Environmental Sustainability Report 2010

Produced by Sustainability Office
Property and Facilities Division
The University of Queensland
on behalf of the
Sustainability Steering Committee

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

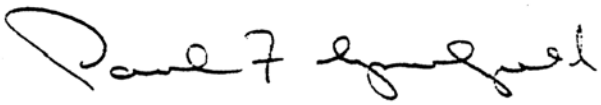
CONTENTS

SUSTAINABILITY FOCUS

The University of Queensland consolidated its work to integrate sustainability throughout teaching, research and operational activities in 2010. This report gives an overview of efforts and achievements, which include:

- The launch of the UQ Sustainability website
- Continuing development and implementation of a university-wide carbon strategy
- The launch of the Global Change Institute
- A focus on sustainability in staff and student Environment Day engagement
- Expansion of the Green Office Program to include over 100 representatives in 100 UQ schools, centres and administrative units
- Development of a waste minimisation plan
- A concern to incorporate sustainability features in the design of new buildings
- Regular meetings by the Sustainability Steering Committee of senior university executives.

For sustainability to be fully realised in a large and established institution like UQ, it must be part of our cultural essence. I thank the many staff, students and community and industry partners who are helping to positively transform attitudes, policies and practices throughout the University.



Professor Paul Greenfield AO
Vice-Chancellor

EMBEDDING A SUSTAINABLE CULTURE

Our strategy and framework

Sustainability Steering Committee (SSC)

The Sustainability Steering Committee is The University of Queensland's senior management committee tasked with establishing an environmentally sustainable culture throughout the University.

The committee provides leadership, direction and coordination of UQ's response to sustainability challenges.

In 2010 it approved and implemented a corporate Sustainability Communication Plan to raise awareness and establish UQ as a leader within the tertiary education sector.

It has also overseen the implementation of the Trial Energy Savings Project which will see strategies for greenhouse gas emissions developed for the whole University.

Sustainability Engagement Working Group

In late 2010 the formation of the Sustainability Engagement Working Group was approved. This group is tasked with engaging stakeholders in embedding sustainability on all of its campuses and sites, and across all areas of learning, discovery and engagement.

The Working Group will be established in early 2011 with members who will represent a cross-section of the University community.

Sustainability Teaching and Learning Working Group

The Teaching and Learning Working Group was established in 2010 by the SSC in response to gaps identified between UQ's practices and the requirements of the Talloires Declaration and Universitas 21 statements.

The Working Group membership includes the Deputy Vice-Chancellor (Academic); Dean, Office of Academic Programs; Director, Global Change Institute; Director, Sustainability Business Unit; and Deputy Director, Property and Facilities Division. The group held three meetings in the second half of 2010 and is focused on integrating sustainability into teaching and learning activities.

Renewable Energy Project Control Group

A Renewable Energy Project Control Group, chaired by Professor Max Lu, Deputy Vice Chancellor (Research Linkages), was formed in 2009. The group, consisting of some of UQ's best renewable energy researchers as well as Property and Facilities staff, has been busy getting a large on-site solar project off the ground at the St Lucia campus.

Our partnerships

The University has established a number of external partnerships with industry in the sustainability arena. For example, the installation of the 1.22MW photovoltaic array at the St Lucia Campus has fostered the following industry partnerships:

- Queensland Government Office of Clean Energy
- Redflow Technologies
- Ingenero
- Trina Solar
- Energex
- Tritium

In 2010 The University of Queensland received $25,000 from the Australian Food and Grocery Council's Packaging Stewardship Forum (PSF), to improve its public place recycling infrastructure.

While the University is proactively improving the sustainability of its operations through the installation of public place recycling infrastructure the initiative also contributes to UQ's and the PSF's objectives of increasing the collection of PET bottles, glass bottles and aluminium cans for recycling and reducing waste to landfill.

This project resulted in the installation of seven new recycling stations at the St Lucia campus.

Sustainability defined

A widely accepted definition of sustainability is to "meet the needs of the present without compromising the ability of future generations to meet their own needs." (Brundtland Commission, 1987)

EMBEDDING A SUSTAINABLE CULTURE

Our progress so far

UQ's ongoing commitment to sustainability

The University's commitment to sustainability continues to develop from senior management's formal recognition of the need for action in 2009. The Sustainability Steering Committee (SSC) has continued to meet through 2010. While working on delivering real sustainable outcomes, it has also supported further strengthening of this commitment.

A Sustainability Policy to formally embed sustainability in the University's decision-making processes has been agreed with SSC and is being finalised for referral to Senate in 2011. Working parties, both formal sub-committees of SSC and operational groups to target specific areas of improvement and engagement, have been supported. Commitment to formal industry agreements have also been made to further enhance management's own sustainable vision of UQ.

The Talloires Declaration for sustainability in higher education and Universitas 21 Sustainability Agreement are two such commitments to which UQ is a signatory. These will incorporate sustainability and environmental literacy in teaching, research, operations and outreach and emphasise UQ's role in facing challenges of climate change, the decline of biodiversity, the need for energy, food and water security, economic sustainability and human health.

During the year, the University undertook a gap analysis to identify variances between current practices and the goal of these commitments. The findings of this report have been used to focus efforts, including establishing the Sustainability Teaching and Learning Working Group to strengthen sustainability in the University's curriculum.

Sustainability Communication Plan

In 2010 a Sustainability Communication Plan was developed and implemented to focus on raising awareness about the University's goal to embed sustainability into all areas of its activities.

Highlights included:

- New corporate Sustainabilty website was developed and launched
- New Sustainability email was set up as a central point for both internal and external stakeholders to contact the University about sustainability related items
- An eight page Sustainability feature was included in the July
- Regular articles were placed in UQ Update - the weekly staff newsletter
- New Switch Off Save Energy stickers were produced and distributed to staff to use to raise awareness about energy efficiencies
- A Sustainability survey was sent out with results highlighting that staff want UQ to be a leader in sustainability

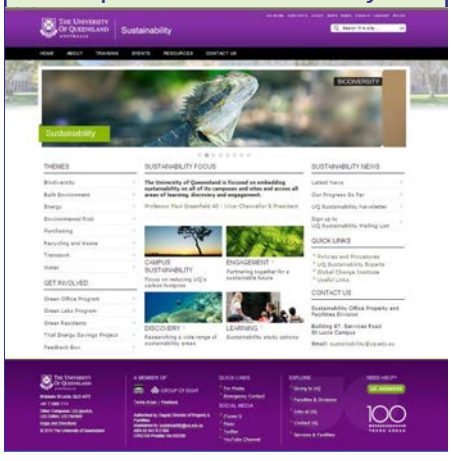
New UQ Sustainability website launched in 2010

UQ's new Sustainability website, launched on Friday 4 June 2010, is a one-stop-shop for information about how UQ is embedding sustainability into all research, teaching and operational activities.

The site provides information on topics as diverse as energy, transport, water, biodiversity, the built environment, environmental risk, purchasing, recycling and waste.

It highlights sustainability courses, a range of sustainability-related research and sustainable initiatives being implemented on UQ's campuses and sites.

UQ Sustainability website
www.uq.edu.au/sustainability



CAMPUS SUSTAINABILITY

UQ's carbon strategy

To focus its carbon management initiatives, UQ is currently developing carbon management goals.

The goals will identify UQ's priorities and establish mechanisms for achieving meaningful carbon reductions. These are being developed for endorsement by the Sustainability Steering Committee.

Legal requirements

National Greenhouse and Energy Reporting Act (NGER)

In October, UQ submitted its second annual report to the Federal Government under the *National Greenhouse and Energy Reporting Act* to comply with the University's statutory reporting obligations. The report detailed UQ's total carbon emissions for 2009/10.

Comprehensive monitoring of the University's greenhouse gas emissions is an ongoing requirement and UQ will submit a report annually.

Energy Efficiencies Opportunities Act (EEO)

In early 2010, UQ commenced the Energy Efficiency Opportunities program, a mandatory Federal Government program for Australia's largest organisations. From 2011, the University will be required to undertake comprehensive energy assessments and report (publicly and to government) on energy saving opportunities identified.

In December, UQ submitted its assessment and reporting schedule in which it committed to undertaking representative assessments of the significant energy using activities across four campuses within five years. Projects that emerge from these assessments will be assessed for practicality of implementation and the results published.

Energy and Emissions report 2009/10

The following table details the energy and emissions reported for financial year 2009/10.

Tonnes of carbon dioxide equivalent emissions				Energy (Giga Joules)	
	Scope 1	Scope 2	Total of Scope 1 & 2	Energy Consumed	Energy Produced
2009/10 Total	3,523	123,686	127,209	539,991	68

CAMPUS SUSTAINABILITY

UQ's carbon footprint

During financial year 2009/10, The University of Queensland emitted a total of 200,394 tonnes of carbon di-oxide equivalent (CO2-e) emissions.

The University's key greenhouse emissions are those that are linked to the following activities:

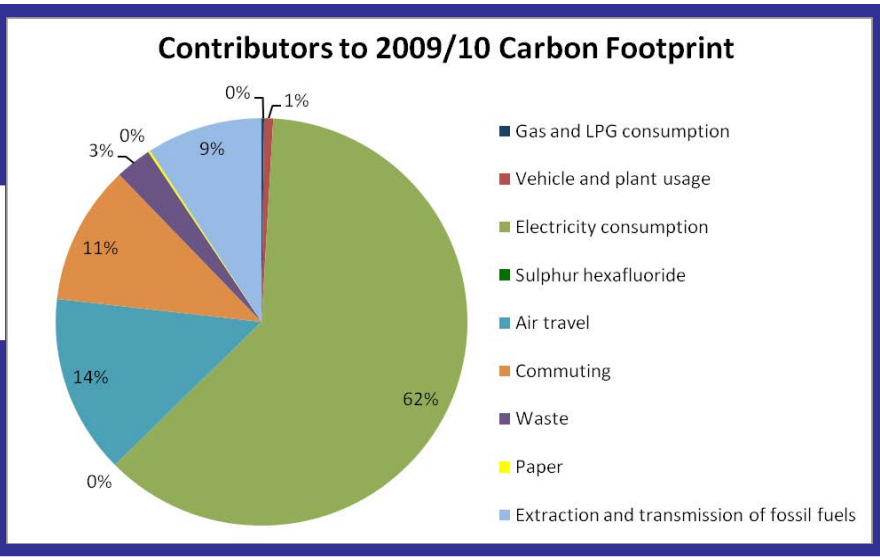
- electricity consumption
- air travel
- commuting
- waste management

In addition to these, UQ has also calculated its emissions for vehicle and plant fuels, natural gas, embodied energy in paper, sulphur hexafluoride used in electrical switchboards and microscopes and indirect emissions associated with the extraction and transmission of gas, electricity and fuels used by the University.

The following table outlines the emissions relating to UQ during the periods 1 July 2008 to 30 June 2009 and 1 July 2009 to 30 June 2010 and the graph illustrates the breakdown of emissions for 2009/10.

Activity	Emissions (tonnes of CO2-e)		
	2008/2009	2009/2010	% Change
Gas and LPG consumption			
Purchased natural gas directly from a retailer	347	349	0.6%
Purchased LPG directly from a retailer	48	48	0.0%
Vehicle and plant usage			
UQ owned vehicles	1,274	1,268	-0.5%
UQ owned plant	143	152	6.3%
Electricity consumption			
Purchased directly from an electricity retailer	120,067	123,506	2.9%
Sourced through a third party	181	180	-0.6%
Sourced from back-up power generators	1	1	0.0%
Sulphur hexafluoride			
Electrical switchgear	4	5	25.0%
Microscopes	2	2	0.0%
Air travel			
Domestic and international air-travel on commercial airlines	35,089	28,389	-19.1%
Commuting			
Staff and student commuting emissions to St Lucia campus	22,148	22,148	0.0%
Waste			
General waste to landfill	1,407	1,437	2.1%
On-site incineration	988	1,398	41.5%
Off-site incineration	72	72	0.0%
On-site waste water treatment (Gatton Campus)	480	299	-37.7%
Off-site wastewater treatment	2,539	2,539	0.0%
Paper			
Embodied energy from paper purchased	398	353	-11.3%
Extraction and transmission of fossil fuels used			
Extraction and transmission of natural gas	36	37	2.8%
Extraction and transmission of LPG	65	65	0.0%
Extraction and transmission of fuels for UQ owned vehicles	95	96	1.1%
Extraction and transmission of fuels for UQ owned plant	12	11	-8.3%
Extraction and transmission of electricity	17,152	18,040	5.2%
TOTAL	202,547	200,394	-1.1%

Our focus ... to reduce our carbon footprint



CAMPUS SUSTAINABILITY

Our commitment to renewable energy

1.22MW flat panel array install at St Lucia campus

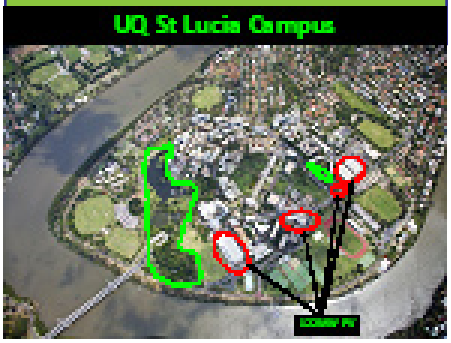
UQ will show leadership as a generator and user of solar energy and also as a provider of internationally recognised teaching, research and development in the area of solar technology. With State Government funding, UQ is making a real investment by deploying Australia's largest flat panel photovoltaic array.

The new project, valued at $7.75 million, began construction in August 2010 and is scheduled for completion in 2011. The state-of-the-art high-efficiency panels will be installed on the two multi-level car parks, the UQ Centre and the Sir Llew Edwards building and will cover a surface area equivalent to about one-and-a-half rugby fields.

The system will feature a 1.22 megawatt (MW) solar photovoltaic installation capable of producing 1759 MWh of electricity a year. It is expected to generate about six percent of the St Lucia campus' average peak demand and 1.6 percent of its annual electricity usage, resulting in a $6 million saving on electricity costs over the next 15 years. The system will save 1750 tonnes of greenhouse gas emissions annually – equivalent to taking 335 cars off the road. It will also be a resource for students and staff, who will use the array to help develop next-generation solar technologies.

A deal has also been signed to connect the University's 1.22 MW solar photovoltaic system to a prototype zinc-bromine battery-based energy storage system. The energy storage system will allow clean energy generated while the sun is shining to be fed back into the grid at evening peak times, when electricity is most valuable and demand is the highest.

The prototype RedFlow 200 system, rated at 200 kW, will be linked to a 390 kW section of the UQ PV array, and the performance of those panels will be compared with an identical section with no storage. Energex is supplying advanced metering and monitoring equipment to provide high-quality data for analysis, to support world-leading research into the impact of renewable solar energy on the grid.



The first photovoltaic solar panels were installed on the UQ Centre building, St Lucia campus on 30 November 2010. Panels will also be installed on the multi-level car parks and Sir Llew Edwards building in 2011.

CAMPUS SUSTAINABILITY

Other solar projects on UQ campuses and sites

25 kW of solar energy was installed as part of the School of Veterinary Science relocation project at Gatton campus. The polycrystalline silicon solar panels, located on the roof of Building 8167 have been generating renewable energy for the UQ Gatton campus since June 2010.

The University of Queensland, with Voyagers Resort and Queensland Parks and Wildlife, have been successful recipients of a Federal Government Green Precincts Fund project prepared and submitted by Wide Bay Water Corporation. UQ has contributed $260,000 to the Solar Power component of the project with the balance being provided by Wide Bay Water Corporation and the Federal Government.

The solar project, completed in August 2010, comprises an installed capacity of approximately 54.6 kW which represents about 45 percent of the research station peak demand.

The new installation will significantly reduce the carbon footprint of the research station which relies on diesel generators for its electricity.

Solar panels on Building 8167 - Gatton campus

New solar installation at Heron Island Research Station

EMBEDDING SUSTAINABILITY ON OUR CAMPUSES AND SITES

Biodiversity

The University of Queensland's campuses have a diverse range of fauna and flora, with some species specific to the area.

The St Lucia Lakes Precinct comprises one large freshwater lake and two smaller water bodies within a parkland setting. It has been developed to attract flora and fauna.

The Gatton campus Environmental Park is a great example of UQ's commitment to the environment and sustainable management of its buildings and grounds.

The project, jointly funded by the University and Greening Lockyer, has transformed the former golf course and surrounds, including Lake Galletly, into a 10 hectare bushland park. The park includes animal shelters, bird-watching hides and a revegetated native forest.

The first work began in 2004 with more than 50 nesting boxes being placed around the precinct for native animals and birds. The precinct now has 600 metres of walkways and more than 1000 trees.

UQ's Ipswich campus is privileged to have a number of Cooneana Olive plants (Notelaea ipsviciensis), an extremely rare plant native to the Ebbw Vale to Dinmore area of Ipswich. The Ipswich campus is also aiming to gain status as a Land for Wildlife site in 2011.

Built environment

UQ Global Change Institute

The initial design of the proposed GCI building was developed in 2010 with the building expected to be completed in 2012.

The building will:

- Demonstrate cutting-edge architecture and engineering for sustainable design and construction
- Incorporate a central control and monitoring facility linked into campus renewable energy systems, including the proposed new 1.22MW PV solar array
- Utilise "smart building" energy demand management systems
- Incorporate teaching and demonstration facilities for sustainability, low-emission energy technologies and water management.

Proposed GCI Building

Advanced Engineering Building (AEB)

Subterranean corridors to be built under the new $130 million Advanced Engineering Building (AEB) - on the western side of the UQ Lakes - will act as air ducts and form part of the building's energy-efficient design.

The AEB will use just 70 percent of the energy used by other similarly sized buildings, most through the use of such "passive" features.

The building will also be fitted with a range of monitoring equipment so staff can measure solar controls, daylight, air quality, solar hot water and electricity produced by building renewable energy systems.

Construction commenced in November 2010 and is due for completion in October 2012.

Legal compliance

The University of Queensland maintained numerous registered activities throughout 2010 without regulatory issues. These activities included such diverse activities as storing bulk flammable and combustible liquids, in-house operation of the Gatton sewage treatment plant and emissions reporting.

Throughout 2010, there were no identified "off-design" performance issues that required exemption reporting to regulatory authorities. This could be attributed to the ongoing diligence of the staff directly involved in the operation of these activities and continual improvement of systems that have eliminated the failures that resulted in minor non-compliances in 2009.

With some changes to legislation taking effect in 2011, the University is already engaged with external parties and stakeholders to ensure the necessary changes will be implemented for the continued compliance of these activities.

The University also met its reporting obligations for energy and carbon management by submitting its second annual National Greenhouse and Energy Reporting Scheme report in October and its compliance plan for Energy Efficiencies Opportunities in December to the Federal Government.

EMBEDDING SUSTAINABILITY ON OUR CAMPUSES AND SITES

Energy

In July 2010, UQ appointed an Energy Manager to help develop policies and programs to improve the University's energy efficiency.

An outside consulting firm conducted energy audits of 10 buildings on the St Lucia campus and the Centre for Advanced Animal Research at Gatton campus and delivered the results in the second half of 2010. These audits have been reviewed and their recommendations prioritised.

Towards the end of 2010 a number of surveys and trials were conducted to confirm the practicality of the recommendations. As a result plans are in place to implement the results of the audits in the first half of 2011. Audits of three of the St Lucia chilled water precincts and the buildings served by each of the precincts are scheduled for 2011. An audit of the Ipswich campus is also planned.

A joint UQ and Wide Bay Water project, under the auspices of a green precincts program, was completed at the Heron Island Research Station.

The objective of the project was to reduce the use of diesel on the island for power generation through a combination of PV panels and energy efficiency initiatives. The latter included steps to improve water use efficiency to, in turn, reduce the amount of electricity used by the reverse osmosis equipment to produce potable water. Improvements were also made to the operation of air conditioning, the sea water system that supplies the research aquaria and several other items of plant and equipment.
Work is already underway to investigate means to improve the energy efficiency of the Moreton Bay Research Station. Options under consideration include installation of PV panels, conversion of electric hot water heating to solar heating, use of window film to lower air conditioning loads and improvement to lighting.

A major review of the way UQ meters and measures the way energy is used on the campus is underway and scheduled for completion by the end of 2011. The focus is on better measurement of electricity and chilled water use so that opportunities for improvement can be identified. It is quite likely that additional chilled water and electrical meters will be installed during the year so that a more complete picture of energy use in major buildings at St Lucia is possible.

Purchasing

Procurement Policy

A new State Procurement Policy came into effect from 1 September 2010 and according to the Department of Public Works, "The new Policy implements the procurement-related reforms contained within the Queensland Government's Response to Integrity and Accountability in Queensland, released in November 2009."

The new policy also contains incremental improvements to enhance sustainable procurement provisions and reinforce agency obligations to consider opportunities for local suppliers during procurement planning.

New Sustainable Procurement Working Group

A new Sustainable Procurement Working Group will be looking at how UQ can best comply with the State Procurement Policy in the area of sustainable procurement and has begun to develop guidelines for procuring paper, IT equipment and office equipment.

EMBEDDING SUSTAINABILITY ON OUR CAMPUSES AND SITES

Recycling and waste

Waste Minimisation Plan

As part of UQ's commitment to sustainability, the Sustainability Office has developed a Waste Minimisation Plan (WMP) with actions to be implemented throughout 2011 and 2012. The plan is strategically linked with the UQ EMS and the Carbon Management Strategy as it targets minimising waste at UQ.

The development and implementation of the WMP ensures that the University moves toward a goal of producing less waste, and managing waste that can't be eliminated as a resource to deliver economic, environmental and social benefits in line with the National Waste Policy 2009.

It is proposed that three working groups will be established in 2011 to separately focus on sustainable procurement, green ICT and reuse, recycling & disposal. These groups will be operational groups charged with the development and implementation of strategies and the implementation of key actions that ensure the University meets the requirements of national and state waste minimisation policies and waste legislation, whilst reducing the carbon footprint and other environmental impacts associated with the purchase, use and disposal of products and services acquired by the University.

National Waste Policy and legislation

In 2009, a National Waste Policy was released by the Environment Protection and Heritage Council, in July 2010, an implementation plan relating to the policy was released. The policy and implementation plan establishes Australia's waste management and resource recovery agenda across six key directions for the period to 2020.

UQ's WMP was developed in line with these directions.

Queensland's waste strategy 2010-2020 was released in June 2010 and new waste legislation is to be introduced in 2011 including a new waste levy and product stewardship legislation.

Waste minimisation – Public Place Recycling

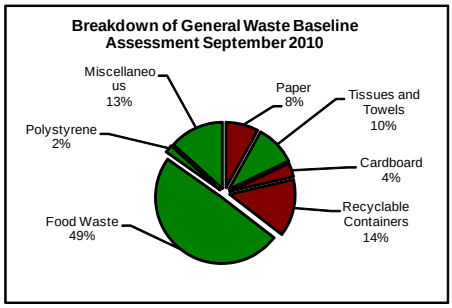
New permanent bin enclosures were added to Campbell Place and the Great Court at the St Lucia campus as part of an upgrade of the University's public place recycling system in 2010. The bins have been installed with the nationally recognised "Do the Right Thing" message. The installation of the bins was partly funded by the Packaging Stewardship Forum. A program launch and further installations are planned at the St Lucia campus in 2011.

To measure the success of the recycling program, waste assessments were conducted in September 2010 and October 2010 with further assessments to be conducted in March 2011.

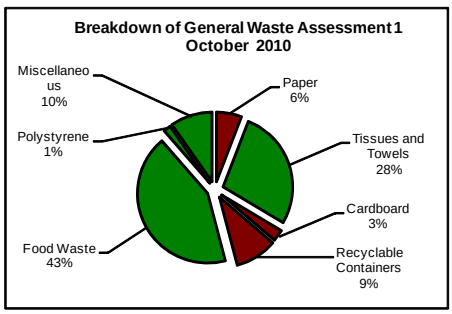
The purpose of the monitoring is firstly to give the University a baseline from which to improve the public place recycling system and then to measure the rate of success of the new system.

2010 Waste Audits

The waste streams were broken down into components as shown in the graphs below. This allows UQ to determine the rate of resource loss whereby recyclables are deposited in general waste and the rate of resource recovery through recyclables collected for recycling and therefore redirected from landfill.



The baseline assessment in September showed that 25.54% of the general waste stream was made up of recyclable items; of which 14.08% were recyclable containers (glass, plastic and aluminium), 8.03% paper and 3.42% cardboard.



Results of the October assessment indicated a 29% improvement in resource recovery compared to the baseline assessment. This assessment also told us that the contamination rate in the recycling bins is around 22%. In total,55% of the waste from the Great Court and Campbell Place are being diverted from landfill.

EMBEDDING SUSTAINABILITY ON OUR CAMPUSES AND SITES

Transport

Expansion of UQ Lakes Bus Terminal

It is four years since the opening of the Eleanor Schonell Bridge and UQ Lakes Bus Stop. The bridge link and bus service has been an overwhelming success, reducing travel time to the CBD and improving access to the St Lucia campus. Patronage has been so good that Translink has increased its services and is considering expansion of the existing UQ Lakes Bus Station.

This development, combined with the completion of the Boggo Road busway link, has created a dedicated busway to the City with a travel time of approximately 13 minutes and a "metro" link bus every 5 minutes.

The new 1.5km Boggo Road Busway provides dedicated public transport to UQ St Lucia from the whole of the busway network. This equates to in excess of 600 buses and 13,000 passagers per day in both directions. Bus services to Chancellor's Place have also been expanded over the past 12 months.

New bike racks

In 2010, 20 new bike racks were installed at St Lucia campus, to increase bike parking capacity for an additional 80 bikes. The new bike racks are located on the eastern wall of Duhig Library, southern wall of General Purpose North 3 building, and near the UQ Lakes Bus Stop in the lakes area.

The seven old bike racks, located in the lakes area, have been taken away for refurbishment and will be installed in the near future off University Drive on the southern side of Duhig North building, increasing the parking for bikes by 28.

Bike Rack Competition

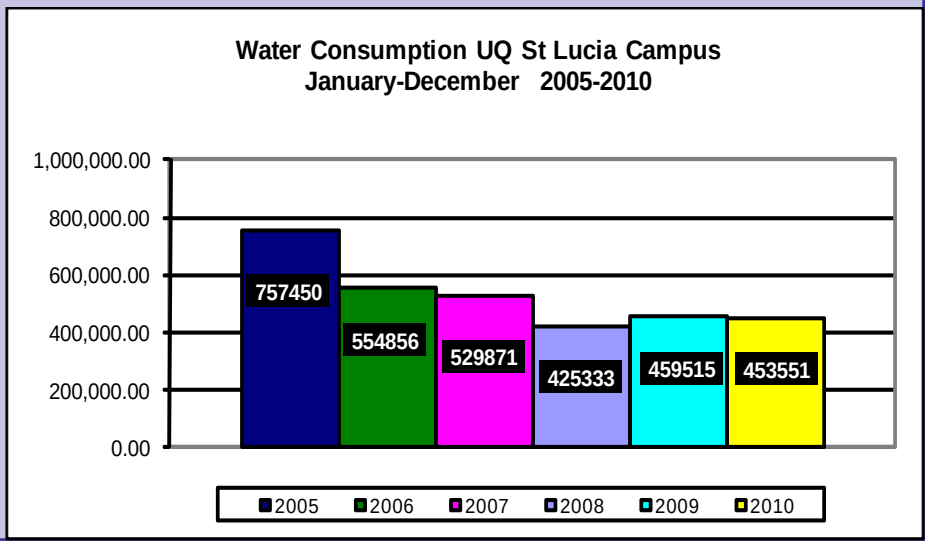
UQ's Property and Facilities Division ran a Bike Rack Competition in 2010 to encourage students to submit innovative bike rack designs that could be used on campus.

The top six designs were of excellent quality and the top three designs will be used to place further bike racks on campus.

Water Management

No major leaks were detected at any of the sites or campuses during 2010. The Brisbane City Council water meter at the St Lucia campus was faulty from January to August 2010, so consumption has been determined using data from building meters along with comparisons with past consumption data. The data shows a slight decrease in total water consumption at the St Lucia campus during 2010 as well as a decrease in the Key Performance Indicator kL/m^2 which has dropped from 0.98kL/m^2 to 0.94 kL/m^2. This remains below the University's consumption target of 1.1kL/m^2.

The University of Queensland is now only required to report annually on actions outlined under the Water Efficiency Management Plans and consumption related to sites and cooling towers, instead of quarterly. The University has completed all actions under all site WEMPs with only the ongoing items such as monitoring and auditing continuing. The WEMPs will be reviewed in 2011.



A SUSTAINABLE WORK ENVIRONMENT

Environment Day Event

The Environment Day activity, held on June 4, provided an opportunity for Professor Paul Greenfield, Vice-Chancellor, to speak about sustainability challenges for Australia and UQ.

One of the key points he discussed was UQ's focus toward sustainability as a triage to achieve top-management commitment, to embed sustainability into all of UQ's operational activities, and to communicate achievements.

A highlight of the event was the launch of UQ's Sustainability website: http://www.uq.edu.au/sustainability and presentation of the Green Office Awards for Most Improved Area, the School of Social Science (Bridget Waugh) and Best New Area, Student and Administrative Services Division – Examinations (Jane Fisher).

Professor Paul Meredith, Centre for Organic Photonics & Electronics, also spoke and discussed Renewable Energy Projects at UQ. He highlighted that UQ will have the largest solar panel grid (1.22MW) in

Environmental training and awareness

Environmental training and awareness activities are conducted across UQ campuses as required. Activities carried out in 2010 included:

- Environmental training sessions through the University's Staff Development program
- Environmental training sessions through UQ Schools and Institute Induction programs
- Contractor Induction Program
- Green Office Program Information and Update sessions
- Stalls at Orientation Week Market Days
- Environment Day activities

Sustainability stall at New Staff Induction Expos

UQ launched a new initiative in 2010 where new staff are invited to attend an expo and obtain information on a variety of areas within the University community.

The Sustainability Office took the opportunity to be involved in the New Staff Induction Expo. The Green Office Program, environmental training programs, environmental information and the new UQ Sustainability website were among the many initiatives promoted at the event.

National Tree Day 2010

On Friday 30 July, staff, students, families and friends of the University came together to participate in the University's first National Tree Day planting activities.

One hundred and fifty dry rainforest species, endemic to the region, were selected to enhance a small grove of mature native hoop pines and fig trees at Ipswich campus. The trees were planted between the Activity Centre and the Bremer State High School Site.

On Sunday 1 August at the St Lucia campus, 250 trees, shrubs and groundcovers were planted along the riverbank in a land for wildlife area.

The carefully selected trees and shrubs planted on each campus will play an important role in enhancing the natural biodiversity in the regions.

ENGAGING STAKEHOLDERS

Green Office Program expands to over 100 areas in UQ's centenary year

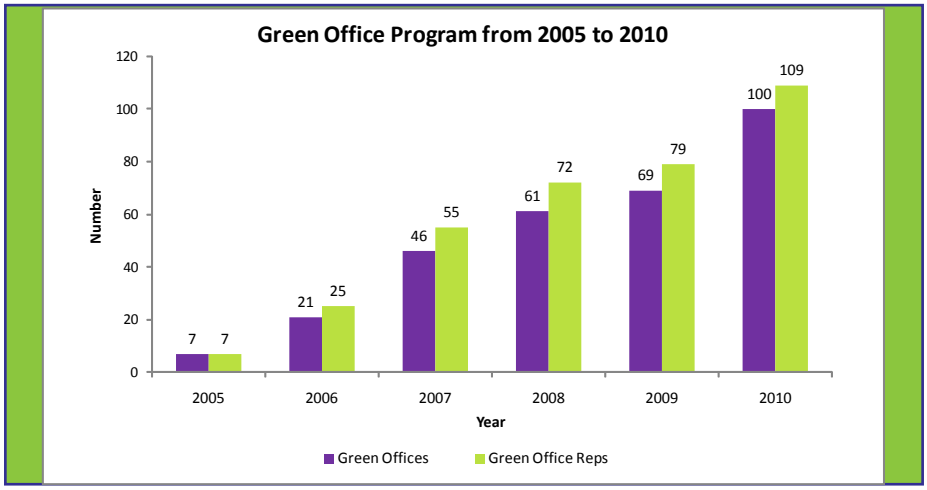
On Wednesday 24 November 2010, the Green Office held a lunch for all representatives in honour of reaching 100 representatives and 100 areas.

During the event there were five Green Office certificates handed out. Recipients were:

- Nalini Seethapathy (Faculty of Science) for being the 100th Representative
- Centre for Nutrition and Food Sciences for being the 100th Area represented by Nima Gunness
- Nicole Connolly (Traffic and Parking, P&F) for being a representative of the program since its formation in 2005
- Tony Lam and Alice Liang (Faculty of Business Economic and Law) for being representatives of the program since its formation in 2005

L-R Nima Gunness, Tony Lam, Nicole Connolly, Nalini Seethapathy and Alice Liang

Nalini Seethapathy - 100th Green Office Representative



Stepping out of the office at Ipswich and St Lucia campuses

On a spring day in Ipswich, Green Office representatives and guests had an opportunity to listen to a talk and guided walk by Mark Glindemann, P&F Maintenance Manager, Ipswich.

Representatives learned about the history of the Ipswich region and the campus Landscape Management Plan which was implemented in 2006. On the guided walk, Mark pointed out the Cooneana Olive (*Notelaea ipsvicensis*) plant, which is one of the rarest plants in the world and is critically endangered. Mark also pointed out the Gymea Lilly (*Doryanthes excels*) plant with its beautiful red flowers, an important food source for native wildlife. Attendees were even fortunate enough to see a koala sleeping on the branch of a eucalyptus tree.

St Lucia Green Office representatives also enjoy a guided walk on 8 September, Guest speaker, Shane Biddle, P&F Senior Supervisor Grounds, delivered a presentation and guided walk around the St Lucia campus. Green Office representatives were informed about revegetation projects at the UQ Lakes and stabilisation strategies for the river banks of the Brisbane River.

The walk concluded at the Alumni Teaching Garden where work is being undertaken to restore the area.

St Lucia Green Office presentation

Ipswich Green Office presentation

EMBEDDING SUSTAINABILITY IN DISCOVERY

Sustainability is a key focus and driver for University of Queensland discovery projects. Many discipline areas, including energy, business, mining, food production,environment, urban planning and development, clean water, architecture and construction share this sustainable focus.

UQ is actively pursuing a vast range of research and development projects, many of them multi-disciplinary, such as those undertaken by the new Global Change Institute. The University also leads the Terrestrial Ecosystem Research Network (TERN), a new national partnership between government agencies and universities to develop collaborative infrastructure that will facilitate enhanced ecosystem research.

The Sustainable Minerals Institute is a world leader in providing knowledge-based solutions to the sustainability challenges of the global minerals industry, while the Ecology Centre is exploring ways to conserve terrestrial, aquatic and marine species and their habitats and ecosystems within Australia and abroad.

The Institute for Social Science Research has developed a Sustainability and Environment Research Program which examines the social, political and institutional aspects of sustainable development, particularly in urban and regional Australia.

UQ is also a world leader in clean energy research spanning geothermal, biofuels, intelligent grids and network systems and energy economics. For example, The Centre for Organic Photonics and Electronics (COPE) is exploring new solar cell technology.

In May, the State Government granted $2 million to a UQ-led consortium aiming to produce environmentally friendly aviation fuel from algae. This support means the St Lucia campus will become the hub for world-first aviation biofuel research, which has Boeing, Virgin Blue and Amyris as partners.

Professor Paul Meredith, Centre for Organic Photonics and Electronics (COPE)

Global Change Institute launched in 2010

The Global Change Institute (GCI), which addresses the problems of a rapidly changing world, was launched in March 2010 by Dr Penelope Wensley AO, Governor of Queensland.

GCI represents a significant commitment by the University to focus on global challenges.

The Institute, lead by Professor Ove Hoegh-Guldberg, will focus on some of the biggest challenges: climate change, population growth and changing technology, and will draw on expertise from around the globe.

Construction of a new $30 million building to house the GCI will commence in 2011 and is expected to be completed in 2012. The building will be an example of modern green technology in action. It was made possible by a $15 million gift by alumnus and co-founder of Wotif.com Graeme Wood. The building will employ sustainable design, construction and operating practices. It will house the control room of Australia's largest flat panel solar photovoltaic electricity generator to be constructed at the St Lucia campus.

The GCI aims to consolidate UQ as a leader in the analysis of complex problems, while providing a platform for both UQ researchers and the community.

EMBEDDING SUSTAINABILITY IN LEARNING

In 2009, The University of Queensland became a signatory to both the Universitas 21 Sustainability Declaration and the Tallories Declaration.

A gap analysis has been undertaken to develop an action plan for the University to meet the requirements of this agreement.

A working group was established to integrate sustainability into teaching and research programs.

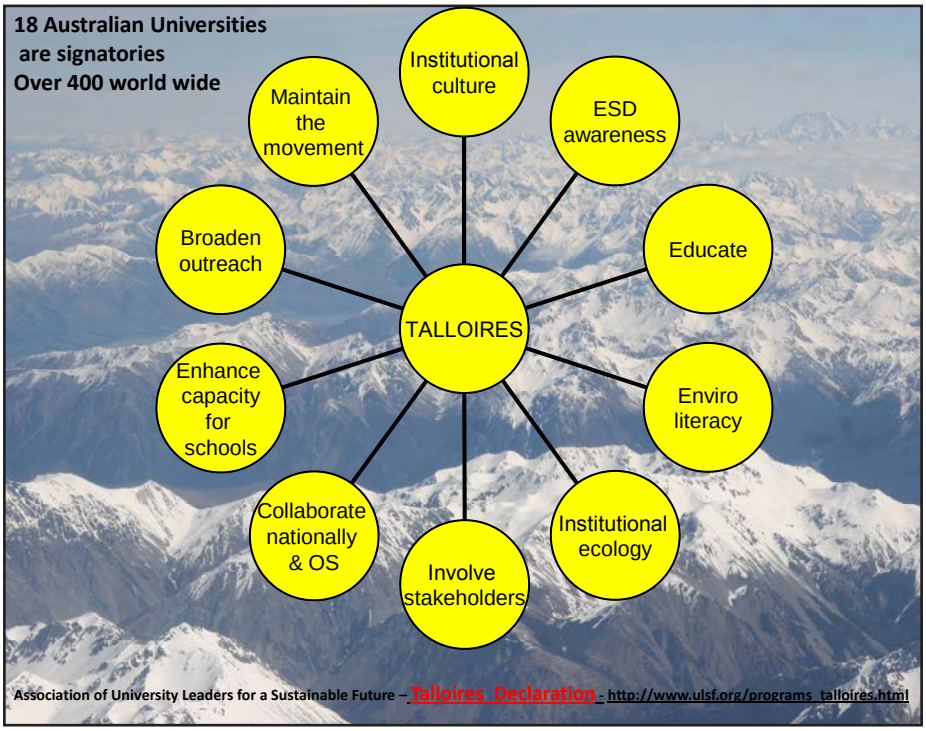
New Sustainability Teaching and Learning Working Group formed in 2010

The membership of this working group is:

- Professor Deborah Terry, Deputy Vice-Chancellor (Academic)
- Professor Ove Hoegh-Guldberg, Director, Global Change Institute
- Professor Mick McManus, Dean Academic Programs
- Professor Andrew Griffiths, Deputy Director, Global Change Institute
- Geoff Dennis, Deputy Director, Property and Facilities

The role of this group is to work towards meeting the requirements of the Tallories Declaration and the Universitas 21 Sustainability Declaration.

In late 2010, the Working Group developed an outline for a University wide undergraduate sustainability program. This is intended to be developed during 2011 and 2012, for implementation in 2013.



Students contribute to embedding sustainability at UQ

The Green Office Program has developed and expanded over the past five years due to our partnership with a total of six dedicated UQ students that have worked in the Sustainability Office over that time.

This strategy provides the students with valuable experience and has been an excellent resource for the Sustainability Office. The expansion of the program has only been possible with the assistance of our students.

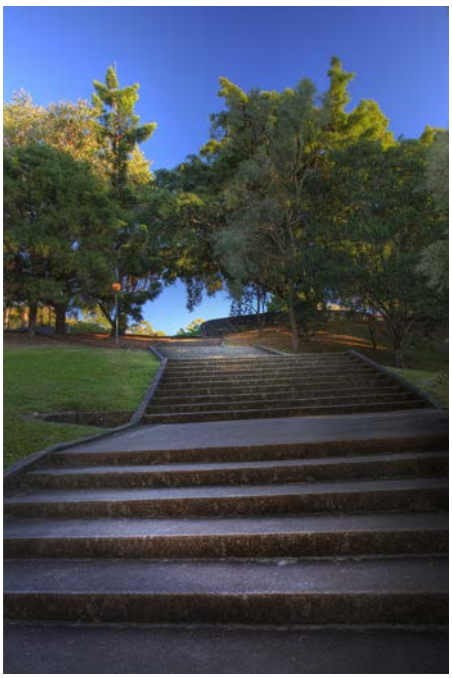
Camille Percival, Environmental Management student, has held the Student Green Office Coordinator role in 2010 and has been a great asset to the Sustainability Team.

Camille Percival - Student Green Office Coordinator 2010

STEPS TO A SUSTAINABLE FUTURE

In 2010, the University progressed its goal to embed sustainability in all of its campuses and sites and across all areas of learning, discovery and engagement.

The new UQ Sustainability Website has been a valuable instrument in featuring many of UQ's sustainability initiatives and expertise. A highlight of these initiatives is the 1.22MW Solar Photovoltaic project at the St Lucia campus.



In 2011, key stakeholders will be engaged through a range of avenues to take sustainable steps forward. This includes:

Engagement with stakeholders	A new Sustainability Engagement Working Group to be formed
Planning	Campus Energy Infrastructure projects to be implemented
	Design Guidelines reviewed to incorporate further sustainabiity aspects
Initiatives	The 1.22MW Photovoltaic solar array to be operational on the University's multi-level carparks, as well as two other buildings on the St Lucia campus
	Energy Audit Program to be implemented
	Energy Efficiencies Program to be implemented
	Ipswich campus to become a Land for Wildlife site
	Expansion and enhancement of Lakes and Environmental precinct to link wildlife corridors and to include bush tucker garden
	St Lucia Campus Sustainability Tour to be implemented
	Waste Minimisation Plan to be implemented
Training and awareness	Green Office Program to be further expanded
	Green Labs Program to be developed and piloted
	Four new training modules focused on sustainability will be included in the UQ Staff Development Program
	Sustainability on-line training module for UQ Staff to be developed and implemented
	Sustainability Steering Committee Communication Plan to be further developed and implemented

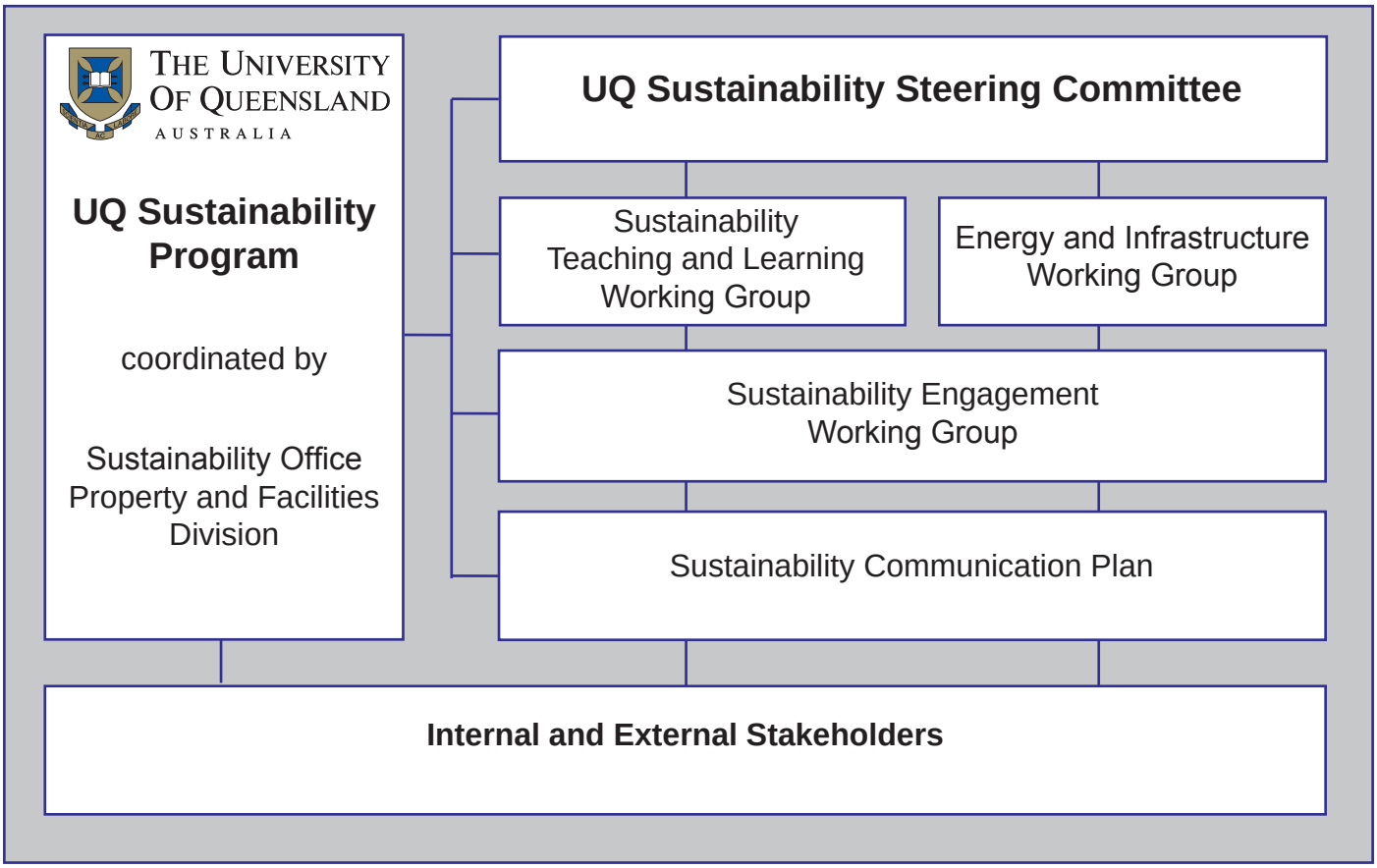
UQ SUSTAINABILITY STRUCTURE

The Sustainability Steering Committee was established in 2009 to lead UQ's Carbon and Sustainability strategy. The Committee's membership comprises:

Mr Maurie McNarn, Executive Director (Operations) and University Secretary (Chair)
Professor Michael Keniger, Senior Deputy Vice-Chancellor
Professor Deborah Terry, Deputy Vice-Chancellor (Academic)
Professor Max Lu, Pro-Vice-Chancellor (Research)
Professor Ove Hoegh-Guldberg, Director, Global Change Institute
Dr David Quemard, Deputy Director, Sustainable Minerals Institute
Professor Andrew Griffiths, Director, Sustainable Business Unit, School of Business
Professor Stephen Walker, Executive Dean, Faculty of Science
Mr Geoff Dennis, Deputy Director, Property and Facilities Division
Mr Graham Bethune, Director, Office of Marketing and Communications
Mr Andrew Betts, Chief Financial Officer, Finance and Business Services
Professor Roger Swift, Executive Dean, Faculty of Natural Resources Agriculture and Veterinary Science and Campus Director, Gatton campus
Professor Alan Rix, Pro-Vice-Chancellor, Ipswich campus
Mr Michael Zivcic, President, UQ Student Union
Mr Stuart Green, Environmental Engineer, Property and Facilities Division (Secretary)

In 2010, the Renewable Energy Working Group and Sustainability Teaching and Learning Working Group were established to focus on reducing the University's carbon footprint. In late 2010, the Sustainability Engagement Working Group was approved and will be established in 2011 to focus on embedding sustainability into all University activities.

The Sustainability Office, Property and Facilities Division, works in conjunction with the Sustainability Steering Committee and Working Groups and other internal and external stakeholders, to progress the UQ Sustainability Program.



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