

THE UNIVERSITY OF
NEW SOUTH WALES



UNSW Environmental Management Plan

2009 Action Plan

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Officer and Chair of Environment Policy
Advisory Committee**

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Introduction

This document is the fourth annual Action Plan prepared to support implementation of the 2005-10 UNSW Environmental Management Plan (EMP). The actions summarised herein support the B2B Blueprint to Beyond 2010, the UNSW Environment Policy and the Campus 2020 Master Plan, consistent with the ongoing accountability of the Environment Unit:

“To develop and promote a culture of environmental leadership, responsibility and continual improvement across the UNSW community”.

Strategic priorities

The 2009 Environmental Action Plan is informed by the Operations Division Key Performance Targets, in particular to “establish UNSW as the benchmark Australian University for sustainability”; and the Facilities Management Department KPTs, in particular to “create and maintain a sustainable UNSW Estate” and to “enhance the campus experience for all UNSW stakeholders”. These Divisional and Departmental objectives, together with the UNSW Environment Policy, provide the context for the following strategic priorities for environmental management at UNSW addressed in this Action Plan:

1. Facilitate the active participation of the UNSW community in reducing the collective environmental impact of the organisation;
2. Integrate environmental criteria into UNSW policies, systems and procedures;
3. Support compliance with the University’s environmental legislative and regulatory obligations and other environmental commitments;
4. Systematically reduce resource consumption and progress to zero waste through best practice environmental management and organisational culture change;
5. Continually improve the quality of the UNSW built environment, conserve and enhance biodiversity and minimise adverse environmental impacts on UNSW property;

An additional priority to facilitate all of the above is to seek external grant funding to support implementation of measures identified in this Plan wherever appropriate.

2009 Environmental Action Plan – Objectives, Measures and Targets

The 2009 Action Plan acknowledges the need for accountability, flexibility, and financial responsibility; it provides a framework for action. It is acknowledged that the extent to which the defined projects are implemented is dependent upon the engagement and participation of both UNSW and external stakeholders and within budgetary constraints. The Plan has been developed in parallel with the 2009 budget preparation process, and implementation is predicated on finalisation of the University 2009 Budget, consideration of emerging strategic planning priorities and continuing Senior Management support. As per the UNSW Environment Policy, the Environment Policy Advisory Committee is responsible for endorsement of the annual EMP Action Plan.

Priority: To facilitate the active participation of the UNSW community in reducing the collective environmental impact of the organisation.

OBJECTIVES	MEASURES	TARGETS
Achieve broad recognition of UNSW as a leader in applied environmental management	Standard of EALA award submissions Peer acknowledgement of UNSW environmental initiatives External media coverage of UNSW environmental initiatives	Competitive entries to EALA awards across all categories Prepare and present two conference papers relating to UNSW campus environmental management
Facilitate environmental training for relevant FTE staff and contractors	Availability of induction modules, incorporation into systems and procedures	All new staff undertaking general induction training to have completed general environmental awareness module
Ensure staff access to information on UNSW Environment Policy and EMP	Publication of current information	Relevant material provided regularly to Media Unit EU content of web pages kept up to date Material published and distributed on a timely basis

Priority: To integrate environmental criteria into UNSW policies, systems and procedures.

OBJECTIVES	MEASURES	TARGETS
Facilitate compliance with environmental requirements by contractors and suppliers	Inclusion of environmental aspects in contract documentation	Specifications for all contracts over \$100,000 to include environmental criteria Any nonconformities with specified requirements identified and reported to contract manager for attention
Provide environmental leadership through annual “cutting edge” environmental reporting	Comprehensiveness, accuracy and timeliness of reporting	Reports completed and submitted on time Benchmark collection of data to capture 95% of UNSW carbon footprint
Maximise integration of the EMP with UNSW teaching and research objectives	Applicability of academic/student projects to UNSW campus Course evaluation and feedback	All projects to address relevant, specified problems in applied environmental management Positive CATEI evaluation of course

Priority: To audit, monitor and ensure compliance with the University’s environmental legislative and regulatory obligations and other environmental commitments.

OBJECTIVES	MEASURES	TARGETS
Ensure awareness by Faculties and Divisions of their obligation to manage their environmental legal compliance responsibilities	Staged implementation of the Green Laboratory program	Sign-off and effective implementation of each stage / module of the Green Lab program on time and within budget
	Support for campus wide achievement of legal environmental compliance under the auspices of the UNSW corporate compliance framework ¹	Establishment of environmental compliance auditing and reporting program to progressively target identified priorities

¹ Measure and associated actions (23-32) subject to formalisation of the corporate compliance framework via the Vice-Chancellor’s Advisory Committee and allocation of appropriate resources.

Priority: To systematically reduce resource consumption and progress to zero waste through best practice environmental management and organisational culture change.

OBJECTIVES	MEASURES	TARGETS
Measure, monitor and reduce the University's carbon footprint	Number of Landcare planting activities Number of trees planted <i>See also Environmental Reporting</i>	Three planting weekends on UNSW property 4000 trees planted Formal agreement established for long-term management of site to secure carbon offset benefits
Reduce consumption of energy and water	Electricity density for Kensington campus, total electricity use at external properties	Target reduction 2% over 2008
	Potable water consumption per EFTSU and per sqm floor space.	5% reduction in potable water use per sqm floor space
	Percentage of peak electrical demand met by renewable energy sources	2.5% of peak electrical demand met from renewable sources, including installations on campus ("UNSW Green Power")
	Proportion of non-potable water uses supplied by borewater	Increase in borewater substitution of 5% of 2008 potable water consumption
Achieve continuous increase in proportion of solid waste stream recovered for high resource value use.	Proportion of indicator resources recovered from waste stream	Trend increase in proportion of resources recovered
	Diversion of food organics from landfill via the UNSW composting facility	All Kensington campus retail outlets engaged in food waste diversion program Production of compost products to required specifications for application to UNSW Grounds Site managed to avoid detrimental environmental impacts.

Priority: To continually improve the quality of the UNSW built environment, conserve and enhance biodiversity and minimise adverse environmental impacts on UNSW property

OBJECTIVES	MEASURES	TARGETS
Design, build and demolish in accordance with ESD principles	<p>Green Building Council Green Star assessment of eligible projects</p> <p>In-house assessment of projects ineligible for GBCA assessment</p>	<p>Five Stars + achieved for eligible projects (new build or major refurbishment)</p> <p>Projects assessed in-house consistent with Five Star + rating</p> <p>Benchmark level of occupant satisfaction with UNSW offices, research and teaching spaces and campus open space.</p>
Enhance the campus experience for the UNSW community	Increase awareness and knowledge of the ecology and functionality of the UNSW campus.	Staged completion of Green Trail projects on time and within budget

2009 Environmental Action Plan – Program Areas

The Environment Unit includes the following **program areas** through which the 2009 EMP Action Plan will be implemented:

UNSW Greenhouse and Carbon Footprint Reporting

The UNSW Environment Policy requires the University to prepare, publish and distribute an annual **State of the Environment Report** as a tool to track progress in implementing the EMP, celebrate successes, identify gaps and support continual improvement in environmental management. This incorporates annual reporting in compliance with the National Greenhouse and Energy Reporting Act 2007, and detailed supplementary reporting on the University's carbon footprint.

Green Buildings

UNSW has committed to the goal of 5 stars or better for new buildings and major refurbishments – a minimum of Australian best practice – through the Green Building Council **Green Star ratings**. This program supports this goal through development and implementation of systems and guidelines for environmentally responsible planning, design, construction and operation of the University's built fabric.

Green Laboratory

This program establishes and implements **environmental compliance induction training** for UNSW laboratory staff, and conducts environmental compliance and management audits which target areas of priority for achieving fundamental compliance with environmental regulations. The program works directly with Schools and non-academic units to develop recommendations to inform continual operational improvement in environmental performance.

Towards Zero Waste

This program develops and implements **integrated waste management** strategies and services to minimise waste and maximise resource recovery, reduce greenhouse impacts and conserve resources. One-stop-shop access to UNSW recycling and waste management services is provided on-line at: <http://www.recycling.unsw.edu.au>.

Environmental Assistance Program

This program directly **engages with and supports the UNSW community** and individual Schools/Units to achieve their own environmental objectives consistent with the Environmental Management Plan, targeting key areas such as office greening, sustainable transport and environmental auditing.

EcoColleges

This program provides expertise, support, and practical opportunities for **involving College residents and staff** in improving the environmental design and operational performance of UNSW student housing.

UNSW Green Trail

This program involves the staged establishment and enhancement of an integrated network of interpretive eco-tours on the Kensington campus, to **showcase the University's environmental initiatives** in campus operations, research and teaching.

UNSW Landcare

This program coordinates the involvement of staff, students and friends of UNSW in revegetation projects on UNSW properties and other significant sites to **enhance biodiversity and offset the University's transport-related greenhouse gas emissions**.

Environmental Leadership and Achievement Awards

This program provides **recognition to UNSW leaders** in applied environmental management, identifying individuals, Schools and non-academic units as role models, encouraging emulation across Faculties and Divisions and promoting UNSW as an environmental exemplar among the Go8 Universities.

Composting Facility

This program **diverts food waste** from UNSW retail food outlets and student housing waste streams for processing into composted products for application to UNSW grounds; thereby reducing associated greenhouse emissions, and UNSW reducing waste and associated waste service costs.

Energy and Water Saving Action Plans

This program comprises collaboration with and support for the Energy Management Unit in the staged implementation of the 2006 UNSW Water Saving Action Plan (WSAP) and 2007 UNSW Energy Saving Action Plan (ESAP). This includes operational projects, training and awareness ("Spot It and Stop It" program) and management of works as required, to reduce the consumption of energy and water resulting from University activities.

2009 Environmental Action Plan – Detailed Actions

OBJECTIVES	ACTIONS
<p>Achieve broad recognition of UNSW as a leader in applied environmental management</p>	<ol style="list-style-type: none"> 1. Formalise and expand scope to implement the Environmental Achievement and Leadership Awards across campus. 2. Facilitate and participate in relevant sectoral networks to foster knowledge exchange on key environmental issues. 3. Continue to provide regular contributions on campus environmental management to UNSW Media and Communications for external media
<p>Facilitate environmental training for relevant FTE staff and contractors</p>	<ol style="list-style-type: none"> 4. Develop generic overview “Environment at UNSW” and make universally available for induction of general staff/students 5. Provide general environmental induction / training input to Organisation and Staff Development Unit. 6. Develop specific online induction/training module for Facilities Management staff and contractors. 7. Continue roll out of Green Lab induction/training program across campus (see Page 8).
<p>Ensure staff access to information on UNSW Environment Policy and EMP</p>	<ol style="list-style-type: none"> 8. Continue to provide regular contributions on campus environmental management to UNSW Media and Communications for internal media 9. Continue to provide content for “Environment@UNSW” website and manage relevant discussion lists as required to support EU programs. 10. Continue to prepare and publish printed material (brochures, posters etc) as required to support EU programs.

OBJECTIVES	ACTIONS
<p>Facilitate compliance with environmental requirements by contractors and suppliers</p>	<p>11. Work with the UNSW Procurement Unit and Facilities Management across Environment Unit program areas to develop environmental specifications as relevant.</p> <p>12. Conduct “second party” environmental audits of strategic UNSW suppliers and report audit outcomes to the responsible contract manager.</p>
<p>Provide environmental leadership through annual “cutting edge” environmental reporting</p>	<p>13. Prepare 2009 Greenhouse report in line with NGER Act 2007.</p> <p>14. Continue to develop and extend UNSW carbon inventory in line with Australian greenhouse Office guidelines.</p> <p>15. Prepare, publish and distribute UNSW State of Environment report.</p>
<p>Maximise integration of the EMP with UNSW teaching and research objectives</p>	<p>16. Continue collaboration with the Institute of Environmental Studies, Kensington Group, Environment Network, Centres and Faculties to facilitate projects focused on campus environmental management.</p> <p>17. Support the delivery and evaluation of “environmental literacy” pilot course.</p>

OBJECTIVES	ACTIONS
<p>Ensure awareness by Faculties and Divisions of their obligation to manage their environmental legal compliance responsibilities</p>	<ol style="list-style-type: none"> 18. Develop additional on-line environmental compliance induction/training module for operational staff and contractors, and make available for integration into existing induction system. 19. Duplicate modules/user guidelines as required for Macintosh platform based delivery. 20. Continue staged implementation beyond Faculty of Science to all relevant Faculties and units. 21. Implement environmental auditing program as resources allow. 22. Expand program scope (to management in addition to compliance) as defined in ESAP and WSAP on provision of specified ESAP/WSAP funding. 23. Provide consultation/advice to support Legal Office establishment and maintenance of comprehensive UNSW environmental legal compliance register. 24. Formalise risk assessment criteria. 25. Conduct environmental compliance risk assessment using approved criteria and Legal Office environmental compliance register to identify significant environmental aspects and impacts of UNSW activities at Kensington Campus. 26. Formalise scope and priorities of audit program and authorisation to proceed, including allocation of roles and responsibilities in line with resource availability. 27. Develop and document environmental compliance audit protocols and procedures in prioritised areas. 28. Pilot and evaluate audit protocols, procedures and reporting framework. 29. Begin staged implementation of environmental compliance audit, and report findings and recommendations to management stakeholders. 30. Develop and document induction training and training delivery framework in prioritised areas as required. 31. Pilot and evaluate induction training, and associated procedures and systems. 32. Begin staged implementation of environmental compliance induction training program.

OBJECTIVES	ACTIONS
<p>Measure, monitor and reduce the University's carbon footprint</p>	<p>33. Continue and extend delivery of UNSW Landcare Program to UNSW properties².</p> <p>34. Develop and implement framework for data collection and calculation of greenhouse budget for compost facility.</p> <p>35. Continue environmental audits of UNSW organisations and facilities in conjunction with postgraduate Environmental Auditing course.</p> <p>See also targets and actions relating to monitoring and measurement under Environmental Reporting objective (Page 7), and actions relating to carbon reduction throughout this Action Plan.</p>
<p>Reduce consumption of energy and water</p>	<p>36. Implement the 2009 capital and operational recommendations of the UNSW Energy Saving Action Plan.</p> <p>37. Implement the 2009 capital and operational recommendations of the UNSW Water Saving Action Plan.</p> <p>38. Evaluate and select preferred tender for provision of agreed percentage of certified Green Power to UNSW.</p> <p>39. Progressively incorporate renewable energy generation capacity in UNSW capital works.</p> <p>40. Install borewater treatment facility on upper campus.</p> <p>41. Continue substitution of borewater for non-potable uses as appropriate.</p>

² UNSW investment in Landcare program in expectation of realising formal carbon abatement under the federal “Carbon Pollution Reduction” scheme.

OBJECTIVES	ACTIONS
<p>Achieve continuous increase in proportion of solid waste stream recovered for high resource value use.</p>	<ul style="list-style-type: none"> 42. Maintain and promote existing Towards Zero Waste programs. 43. Maintain recycling website and associated procedures. 44. Advise on inclusion of relevant specifications into waste and recycling contracts. 45. Engage with and support retail outlets to minimise use of single use disposable items. 46. Develop and document waste and recycling guide for retail outlets consistent with lease terms and conditions. 47. Develop and deliver associated induction program for retail outlets. 48. Install screen planting at the compost facility site for visual screening and dust suppression. 49. Conduct an odour study prior to occupation of Campus Living Villages student housing. 50. Conduct top dressing trial with UNSW Grounds and provide support for continued beneficial application as substitute for commercial top dressing products. 51. Conduct condensate trial with UNSW Grounds and provide support for continued beneficial application as liquid fertigation. 52. Implement stage 2 of student research project on dewatering systems/technologies to optimise processing efficiency and cost effectiveness of food waste composting plant. 53. Trial alternative bulking agents and compost recipe to optimise processing efficiency and cost effectiveness of food waste composting plant. 54. Conduct mulch performance longevity assessment to inform product specification for purchase of most cost effective products. 55. Develop OHS plan and Quality Management System for compost facility. 56. Initiate insectary plantings trial to evaluate opportunities for reduced pesticide application via perennial IPM plantings.

OBJECTIVES	ACTIONS
<p>Design, build and demolish in accordance with ESD principles</p>	<p>57. Continue provision of ESD input to Lowy Cancer Research Centre, COFA redevelopment, Engineering Precinct, and other major projects as required.</p> <p>58. Provide ESD advice and assessment against Green Star principles for minor/medium capital works.</p> <p>59. Continue liaison on ESD matters with Campus Living Villages (High Street student housing).</p> <p>60. Review and update UNSW Design and Construction Guidelines from ESD/Green Star perspective as required.</p> <p>61. Develop and implement formal post-occupancy evaluation framework for UNSW buildings/facilities.</p> <p>62. Continue POE of UNSW buildings/facilities in conjunction with postgraduate Sustainability and Habitability course.</p> <p>63. Initiate pilot Green Star Existing Building assessment.</p>
<p>Enhance the campus experience for the UNSW community</p>	<p>64. Continue to enhance, extend and implement and promoter the campus “Green Trail” program.</p> <p>65. Integrate compost facility, D11 photovoltaic array, borewater treatment plant and aquifer recharge system into the Green Trail.</p>