

ENVIRONMENTAL MANAGEMENT MANUAL

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1 Introduction/Background

This Manual provides an outline and clarifies the roles and responsibilities related to the University of Wollongong's (UOW) Environmental Management. In some instances it serves only as a reference to other management systems – including Occupational Health and Safety and Quality Assurance. This Manual therefore provides a framework and reference to supporting operational documentation e.g. plans, procedures and guidelines.

The Manual utilises the international standard for Environmental Management Systems ISO14001. It follows a methodology of Plan-Do-Check-Act and promotes pollution prevention, continuous improvement and environmental performance and compliance with legal obligations. For additional information on ISO14001:2004. Please refer to the [ISO website](#) or view the standard online through UOW's online Library Databases - [SAI Global](#).

1.1 Benefits of the Environmental Management Manual

While environmentally responsible behaviour within UOW may be sufficient to achieve the fundamental objective of minimising impacts on the environment, certainty of achieving this objective over a sustained period is increased through the documentation of procedures and responsibilities.

This Manual aims to provide the following benefits:

- A framework and mechanism for regular review of all aspects of environmental management.
- Maintains a focus and momentum in environmental improvement programs; and
- Demonstrates to the community how UOW is taking responsibility for and providing leadership on environmental issues.

Provides external supporters/partners of UOW evidence of responsible environmental management practices.

1.2 Scope

The Manual applies to UOW, its activities and people associated with it such as staff, students, visitors and contractors this includes all UOW principal functions as outlined in Section 6 of the University of Wollongong Act (1989). The Manual may also be utilised as the benchmark for other functions e.g. commercial functions.

1.3 Roles

Environmental Advisory Committee

The Environmental Advisory Committee (EAC) is an advisory body to the Vice-Chancellor and will oversee the development and implementation of UOW's environmental initiatives. The aim is to integrate environmental responsibility into all aspects of the University's activities and to minimise UOW's environmental footprint.

Vice-Chancellor

The Vice Chancellor has ultimate responsibility for, and is committed to, the effective implementation of the University Environment Policy.

Environmental Sustainability Initiatives Unit (ESI)

The ESI unit has the primary task to lead UOW's environmental management program and ensure the University achieves its environmental strategic goals. The ESI Unit will support an organisational and behavioural shift towards environmental sustainability through education, communication and management of projects that generate better environmental outcomes for the University across all areas of its operations. ESI will also be responsible for the management of the EMP, EMS and associated documents.

Heads of School/Units, Manager and Supervisors

Heads of Units, Managers and Supervisors are required to implement EMS in the workplace on a day-to-day basis.

2 Environmental Policy

2.1 Purpose

The Environmental Policy formalises the University's commitment to supporting the principles of environmental sustainability and the need for all staff and students to share a role in achieving the Policy objectives.

2.2 Procedure & Responsibilities

The ESI unit has the responsibility to manage changes to the Environmental Policy based on recommendations from EAC, submissions from interested parties or from its own deliberations. The University Council has the responsibility of approving changes to the policy, as deemed appropriate links.

UOW's Environmental Policy is available at:

<http://www.uow.edu.au/about/policy/UOW058684.html>

For more information on the requirements of University Policy refer to:

Standard on UOW Policy

<http://www.uow.edu.au/about/policy/UOW058645.html>

Procedure for the Development and Management of UOW Policy

<http://www.uow.edu.au/about/policy/UOW058642.html>

3 Environmental Aspects and Impacts

3.1 Purpose

This section defines the means by which UOW's environmental aspects and impacts are identified, assessed, and managed. Responsibilities for management and review are defined.

3.2 Principle of Aspects and Impacts

Activities that interact with the physical environment are termed 'environmental aspects'. The resulting consequences of those aspects are termed 'environmental impacts'.

Guidance provided in the international standard on Environmental Management Systems (AS/NZS ISO 14001:2004) states:

"An organisation' policy, objectives and targets should be base on knowledge about the environmental aspects and significant environmental impacts associated with its activities, products and services. This can ensure that the significant environmental impacts associated with these aspects are taken into account in setting the environmental objectives. The identification of the environmental aspects is an ongoing process that determines the past, current and potential impact (positive or negative) of an organisation's activities on the environment. This process also includes the identification of the potential regulatory, legal and business exposure affecting the organisation. It can also include identification of health and safety impacts, and environmental risk assessment."

3.3 Procedure & Responsibilities

The ESI Unit are responsible for preparing and updating, as appropriate, the Environmental Aspects and Impacts Register. Business Unit Managers and Heads of School have an obligation to advise ESI of any activities which may have significant environmental impact. ESI must review the Register and revise it during any system wide audit or as required.

A detailed description of the process can be found in the [Environmental Aspects and Impacts Procedure](#).

3.4 Methodology

Environmental impacts are evaluated to determine their priority for action, considering:

- Environmental risk:
 - The consequences of the impact occurring
 - The likelihood of the impact occurring
- Business concerns:
 - The difficulty in changing the impact
 - The cost/ benefit of changing the impact
 - The effect of change on other activities and processes

The priority of each environmental impact will be ranked and corresponding actions developed and implemented for those environmental impacts.

3.5 Links

[Environmental Aspects and Impacts Procedure](#)

[Environmental Aspects and Impacts Register](#)

4 Legal and Non-Statutory Requirements

4.1 Purpose

The purpose of this section is to identify environmental legal and other requirements that are applicable to UOW's operations, and to provide accessibility for staff to this information. The procedure is applicable to those operations that have the potential to interact with the environment, or otherwise have some relevance to provisions in environmental legislation or codes of practice.

4.2 Procedure & Responsibilities

ESI is responsible for providing access to an Environmental Legal Register. The Register will:

- Summarise the environmental legislation relevant to UOW's activities;
- Summarise the implications of the legislation; and
- Provide details of sources of further information to enable staff to gain a greater understanding of the legislation, if required.

The Register should consider:

- National Legislation;
- State Legislation;
- National Standards;
- Codes of Practice;
- Local Council requirements; and
- Local licensing and permit requirements.

4.3 Links

[Environmental Legal Register](#) – Environment Essentials [EnviroLaw](#) Database (staff only access).

5 Environmental Objectives and Targets

5.1 Purpose

This section defines the responsibility for developing and maintaining an Environmental Objectives and Targets Register.

Objectives and targets are derived from UOW's Environmental Policy and from an analysis of environmental aspects and impacts. Environmental objectives and targets set direction and benchmarks for achieving the goals of the Environmental Policy. Continual improvement in environmental performance is facilitated through measuring performance against the objectives and targets and making the necessary adjustments to environmental management plans or programs (Section 6).

5.2 Procedure & Responsibilities

Environmental objectives and targets are formulated with regard to the following:

- Goals of the Environmental Policy
- Aspects with identified significant environmental risks
- Business concerns
- Any legislative or other requirements applicable to UOW's activities

Environmental objectives and targets are quantifiable where practicable to facilitate measurement of environmental performance. The Environment Manager will develop and maintain the Environmental Objectives and Targets in the EMP.

Annual review of the objectives and targets is also the responsibility of the Environment Manager and should consider the following factors:

- Progress made on meeting the objectives and targets
- Changes to legal and other requirements
- Technological options for meeting the targets
- Views of all staff e.g. input from the Environmental Advisory Committee
- Financial, operational and business requirements.

It remains the responsibility of the Environment Manager to initiate, facilitate and direct the process of formulation and, periodic review of the objectives and targets. The Senior Executive has ultimate responsibility for endorsing the Objectives and Targets.

5.3 Policy Objectives and Targets

Based on the Environmental Policy, UOW has objectives to guide environmental management programs. The underlying objectives are:

- Continuous improvement
- Compliance with regulations and demonstration of leadership
- Minimisation of energy, water and waste
- Raising the environmental awareness of students and staff
- Providing opportunities for all to participate in improvements
- Harmonious integration of buildings with the natural environment.

5.4 Links

[Environmental Management Plan](#)

6 Environmental Management Plans

6.1 Purpose

This section describes the process and responsibilities for planning and implementing environmental improvement programs or environmental management plans.

The development and implementation of improvement programs is the means by which the environmental objectives and targets can be met. Therefore, environmental improvement plans/programs are closely linked to objectives and targets.

6.2 Responsibility

Responsibility for overseeing the development of environmental management plans/programs lies with the Environment Manager.

Development of environmental management programs may involve the participation of key stakeholders such as the Environmental Advisory Committee; and the Senior Executive.

Where an environmental management plan/program directly affects, or requires the participation of an academic, business or support unit, the unit should participate in the development, implementation and evaluation of the plan/program.

It remains the responsibility of the Environment Manager to initiate, facilitate and direct the process of reviewing the implementation and outcome of environmental management plans/programs.

The review should consider the following factors:

- Progress made on meeting the objectives and targets
- Changes to legal and other requirements
- Technological options for meeting the targets
- Views of staff at all levels
- Financial, operational and business requirements.

6.3 Environmental Management Plan

The University's [Environmental Management Plan](#) includes details on the following functional areas or themes:

- Management systems
- Energy Management
- Water management
- Materials management
- Research, Teaching and learning
- Campus Environment
- Communication and engagement.

6.4 Other Plans and Programs

The following specific plans are currently being implemented:

- [Water Savings Action Plan](#)
- [Energy Savings Action Plan](#)

The following plans are currently in development:

- Renewable Energy Plan
- Off-Grid Water Reuse Plan

For more information on any of these plans please contact the [Environmental and Sustainability Initiatives Unit](#).

7 Structure and Responsibility for Environmental Management

7.1 Purpose

This section defines the roles of each functional group / individuals or committees with respect to the Environmental Management. In order to achieve effective environmental management and to meet the established objectives and targets it is considered essential that the roles, responsibilities and authorities of those charged with planning and implementing environmental management, are documented and communicated within the organisation.

7.2 Overall Responsibility and Authority for Environmental Management

Responsibility for compliance with environmental management objectives and environmental improvement programs lies with the line of management of UOW. As such, responsibilities for environmental management are synonymous with business management and business compliance. Likewise, authorities for implementation of environmental management rest at the same level as the corresponding responsibility. Structure of the lines of responsibility for environmental management and lines of authority for University management are shown in *Figure 1 Structure of Environmental Management at UOW*.

7.3 Role of the Environment Manager

The Environment Manager, in the Facilities Management Division, has responsibility to:

- Oversee programs and initiatives across the academic and business units
- Audit the environmental performance of each academic and business unit and to identify areas where additional action or revision of practices is necessary
- Prepare reports to UOW's EAC, on the implementation of the Environmental Management Plan.

7.4 Role of the Senior Management

The essential obligation Senior Management is to provide leadership and resources necessary to the implement UOW's Environmental Policy.

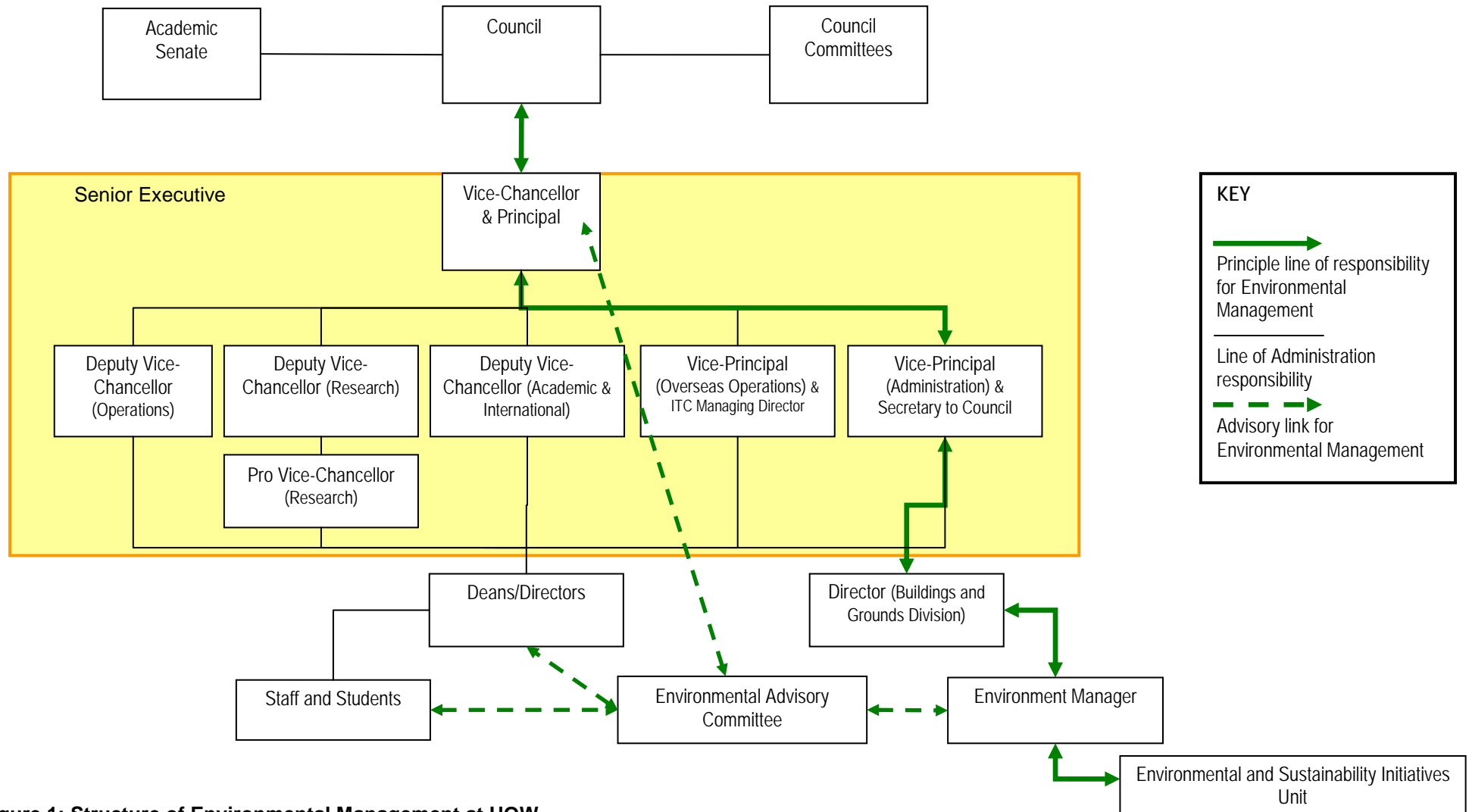


Figure 1: Structure of Environmental Management at UOW

8 Training Awareness & Competence

8.1 Purpose

This section specifies the means by which the competence of staff performing activities that may have a bearing on environmental compliance can be assured. The means by which UOW will promote its environmental policy and programs, within the organisation is also specified.

8.2 Environmental Training

The responsibility for identifying the training and awareness needs of University staff for the performance of their duties lies with the management of faculties and business units. Thus, training and awareness for staff in activities having a potential impact on the environment should be included in training programs relating to competence in the performance of specific duties.

Relevant Senior Managers are to have appropriate training/induction into UOW's Environmental Management Systems to ensure organisation is able to fulfil its objectives and targets.

Faculties and business units should keep a record of staff training so that there is an auditable record of training or awareness in activities identified as having a potential significant impact on the environment or OHS risks.

8.3 Environmental Awareness

The Environmental & Sustainability Initiatives (ESI) unit must coordinate initiatives to promote environmental awareness amongst staff and students at UOW. Initiatives to promote awareness may include:

- Creation and maintenance of information on environmental management and performance in UOW's website
- Coordination or assistance in the establishment of information stalls or displays during orientation periods or other important occasions
- Liaison with and assisting staff and students in promoting environmental improvement programs, including energy, recycling and transport alternatives.

The Environmental Manger will attend and present updates to the Environmental Advisory Committee meetings.

8.4 Links

For information on OHS training and professional development courses available please visit <http://staff.uow.edu.au/ohs/training/index.html>

9 Environmental Communication and Reporting

This section describes the processes in place to communicate UOW's environmental policy, programs and performance, within UOW and externally where required.

9.1 Procedure and Responsibilities

The Environmental and Sustainability Initiatives Unit has primary responsibility for ensuring that staff and students are aware of their Environmental responsibilities. This Manual and associated reference documents should form the basis of the information required by the faculties and business units to ensure responsibilities are understood, The Manual should be made available via UOW's intranet site.

The Environment Manager will liaise with the Environmental Advisory Committee, Faculties and Business Units to continually improve environmental management.

The Environment Manager and the Director, Facilities Management Division, have primary responsibility for preparing a triennial Environmental Performance Report for the Senior Executive.

All staff and students have the ability to report environmental incidents via UOW's SafetyNet system. Any safety issues that are environmental in nature should be reported in this system and the appropriate action will be taken to assess, control and review the issue. Feedback will also be accepted through the Quality Management Feedback system or directly to the Environmental & Sustainability Unit.

9.2 Links

Safety Net accessed via UOW's OHS website

<http://staff.uow.edu.au/ohs/reportingahazardorinjury/reporting/index.html>

Quality Management Feedback System

<https://intranet.uow.edu.au/qualitycentral/feedback/>

ESI Unit feedback

<http://www.uow.edu.au/about/environment/contact/index.html>

10 Environmental Management Documentation

10.1 Purpose

This section identifies the key environmental management documentation and specifies the means by which the documentation is managed.

10.2 Key Documentation

Key Environmental Management Documentation consists of the following:

- UOW's Environmental Policy
- The Environmental Management Manual (this document)
- The Environmental Management Plan
- Related procedures, registers and forms.

10.3 Procedure and Responsibilities

Environmental Management documentation shall be managed in accordance with Quality Assurance principles and adhere to the [Document Control Standard](#).

Quality documents are located online and are considered controlled documents, while other copies are uncontrolled.

UOW's Environmental Policy is approved by the University Council and is subject to the [Procedure](#) for the Development and maintenance of UOW policy..

11 Operational Controls

11.1 Purpose

This section identifies routine activities that have the potential to cause environmental impacts and refers to procedures, guidelines and information developed to manage the associated risks.

11.2 Consumption Energy and Water & Land use

Detailed initiatives have been defined in UOW's Energy and Water Actions Plans to minimisation energy and water consumption. The University is also developing a Renewable Energy Plan and Off-Grid Water Reuse Plan. These plans are discussed within section 6.3 Management Programs.

[Design Standards](#) have been developed which specify detailed requirements for UOW buildings. Some relevant standards include:

- Building Control Management Systems
- Electrical Services
- Energy & Demand Management
- Hydraulic Services
- Landscaping
- Mechanical Services.

11.3 Use and Disposal of Hazardous Goods

Handling, transport, storage and disposal of hazardous goods and potential emissions to the local environment from liquids, solids or gases. Table 11.1 Hazardous Waste Procedures/Guidelines provides links to the relevant documented controls.

Laboratory Safety Guidelines	Biosafety Manual
Field Activity Guidelines & Procedures	Working With Sharps Guidelines
Working with Hazardous Substances Guidelines	Working with Blood and Body Fluids Guidelines
Contaminated/Hazardous Waste Disposal Guidelines	Dangerous Goods Storage and Handling Guidelines
Radiation Safety Guidelines	Asbestos Management Guidelines
Radioactive Waste Disposal Guidelines	Asbestos Register
Lab Waste Disposal (Chemistry)	Chemical Spills (Chemistry)
Handling, Transport and Storage of Cryogenics – School of Chemistry	School of Engineering (Safety Guidelines)

Table 11.1 Hazardous Waste Procedures/Guidelines

11.4 Management of Statutory Licences and Permits

Trade Waste Permit

UOW discharges waste water to the community sewage system under Sydney Water Corporation Commercial Trade Waste Permit No 681. The licence permits disposal of liquid wastes to various balancing and dilution pits associated with various University operations including research, teaching, food services and recreation activities.

[Dangerous Goods Licensing Guidelines](#)

Annual renewals of Dangerous Goods Licences, issued by the Dangerous Goods Branch of Work Cover, are administered by UOW's Occupational Health and Safety Unit.

National Greenhouse Gas and Energy Reduction (NGER)

UOW is obliged to report on its greenhouse gas production as outlined in the NGER legislation.

11.5 Travel/Transport

The consumption of fossil fuels and generation of associated pollutants are an ongoing impact related to UOW. The links provided in Table 11.2, provide specific information on transport options for staff, students and visitors.

UOW Transport Access guide	Rail Service to UOW
Getting to UOW	UOW Parking Map
Transport Info line (Trip planner)	Car Pooling/Parking
Bicycle Rack locations	How to obtain travel concession

Table 11.2 UOW Transport Information

12 Emergency Preparedness and Response

12.1 Purpose

This section identifies the source of information and the management of that information on emergency preparedness and response

12.2 Procedures & Responsibilities

It is the responsibility of the Manager, Environmental Services to periodically review emergency procedures to ensure they adequately addresses emergencies and other incidents that may relate to environmental aspects and impacts.

Emergency procedures are managed by Security and the Occupational Health and Safety unit. Table 12.1 identifies events that have a potential environmental impact and associated procedure.

Emergency Evacuation Procedure	Biohazardous Material Spills or Leaks
Air Supply Contamination	Loss of Power Supply
Bomb Emergency	Medical Emergency
Building Collapse/Structural Failure	Radiation Emergency
Bushfire Emergency	Serious Traffic Accident
Earthquake/Building Collapse	Storm and Flood
Fire Emergency	Loss of Water Supply
Gas Leak	Food Poisoning
Hazardous Material Spills or Leaks	Dealing With Blood Borne Pathogens

Table 12.1 Environmental Emergency Procedures

[UOW's emergency procedure](#) and [guide](#) is accessible to UOW staff only

13 Monitoring and Measurement

13.1 Purpose

The purpose of this section is to describe the scope of monitoring of and reporting on environmental performance indicators.

13.2 Procedure and Responsibilities

UOW has a Performance Indicator Team and they provide accessible and integrated reporting and analysis solutions through a web-based Performance Indicators Reporting System. Gas, water and electricity metering data that is accessible through scorecard, reporting and analysis capabilities providing staff with a data source that monitors day-to-day operations.

The Environment Manager is responsible for reviewing the effectiveness of environmental management and preparing a report to the Vice-Principal (Administration). The report presents data on the effectiveness of environmental improvement plans, as applicable to the period. To this end, the Environment Manager will select appropriate criteria on which to report.

Reporting must include, at least the following performance indicators:

- Information statutory compliance or non-compliance (e.g. trade waste water permits) ;
- Statistics on waste generation, waste stream separation for recycling, energy use and reduction achievements, gas usage and reduction, water use and reduction.

13.3 Links

[Performance Indicator Reporting System](#) or for more information on the Performance Indicator Team

<https://intranet.uow.edu.au/pip/index.html>

14 Records

14.1 Purpose

Records of environmental management are to be kept so as to allow objective reviews of the effectiveness of efforts made to manage and protect the environment.

14.2 Scope of Records

Records are to be kept on at least the following:

- Monitoring of performance indicators such as energy consumption, water use, waste volumes, recycling and transport figures
- Records of annual and other periodic audits
- Records of monitoring for compliance with UOW's Trade Waste Permit
- Any penalty notice for breach of license or environmental regulations.

Records are to be kept according to the following Policy and Guidelines:

[UOW Records Management Policy](#)

[Records Management Compliance Guideline](#)

[Records Management Systems Guideline](#)

15 Environmental Audits

15.1 Purpose

Internal audits of UOW's operations are required to determine whether a systematic approach to environmental management, has been properly implemented and maintained and to provide information to management so that practises can be corrected or maintained or enhanced, as may be deemed necessary.

Audits of environmental management may be of two types. Firstly, an audit may review the operation and implementation of UOW's Environmental Management (known as a systems audit) and secondly, an audit may examine compliance with requirements and the effectiveness of improvement plans and other environmental initiatives (known as a compliance audit).

15.2 Audit Procedures

The ESI Unit is responsible for preparing an audit procedure and scope for audits of UOW's Environmental Management. The scope of audits may vary depending on the nature of any environmental improvement plans being conducted during the audit review period, but will normally include at least the areas in the following list. The following list includes elements of both a systems audit and a compliance audit.

- Review progress on stated objectives and targets
- Review operational controls on significant aspects
- Review of aspects and impacts
- Review of statutory permits and licences with respect to compliance and reporting
- Review of monitoring and other measurement records

- Review of training records of staff engaged in activities having a potential impact on the environment
- Review of implementation, progress and success of environmental improvement programs
- Assessment of the effectiveness of systematic environmental management and assessment of the need for change.

15.3 Environmental Management Internal Audit Procedure

A procedure for audits is to be developed.

16 Environmental Management Review

16.1 Purpose

The objective of a review of UOW's Environmental Management (by the Senior Executive and EAC) is to ensure continuing suitability, adequacy and effectiveness. Reviews may include assessing opportunities for improvement and the need for changes to the management practices, including changes to the environmental policy, objectives and targets.

16.2 Process for High Level Review of Environmental Management

A high level review of the Environmental Management shall be conducted on a triennial basis. The Environment Manager is responsible for advising the EAC of a proposed schedule for review, for providing recommended objectives and facilitating availability of documentation and staff.

The EAC will nominate one or more members to assist in the review and report back to the EAC. EAC will prepare a report on its findings to the Director, Facilities Management Division, who will address any required changes to the EMS.

17 Version Control Table

Version Control	Date Released	Approved By	Amendment
1.0	070228	Manager Environmental Services - David Low	New document created
2.0	091013	Manager Environmental Services - David Low	Review and updated
3.0	110512	Manager Environmental Services - David Low	Review and EMP EAC & Policy updates
	110118		Document updated to reflect name change from Buildings & Grounds (B&G) to Facilities Management Division (FMD)