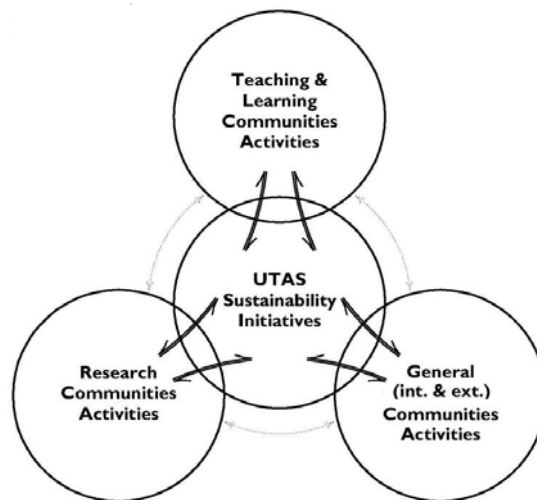


UTAS ENVIRONMENTAL MANAGEMENT PLAN 2009-2011

Part A : GENERAL

Introduction

The Environmental Management Plan (EMP) is one of the instruments/drivers for implementing the University of Tasmania Sustainability Vision. Its implementation as shown in the figure below, illustrates all key University activities, involving students, staff and the community. All of these activities are inter-related, to their mutual benefit.



The EMP, as one of the sustainability initiatives, will aim for net positive environmental outcomes thereby improving the UTAS environmental bottom line.

The EMP will address the priorities listed in the University Governance Level Principle - no GLP9 Environmental Management which states that the University will:-

- ensure waste minimisation and efficient utilisation of energy, water and other resources by fostering initiatives such as demand management where appropriate, as well as reuse and recycling to minimise pollution and other adverse effects from operations, and will take reasonable steps to monitor and evaluate performance under this paragraph
- ensure that development initiatives are environmentally sustainable, consistent with current technical knowledge
- comply with all applicable legislation, regulations, statutory requirements and license conditions relating to environmental management

- promote environmental awareness and responsibility amongst members of the University community including contractors
- take reasonable steps to monitor and evaluate the environmental performance of contractors and suppliers against University policy and procedures where significant potential environmental issues may occur, and implement effective communication with them on environmental issues
- through the University's existing research and teaching on environmental issues and sustainable development, aim to promote better understanding in the broader community.

Implementation

Conventional and innovative solutions will be utilised in the implementation of the EMP through:

1. Understanding current situations
 - Baselines.
 - Benchmark against other Australian universities.
 - Usage patterns.
 - Areas for improvement.
 - Potential collaborations.
2. Seeking improvements in:-
 - Policies, strategies, processes & behaviours.
 - Procurements.
 - Linkages between and outcomes from teaching & learning, research and general activities and UTAS sustainability initiatives.
3. Communicating:-
 - Within and between Communities - students, academics, general staff and external.
 - Promotion, awareness and achievements.
4. Learning & Improvement Cycle
 - Monitor & assessment.
 - Review & evaluate.
 - Learn, improve & adopt.

Administration

The administration of the EMP will be undertaken as follows:

- The Sustainability Manager (when appointed) within the Infrastructure Services Unit in Asset Management Services section shall undertake the day to day administration and regular reporting to the Environmental Management Group (EMG).
- The EMG, having been established by the Built Environment Committee (BEC), will provide a consistent coordinated general direction in regard the development, monitoring progress and reporting to the BEC.
- The BEC, in its role as over-viewing the performance of environmental management at UTAS, shall report annually to UTAS Council on progress on environmental management issues.

Part B: ENVIRONMENTAL MANAGEMENT PLAN 2009 - 2011

The scope of the 2009-2011 EMP will focus on the following categories:

- **Energy and Greenhouse Gases** (reduce energy use and associated greenhouse gas emissions per person and per square metre of built area)
- **Water** (reduce wastage and collect and store water for reuse)
- **Indoor Environmental Quality** (healthy and productive work environment including the minimisation of pollution)
- **Transport** (reduce transport involving fossil fuel powered vehicles and encourage alternatives)
- **Waste and Recycling** (first to decrease production of waste, including hazardous wastes, second to re-use and third to recycle)
- **Biodiversity** (increase biodiversity to restore the environment)

1. Energy & Greenhouse

Objective: To achieve a continual improvement in energy conservation and associated greenhouse gas emissions.

Target:

- To reduce absolute energy consumption and greenhouse gas emission levels to 10% below the base level year (2008) by 2011.

Environmental Performance Indicators:

Develop and monitor appropriate energy and greenhouse performance indicators that illustrate true progress against a background of growth for the university. Proposed performance indicators include:

- GJ energy consumption as well as per EFTSU & per sq.m. gross floor area.
- CO₂e footprint as well as per EFTSU & per sq.m. gross floor area.

Item	Strategies	Responsibilities	Year
1.1	Determine and quantify the types of energy used and establish the baseline position of the university's greenhouse gas (ghg) emission inventory.	Engineering Services Officer / Sustainability Manager	2009
1.2	Identify possibility to extend the management of the electricity demand to other than SB & NH campuses.	Engineering Services Officer / Sustainability Manager	2009

Item	Strategies	Responsibilities	Year
1.3	Review energy consumption patterns and identify areas for improvement and options to reduce energy use.	Engineering Services Officer / Sustainability Manager	2009
1.4	Monitor, manage and evaluate performance of the 5 year Energy Performance Contract following completion of targeted upgrade of Building Management System (BMS) in SB in 2007. Explore possibility to bring stand-alone HVAC control systems into the BMS to improve energy use efficiency.	Engineering Services Officer/ Infrastructure Services Manager	2011
1.5	Continually identify opportunities to use new energy conservation technologies including passive measures, renewable energy sources and energy efficient plant in capital and maintenance project works. Achieve 5 star AGBR performance for major capital works (>\$5m).	Sustainability Manager/ Infrastructure Services Manager	2011
1.6	Establish specific showcase Environmentally Sustainable Design and other sustainability initiative projects.	Sustainability Manager	2011
1.7	Develop and implement energy reduction/ conservation awareness campaign programs for staff and students.	Sustainability Manager	2009

Water

2A-Water Usage and Disposal

Objective: To achieve continual improvement in water conservation.

Target:

- Reduce potable water consumption levels by 10% by 2011 compared to the base year (2009).

Environmental Performance Indicator:

- Kilotres total (potable and rainwater) consumption as well as per sq.m. gross floor area & per oval.

Item	Strategies	Responsibilities	Year
2.1	Establish baseline water consumption for each university campus.	Engineering Services Officer/ Sustainability	2009

Item	Strategies	Responsibilities	Year
		Manager	
2.2	Install water meters in each building and oval, where feasible and monitor water consumption levels to establish baseline for each area.	Engineering Services Officer/ Sustainability Manager	2009
2.3	Review water consumption patterns, identify areas for improvements and options for water conservation.	Sustainability Manager	2009
2.4	Implement water conservation technologies and make water efficient fittings and appliances as one of the procurement selection criteria in maintenance and capital works projects.	Sustainability Manager	2009
2.5	Develop a landscape water conservation plan in conjunction with the University's Landscape Plan.	Sustainability Manager/ Grounds Officer	2010
2.6	Continually identify opportunities in major project works to harvest rainwater for reuse.	Sustainability Manager/ Project Manager	2011
2.7	Develop and implement a water conservation awareness campaign for staff and students.	Sustainability Manager	2010

2B - Stormwater Management

Objective: To minimise pollution entering the stormwater system and improve ecology.

Target:

- Avoid all actions that could attract water pollution infringements.

Environmental Performance Indicator:

- No breaches relating to stormwater identified during campus environmental risk assessments and other inspections.

Item	Strategies	Responsibilities	Year
2.8	Undertake environmental risk assessment of each campus in relation to stormwater and identify	Sustainability Manager	2010

Item	Strategies	Responsibilities	Year
	mitigation strategies.		
2.9	Identify existing infrastructure and practices that generate a residual risk of stormwater pollution and develop and install mitigation strategies such as stormwater pollution traps, swales, etc.	Sustainability Manager	2010
2.10	Continually identify opportunities in maintenance and capital project works to use water sensitive urban design principles to minimise negative impacts on urban water cycle through water minimisation, water recycling and environmental protection.	Sustainability Manager / Project Managers	2011
2.11	Develop and raise awareness to prevent or minimise stormwater pollution as well as to identify initiatives to demonstrate how stormwater can be used as a resource.	Sustainability Manager	2010

3. Indoor Environmental Quality

Objective: To continually improve indoor environmental quality with a view to providing increasingly healthy and productive work environment.

Targets:

- Improved indoor environment quality in buildings.
- Improved workplace satisfaction.

Environmental Performance Indicator:

- Design briefs for proposed building projects will incorporate IEQ.
- Improved workplace satisfaction identified through post occupancy evaluation.

Item	Strategies	Responsibilities	Year
3.1	For targeted existing buildings of high risk areas undertake an IEQ assessment incorporating interior air quality, CO2 level, VOC level, glare control, noise level, hazardous materials, etc). Identify remedies/strategies and implement.	Sustainability Manager / OH&S Manager	2010
3.2	For new & refurbishment building works, incorporate indoor environment quality strategies, which address interior air quality, daylighting, glare control, artificial lighting, external views, thermal comfort, material toxicity and internal noise levels.	Sustainability Manager / Project Managers	2011
3.3	Embedding material toxicity as one of the selection criteria for products and materials procurement (eg furnishings, fittings, finishes,	Sustainability Manager / Procurement	2009

Item	Strategies	Responsibilities	Year
	cleaning products).	Managers	

4. Transport

Objective: To contribute positively to addressing sustainable urban transport issues.

Targets:

- University Fleet:
 - Increase the efficiency of the vehicle fleet (10% reduction of litres fuel consumed) with reference to the base level year (2008) by 2011.
- Reduce the environmental impact of the university community's commuting by:
 - Minimising single occupant car commuting.
 - Maximising the accessibility and suitability of alternative modes of transport.

Environmental Performance Indicators:

- University Fleet:
 - TCO₂^e per annum
 - Fuel consumption against baseline year
- University Commuting:
 - Number of staff and students using inter campus public bus scheme, car-pooling program and alternative forms of transport (walking & cycling)

Item	Strategies	Responsibilities	Year
4.1	Determine fuel consumption by University fleet to provide a baseline for measuring improvement.	Sustainability Manager/Vehicle Fleet Manager	2009
4.2	Develop, in conjunction with University fleet management, a sustainable fleet management strategy.	Sustainability Manager/Vehicle Fleet Manager	2010
4.3	In consultation with relevant University planning groups, review campus-planning issues to determine the impact on inter and intra-campus transport requirements.	Sustainability Manager	2009
4.4	Review, develop and promote the current car-pooling scheme under the Australian Greenhouse Organisation Travelsmart initiative.	Sustainability Manager/Facilities Services Manager	2009

Item	Strategies	Responsibilities	Year
4.5	Undertake a sustainable transport community awareness campaign, promoting diversity in transport choice.	Sustainability Manager	2010
4.6	Undertake research into what influences transport choices. (nb. Potential research project)	Sustainability Manager	2010
4.7	Survey transport modes of UTas staff and students to inform alternative transport strategies, (identifying and addressing 'weak links'), measure impacts and recommend practical actions. (nb. Potential research project)	Sustainability Manager	2010
4.8	Liaise with local councils to improve pedestrian and cycle routes to university campuses. Monitor usage and increase bicycle parking as required.	Sustainability Manager	2009

5. Waste and Recycling

Objective: To achieve best practice in recycling and waste management.

Targets:

- Establish a baseline for weight/volume of waste going to landfill.
- Reduce volume of waste generated.
- Implement university-wide recycling programme.

Environmental Performance Indicator:

- Weight/volume of waste produced, waste to landfill, recycling and composting per year.

Item	Strategies	Responsibilities	Year
5.1	Develop and implement, in conjunction with waste management contractors, a waste monitoring and evaluation process that provides baseline information on annual volume, weight and composition of the waste, recycling and composting streams.	Sustainability Manager	2009
5.2	Introduce & maintain a university-wide recycling program, which includes the use of standard recycling bins and promotional media and training in the use of the system.	Sustainability Manager	2009
5.3	Review the impact of litter on campus and establish recycling points at 'hot spots'.	Sustainability Manager	2009
5.4	Implement a purchasing policy that promotes: the	Sustainability	2010

Item	Strategies	Responsibilities	Year
	use of products manufactured from recycled material, waste minimisation, material reuse and recycling.	Manager	
5.5	Establish a strategy for managing e-waste such as toner cartridges, mobile phones and old computers & monitors.	Sustainability Manager/ ITR Director	2010
5.6	Establish a community awareness program to promote the reuse of materials, recycling and waste minimisation.	Sustainability Manager	2009

6. Biodiversity

Objective: To manage and improve biodiversity in an ecologically appropriate manner in consultation with the various university communities.

Target:

- Develop and implement a biodiversity management plan.

Environmental Performance Indicators:

- Increased university community awareness of biodiversity issues.
- Demonstrated improvement in biodiversity within a location.

Item	Strategies	Responsibilities	Year
6.1	Identify and assess localised biodiversity priorities in partnership with students and/or academics for research and monitoring for biodiversity conservation and protection. (nb. Potential research project)	Environment Officer/ Academics	2010
6.2	Undertake a pilot ecological audit and then develop a biodiversity action plan for input to the University's Landscape Plan for that locality.	Sustainability Manager/ Ground Supervisor	2010
6.3	Assess and report effectiveness of the biodiversity improvements in the pilot projects.	Sustainability Manager	2011
6.4	Include protection of biodiversity and minimisation of ecological impact (on topography, hydrology, vegetation, fauna etc) as goals for all maintenance and capital works projects.	Sustainability Manager / Project Managers	2009
6.5	Raise awareness among university community of potential significant specific factors that impact on site diversity in at least one locality.	Sustainability Manager	2010