

# **University of New England**

**Environmental Management Plan**

**2008 - 2013**

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## 1. Background

The University of New England is a proven performer as a leading higher educational institution, achieving significant regional and global impact. Due to increasing pressure being placed on the worldwide environment it is paramount that an organisation such as the University is at the forefront of developing responses to key environmental issues. To demonstrate its commitment to achieving environmental distinction the University is adopting a strategic approach to environmental management. To achieve optimal environmental performance the University must strive to implement an institutional culture of sustainability amongst its stakeholders and demonstrate to the community that it is an environmentally responsible organisation. As a signatory to the *Talloires Declaration*, the University has committed itself to instilling the principals of ecological sustainability into all teaching, research and operational practices.

The Australian Standards model for Environmental Management Systems (Standards Australia - ISO 14001, 2004) has been utilised to develop procedures for improving environmental performance. Following this model, the first step was to introduce an Environment and Sustainability Policy, establishing a broad framework to guide the University towards achieving institutional sustainability. The policy was introduced in late 2004 and has helped facilitate an improvement of the University's environmental performance.

The Environmental Management Plan is designed to follow on from the initial progress made by the Environment and Sustainability Policy by setting a specific framework for implementing strategic environmental management initiatives. It will support Priority E of the University Strategic Plan 2007-2010 namely to "empower staff and strengthen accountability" with specific emphasis on strategies E1, E2 and E3. It will aim to engage stakeholders and develop multidisciplinary approaches to environmental management at the University.

## 2. Objective

The objective of the Environmental Management Plan is to identify key areas for environmental improvement, to set performance objectives and targets and to outline strategies to achieve them. It will include specific reference to:

- Energy management
- Water management
- Waste management and recycling
- Transport practises
- Greenhouse gas emissions
- Risk management
- Stakeholder awareness

### **3. Scope**

This plan will apply to all operations/activities/facilities of which the University of New England has operational control.

### **4. Glossary of Terms**

The following terms as used in this document shall be deemed to mean:

#### **Carbon Dioxide Equivalent (CO<sub>2</sub>e)**

*- a standardised measure of a substances (usually gaseous) global warming potential.*

#### **Carbon Pollution Reduction Scheme (CPRS)**

*- a framework for carbon trading, developed by the Australian Government which is pending introduction by parliament (by March 2009).*

#### **Carbon Footprint**

*- the total balance of CO<sub>2</sub>e emitted by the University operations (including GHG emissions and carbon sequestration).*

#### **Ecological Sustainability**

*- using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased.*

#### **Equivalent Full Time Student Load (EFTSL)**

*- a standardised measurement of the student occupancy of a University.*

#### **Facilities Management Services (FMS)**

*- the Facilities Management Services Directorate of the University of New England.*

#### **Financial Services Directorate (FSD)**

*- the Financial Services Directorate of the University of New England.*

#### **Full Time Employee (FTE)**

*- a standardised measurement of staff numbers at a University.*

#### **General Waste**

*- the solid component of general waste generated by University operations which is disposed via landfill.*

#### **Greenhouse Gas (GHG) Emission**

*- the emission of carbon dioxide (CO<sub>2</sub>) and any other gas which has a prescribed global warming potential, including: methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), sulphur hexafluoride (SF<sub>6</sub>), hydrofluorocarbons (HFC), hydrofluoroethers (HFE), perfluorocarbons (PFC).*

**Human Resource Services (HRS)**

*- the Human Resource Services Directorate of the University of New England.*

**Occupational Health and Safety (OHS)**

*- the process of securing, and promoting, the health, safety and welfare of persons at work.*

**Stakeholder**

*- any current student, staff member, contractor, sub-contractor or volunteer of the University of New England.*

**Talloires Declaration**

*- a 10-point declaration made by University leaders in Talloires, France, in 1990 and which is currently administered by the Association of University Leaders for a Sustainable Future. (Refer Appendix A).*

**Tertiary Education Facilities Management Association (TEFMA)**

*- an independent Australasian facilities management association of which the University of New England is a member.*

**Waste Avoidance and Resource Recovery Strategy 2007**

*- a strategy implemented to fulfil certain objectives of the NSW Waste Avoidance and Resource Recovery Act 2001.*

**5. Related Policy / Procedure / Records**

- UNE Environment and Sustainability Policy
- UNE Energy Management Policy
- UNE Strategic Plan 2007 - 2010
- FMS Operational Plan 2008 – 2009

## 6. Detailed Management Objectives

### 6.1. Energy Management

Objective: Reduce the University's reliance upon Non Renewable Energy (NRE).

Target: A 10% reduction in annual consumption of NRE attributable to University operations by July 2013, using consumption levels of 2007-08 as a baseline.

KPI: GJ NRE 07-08, GJ NRE/annum, \$/kWh NRE 07-08, \$/kWh NRE.

#	Strategy Description	Project Stewardship	Strategic Timeframe
a.	Develop standardised energy reduction information and procedures for general use by internal stakeholders.	Environmental & Campus Services Coordinator (FMS)	<i>From January 2009</i> – include information on UNE website and in staff induction resources.
b.	Provide end users with substantive reports on their electrical energy consumption levels, via BMS data.  Identify consumers with significantly high energy use and, via consultation, design procedures to reduce consumptions.	Energy Management Officer (FMS)	<i>From January 2009</i> – provide detailed quarterly reports to resource managers. <i>From July 2009/Ongoing</i> – develop reduction procedures with energy users and monitor reduction performances.
c.	Uphold policy that new, and retro-fitted, buildings achieve a minimum four star energy efficiency rating under the GBCA guidelines.	Construction Manager (FMS)	<i>Ongoing</i> - review each capital work for compliance during the planning process.
d.	Review the Space Allocation Policy and rationalise surplus space to optimise the energy efficiency and space utilisation of existing buildings.	Systems Manager (FMS) / Asset Utilisation Officer (FMS)	<i>By July 2009</i> – review Space Allocation Policy, suggest amendments if necessary. <i>Ongoing</i> –annual Room Utilisation Studies of teaching spaces.

## 6.2. Water Management

Objective: Increase water use efficiency of shower facilities at Academic, Bellevue and CB Newling campuses.

Target: Install 3 star/AAA\* heads in 90% of showers on campus by July 2013.

KPI: total # showers, # existing 3 star/AAA showers, # 3 star/AAA showers installed/annum.

#	Strategy Description	Project Stewardship	Strategic Timeframe
a.	Conduct an audit of current shower fittings to assess scope for project.	Infrastructure Manager (FMS)	<i>By February 2009</i> – complete audit.
b.	Design a schedule of works for installation of 3 star/AAA heads which is inline with current maintenance schedules.	Infrastructure Manager (FMS) / Plumbers (FMS) /	<i>By May 2009</i> – integrate LF installations into ongoing maintenance schedules. <i>From July 2009</i> – begin strategic installations.
c.	Update FMS Design Standards to include minimum requirement of 3 star/AAA rated shower head models for new/retro-fitted buildings.	Construction Manager (FMS)	<i>February 2009</i> – include in re-draft of standards.

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\* As defined by Australian Government – Water Efficiency Labelling and Standards (WELS) Scheme.

### 6.3. Waste Management and Recycling

Objective: Increase recovery of materials, from general waste streams, to reduce the annual amount of waste being disposed via landfill.

Target: Reduce annual amount of waste going landfill by 20% by July 2013, using 2007-08 waste data as a baseline.

KPI: t landfill 07-08, t landfill/annum, % recyclables in landfill, t materials recovered.

#	Strategy Description	Project Stewardship	Strategic Timeframe
a.	Implement a standardised waste and recycling system across all academic campuses to provide parity with NSW DECC waste signage standards.	Campus Services Manager (FMS)	<i>Oct to Dec 2008</i> – trial implementation of an integrated waste and recycling system. <i>By January 2009</i> - report on performance of trial.
b.	Develop a Waste Management Strategy to improve upon current waste management procedures and which focuses on providing users with effective recycling alternatives.	Environmental & Campus Services Coordinator (FMS)	<i>By May 2009</i> – plan approval. <i>From July 2009</i> – plan implementation.
c.	Investigate the feasibility of introducing an organic waste stream into University residences and catering facilities.	Director of Colleges	<i>By December 2009</i> – report to Infrastructure Committee on feasibility.
d.	Include waste management clauses in agreements with construction and demolition contractors which stipulate specific recycling criteria.	Construction Manager (FMS)	<i>Ongoing</i> - review waste needs/procedures on a project basis during the planning process.

#### 6.4. Transport Practices

Objective: Reduce and off-set GHG emissions attributable to business travel practices of University staff.

Target: A 10% reduction in the volume of petroleum and distillate used by the University's motor vehicle fleet by July 2013, using consumption levels of 2007-08 as a baseline

Off-set at least 25% of the GHG emissions attributable to the University staff air travel practises by 2013.

KPI: kL fuel 07-08, kL fuel/annum, kL fuel/FTE, av. vehicle efficiency (L/km).

t CO<sub>2</sub>e/km, air miles (km) 07-08, air miles (km)/annum, km/FTE.

#	Strategy Description	Project Stewardship	Strategic Timeframe
a.	Develop policy to purchase off-set credits for air travel emissions.	Financial Services	<b>By June 2009</b> – approval of policy.
b.	Develop procedures for recovering the cost of off-set credits from individual Schools and Administrative Directorates.	Financial Services	<b>2009/10 financial year</b> – first period of emissions off-setting and cost recovery.
c.	Review current vehicle fleet in relation to fuel efficiency.	Fleet Supervisor	<b>By July 2009</b> – report on efficiency of vehicle fleet.
d.	Develop standards for the future procurement of more fuel efficient vehicles.	Fleet Supervisor	<b>By July 2010</b> – implement fuel efficient vehicle procurement standards.
e.	Monitor and record the air miles travelled by University staff and report annual travel data.	Travel Accounts Coordinator	<b>Ongoing</b> – annual reporting in line with financial year.

## 6.5. Greenhouse Gas Emissions

Objective: Monitor and report GHG emissions attributable to University operations.

Target: Accurately record the University's GHG emissions (Scope 1 and 2)<sup>†</sup> and report annual greenhouse performance against 07-08 baselines.

Conform to relevant legislation and reduction strategies, specifically the *National Greenhouse and Energy Reporting Act 2007*.

KPI: t CO<sub>2</sub>e 07-08, t CO<sub>2</sub>e/annum, t CO<sub>2</sub>e/EFTSL, t CO<sub>2</sub>e/EFTSL+FTE, t CO<sub>2</sub>e/m<sup>2</sup> GFA, t CO<sub>2</sub>e/m<sup>2</sup> UFA.

#	Strategy Description	Project Stewardship	Strategic Timeframe
a.	Engage an independent consultant to conduct a Greenhouse Emissions Audit of the Academic, Bellevue and CB Newling campuses.	Environment & Campus Services Coordinator (FMS)	<i>August 2008</i> – submission of consultants audit report.
b.	Identify key recommendations and develop a strategic implementation plan to action said recommendations.	Environment & Campus Services Coordinator (FMS)	<i>By December 2008</i> – develop implementation plan.
c.	Develop and implement procedures for reporting GHG emissions which will facilitate annual reporting formats utilised by the Department of Climate Change.	Environment & Campus Services Coordinator (FMS)	<i>By December 2008</i> – disseminate procedural documents to relevant positions.
d.	Monitor, and report on, the possible impacts of the Federal Governments Carbon Pollution Reduction Scheme (CPRS). Estimated implementation in 2010/2011 financial year.	Environment & Campus Services Coordinator (FMS)	<i>Ongoing</i> – present periodic impact reports until implementation of the scheme.
e.	Investigate pathways available to the University for becoming a 'carbon neutral' operation.	Environment & Campus Services Coordinator (FMS)	<i>By December 2009</i> – report prior to implementation of CPRS.

<sup>†</sup> As defined by Department of Climate Change – National Greenhouse Accounts (NGA) Factors.

## 6.6. Risk Management

Objective: Develop and maintain a Register of Legal and Other Requirements (RLOR) relative to environmental management.  
 Target: Maintain ongoing conformity to Federal, State and Local governmental environmental legislation and policy.  
 KPI: # identified regulatory breaches/annum, # EPA action notices/annum, # critical environmental incidents/annum.

#	Strategy Description	Project Stewardship	Strategic Timeframe
a.	Develop procedures for continual monitoring of environmental legislation to identify legal and other requirements.	Environmental and Campus Services Coordinator (FMS)	<b>By January 2009</b> – Initial compilation of RLOR. <b>Monthly</b> – Reviews of RLOR and amendments as required.
b.	Include environmental factors in the Critical Incident Management Plan and assign responsibility for managing critical environmental incidents.	Campus Services Manager (FMS) / Fire Safety Officer (FMS)	As per FMS operational plan.
c.	Review, and update if required, OHS procedures related to environmental protection/risk management.	OHS Officer (HRS)	<b>Ongoing</b> – continual annual reviews.

## 6.7. Stakeholder Awareness

Objective: To build an ethos of environmental sustainability amongst University stakeholders.

Target: Develop a strategic Sustainability Awareness Program with the aim of achieving a net increase in the level of sustainability awareness amongst University staff and students.

KPI: Variance of resource and emissions KPI (Section 6.1 - 6.5), # seminars/annum, seminar attendance (% FTE/EFTSL), # website visits/annum.

#	Strategy Description	Project Stewardship	Strategic Timeframe
a.	Development of a Sustainability Awareness Program.	Environment & Campus Services Coordinator (FMS)	<i>By December 2008</i> – program approval.
b.	Conduct awareness seminars for stakeholders highlighting the importance of ecologically sustainable development and environmental ‘best practise’.	Environment & Campus Services Coordinator (FMS)	<i>From January 2009</i> – covering Schools and Administrative Directorates.
c.	Continually update and develop the ‘Environment’ web page within the University website.	Environment & Campus Services Coordinator (FMS)	<i>Ongoing</i> – continual updates as required.
d.	Establish an informal ‘Sustainable Colleges Committee’ with college representatives to promote active involvement in identifying and implementing sustainable practices.	Director of Colleges / Environment & Campus Services Coordinator (FMS)	<i>By October 2009</i> – establish framework to begin meetings in 2010.

## **7. Procedural Development**

When necessary, detailed guidelines and operational procedures will be developed to aid the implementation of environmental management initiatives. Guidelines will be used to outline general actions to promote best practice. Operational procedures will be more specific and outline the primary objectives of the strategy, provide detailed processes, set reporting specifications and delegate responsibility to appropriate persons.

## **8. Monitoring and Reporting**

### ***8.1. Environmental Management Plan Annual Progress Report***

As a means of assessing the effectiveness of the Environmental Management Plan a progress report will be developed and submitted to the Infrastructure Committee for annual review. The report will monitor the performance of each strategy against its associated objectives, targets and key performance indicators.

A 'Performance' section will include a gap analysis to determine the rate of progress of each Environmental Management Plan strategy and to quantify its level of success.

A 'Development' section will aim to identify methods to continually improve the effectiveness of the Environmental Management Plan and to further optimise environmental performance at the University. The performance of each Environmental Management Plan strategy will be critically assessed and any recommendations for improvement to the Environmental Management Plan will be outlined.

A 'Compliance' section will be included to monitor the University's legislative compliance. This section will monitor legislation and policies outlined in the 'Register of Legal and Other Requirements (Environmental)' and also include reference to compliance with the UNE Strategic Plan 2007-2010.

### ***8.2. Register of Legal and Other Requirements (RLOR)***

As a means of monitoring relevant environmental legislation and policy, a 'Register of Legal and Other Requirements (Environmental)' will be developed (Section 6.6). The register will include references to Federal, State and Local legislation and policy and will be periodically updated.

### 8.3. *Records*

All documents associated with the Environmental Management Plan are held by Facilities Management Services and within TRIM. These documents include, but are not limited to:

- Operational and strategic procedures
- Monitoring reports and audits
- Energy and waste records
- Customer surveys
- Letters and correspondence
- Memoranda and notes

## 9. **Responsibilities**

The levels of responsibilities in relation to the Environmental Management Plan are outlined below.

<b>Implementation</b>	As outlined in “Project Stewardship” column (Section 6).
<b>Compliance</b>	All stakeholders.
<b>Procedural Development</b>	Environmental and Campus Services Co-ordinator, Facilities Management Services. Relevant Project Stewards.
<b>Monitoring and Reporting</b>	Environmental and Campus Services Co-ordinator, Facilities Management Services. Relevant Data Managers.

## 10. **Document History**

<b>Revision Reference No:</b>	<b>Issue No. 1</b>
<b>Approved by:</b>  <b>Name:</b> _____  <b>Position:</b> _____	<b>Signed:</b> _____  <b>Date:</b> _____

## 11. Acknowledgements

The following is a list of reference used to compile this program:

Association of University Leaders for a Sustainable Future (updated 2001), *The Talloires Declaration 10 Point Action Plan*, ULSF.  
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## Appendix A – Talloires Declaration

### Association of University Leaders for a Sustainable Future

#### The Talloires Declaration

##### 10 Point Action Plan

We, the presidents, rectors, and vice chancellors of universities from all regions of the world are deeply concerned about the unprecedented scale and speed of environmental pollution and degradation, and the depletion of natural resources.

Local, regional, and global air and water pollution; accumulation and distribution of toxic wastes; destruction and depletion of forests, soil, and water; depletion of the ozone layer and emission of “green house” gases threaten the survival of humans and thousands of other living species, the integrity of the earth and its biodiversity, the security of nations, and the heritage of future generations. These environmental changes are caused by inequitable and unsustainable production and consumption patterns that aggravate poverty in many regions of the world.

We believe that urgent actions are needed to address these fundamental problems and reverse the trends. Stabilization of human population, adoption of environmentally sound industrial and agricultural technologies, reforestation, and ecological restoration are crucial elements in creating an equitable and sustainable future for all humankind in harmony with nature.

Universities have a major role in the education, research, policy formation, and information exchange necessary to make these goals possible. Thus, University leaders must initiate and support mobilization of internal and external resources so that their institutions respond to this urgent challenge.

We, therefore, agree to take the following actions:

**1) Increase Awareness of Environmentally Sustainable Development**

Use every opportunity to raise public, government, industry, foundation, and University awareness by openly addressing the urgent need to move toward an environmentally sustainable future.

**2) Create an Institutional Culture of Sustainability**

Encourage all universities to engage in education, research, policy formation, and information exchange on population, environment, and development to move toward global sustainability.

**3) Educate for Environmentally Responsible Citizenship**

Establish programs to produce expertise in environmental management, sustainable economic development, population, and related fields to ensure that all University graduates are environmentally literate and have the awareness and understanding to be ecologically responsible citizens.

**4) Foster Environmental Literacy for All**

Create programs to develop the capability of University faculty to teach environmental literacy to all undergraduate, graduate, and professional students.

**5) Practice Institutional Ecology**

Set an example of environmental responsibility by establishing institutional ecology policies and practices of resource conservation, recycling, waste reduction, and environmentally sound operations.

**6) Involve All Stakeholders**

Encourage involvement of government, foundations, and industry in supporting interdisciplinary research, education, policy formation, and information exchange in environmentally sustainable development. Expand work with community and nongovernmental organizations to assist in finding solutions to environmental problems.

**7) Collaborate for Interdisciplinary Approaches**

Convene University faculty and administrators with environmental practitioners to develop interdisciplinary approaches to curricula, research initiatives, operations, and outreach activities that support an environmentally sustainable future.

**8) Enhance Capacity of Primary and Secondary Schools**

Establish partnerships with primary and secondary schools to help develop the capacity for interdisciplinary teaching about population, environment, and sustainable development.

**9) Broaden Service and Outreach Nationally and Internationally**

Work with national and international organizations to promote a worldwide University effort toward a sustainable future.

**10) Maintain the Movement**

Establish a Secretariat and a steering committee to continue this momentum, and to inform and support each other's efforts in carrying out this declaration.

1994 Updated Version