Self-Guided Sustainability Tour

Macquarie University

Centre for Environmental Law - Macquarie Sustainability
Acknowledgements

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For more information about the Centre for Environmental Law, visit http://www.law.mq.edu.au/MUCEL/

For more information about Macquarie Sustainability, visit http://www.mq.edu.au/sustainability/index.html
Introduction

About the University

Macquarie University is a multifaceted institution situated in the heart of one of Australia’s leading high technology parks. The campus is located 12 miles northwest of Sydney’s central business district and enjoys a magnificent natural bush land setting.

The site was originally occupied by the Wallumataagal clan, an aboriginal community belonging to the Darug language group, to whom this location was greatly appreciated due to its constant water supply.

After the settling, it was used as pastoral grounds and later it became an orchard and market garden, prior to being taken over by the University about 50 years ago. At that time the orchard and market garden ceased to operate.

Macquarie’s 126 hectare park-like campus is an ideal setting in which to discover and learn. It is a dynamic and flexible University committed to excellence in research, teaching and global citizenship.

To this end, Macquarie is taking its responsibility to current and future generations very seriously.


Sustainability at Macquarie University

Macquarie University is committed to embedding sustainability into its policies, processes and practices not only through operational improvements, but also through learning and teaching, to become a model community which will hopefully inspire University students, staff and the wider community to change their way of thinking in favour of a more sustainable society.

Our Vision

“Macquarie University is ecologically sound, socially just and economically viable in all of its activities”

This means:

• As an institution we function as a sustainable community, embodying responsible consumption of energy, water, food, products and transport.
• We actively support sustainability in our local community and region.
• Macquarie students leave the University prepared to contribute as working citizens to an environmentally healthy and equitable society.
• Macquarie University has a reputation for being the place to learn, to work and to connect with the local and global community.
• We actively seek to meet the changing social, environmental and economic conditions as part of the global effort to reduce the impact of climate change upon the environment.

We will reach this through embracing the following principles:

Global, Social and Community Awareness

The University recognises connections to the local and global community and acknowledges that its actions and decisions have the ability to affect others beyond the immediate community. To this end sustainability will be incorporated into research as well as learning and teaching, and our reach to the local and global community will be extended through active partnerships and participation.

Participation

Staff, student and community participation in decision-making about the University’s activities is valued and will be sought whenever possible in the development and implementation of the University’s sustainability agenda. A range of mechanisms will be established for this purpose inclusive of joint working parties and local sustainability committees.

Shared Responsibility

All members of the University community are responsible for our sustainability performance and as such will be made aware of their role through induction, professional development, the provision of necessary educational and material resources and ongoing training and awareness.

Demonstrating Best Practice

The University will integrate sustainability into all its aspects and functions. It will be embedded into all operational policies and procedures; considered in all strategic and operational planning; and enabled through sustainable practices. Research into sustainability best practice in the higher education sector and other sectors of the economy will also be undertaken to ensure the University maintains best practice where possible.

Leadership

Educational, research and resource management activities will be utilised to profile sustainable practices amongst staff, students and the communities served by Macquarie University.

Openness and Transparency

Actions and processes will be transparent and progress will be reported fully to staff, students and the wider community.

Self-Sufficiency

Where possible, the University will utilise resources generated on campus, with residual needs met using a sustainable procurement policy.

Whole-Systems Approach

A whole-systems approach will be implemented to create successful change towards sustainability.

Visit the Sustainability website: http://www.mq.edu.au/sustainability/

This self-guided tour is designed to familiarise Macquarie's students, staff and visitors with the sustainability initiatives and practices the University has established over the last few years. Some are now in operation and others expected to be completed in the near future. For more information about any of the items on the tour visit the Sustainability website: http://www.mq.edu.au/sustainability/

Please note that the tour will take a maximum of two (2) hours to complete, including a coffee break.

Commence the tour at the Coffee Cart in front of the library. Refer to the map for further guidance.

1- Fair Trade Coffee Initiative

Macquarie University is the joint first Fairtrade accredited University in Australia and New Zealand. Along with Melbourne-based RMIT, Macquarie University received Fair Trade accreditation on 6 May 2009, granted by the Fair Trade Association of Australia and New Zealand (FTAANZ).

This means, among other important factors, that all coffee sold on campus comes from suppliers who comply with the Fairtrade certification system, which strives to guarantee fair conditions for Third World Producers.

Useful links:
- Fairtrade at Macquarie University: http://www.mq.edu.au/sustainability/fairtrade/fairtrade.html

Move from the Coffee Cart to the Library entrance.

2- Library

Enter the building and visit the model for the new library, located on the ground floor on the left-hand side of the entrance. This new building is aimed at creating a new standard of sustainable building design on campus whose benefits will be measurable. The design is currently set to achieve a 5 star Green Star Rating from the Green Building Council of Australia.

While at the Library, check also the recycling stations for mobile phones, batteries and ink cartridges.

Useful links:

Exit the building and take the stairs in front of the entrance which lead down under the library. Then take the stairs next to the Co-op Store which lead under the U@MQ Building. Locate the green compactors sitting next to it.

3- Compactors

These two lime green compactors are part of the University waste strategy; they are designed to keep the birds and possums away for their protection, and their mission to crush garbage and paper products in order to maximise waste transport efficiency. They started operating in the second semester of 2009.

While moving around the campus, direct your attention to the rubbish bins. You can now dispose of all your waste in the same bin, rather than separating recycling from general waste. The bins are removed and taken to an off site sorting facility where the rubbish is separated using alternative waste technology, thus guaranteeing a 70% diversion from landfill.

Useful link:
- Where does your waste go?: http://www.mq.edu.au/wheredoesyourwastego

For the next stop on the tour walk across the grass towards building E11A.

4- Geothermal E11A and Art Gallery

The E11A Building is the location of the Vice-Chancellor’s office, the Sustainability team, and the Art Gallery. This building’s air-conditioning system is powered by geothermal energy. This natural cooling method uses pipes that conduct water ninety metres below the ground, where the temperature is constantly between seven and eight degrees Celsius; the chilled water comes back up and is used to regulate the building’s temperature.

Useful links:
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Walk along the grass in front of the lake towards Talavera Road. When you reach the footpath, turn left and walk up the hill. At the top of the hill turn right at Culloden Road and proceed over the bridge across the M2 motorway into the Sports Fields. Once there, take your right following the unsealed road until you reach its end; you will see the Water Project in front of you.

5- Sports Fields Water Project

The Sports Fields Water Project is a water-recycling scheme that combines the use of state of the art technology and natural reed beds to purify and recycle the wastewater on campus. This initiative is estimated to save more than 21 million litres of water a year.

The three-stage system starts with the interception of waste water at the sewer main near Mars Creek. The liquid is then processed through a septic system before being passed through a reed bed system. The treated water is then used to irrigate the 7-hectare playing fields.

The project also involves harvesting storm water from the surface and sub-surface drainage system and storing this water onsite to supplement treated water from the reed beds. The treated effluent and storm water harvesting should provide 95 per cent of the sport fields peak irrigation requirements.

Useful link:

When you exit the Sports Fields return back the way you came. Locate the Community Gardens on the corner of Culloden and Talavera Roads. You should have seen them before entering.

6- Community Gardens

The Community Gardens are jointly run by the University and the North Ryde community. Anyone belonging to the University or surrounding community can request to join and take care of one of the plots. While you are there, see if Mark Hall or Lorie Elliot are around to have a chat. The Garden won third place at the City of Ryde Spring Garden Competition 2009, in the category of Best Edible Garden.

Useful links:

Continue back along Culloden Road towards the University and enter the campus near the W21B Building.

7- Sydney Turpentine Ironbark Forest and Sandstone Gully Woodland

The University has five areas of remnant vegetation of significance. Bushland within the University includes some areas which have persisted in a natural state from prior to the campus being developed in the 1960s. This particular location contains two representative communities which have been listed under State and Commonwealth environment laws as endangered ecological communities, due to having experienced severe reductions from their original extent since European settlement. These communities are known as the Sydney Turpentine Ironbark Forest, and Shale Sandstone Transition Forest.
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Useful links:
• Biodiversity: http://www.mq.edu.au/sustainability/actiongroups/biodiversity/biodiversity.html

Walk down closer to the creek line, moving along the creek bank in the direction of the Lighthouse Theatre.
During the walk you will notice a sandstone ruin. This small cottage was used by its prior owners, the Pietrobon family, as a barn or storage room for the produce of the orchard and market garden they operated in this region.

Cross over Gymnasium Rd – taking care when doing so – to the Bushcare@MQ site along the Mars Creek bank.

8- Bushcare@MQ

The University has recognised the importance of its large areas of natural space that make for an enjoyable learning and teaching environment and has maintenance and restoration of natural areas as a key priority.

The Biodiversity Action Group is helping to ensure natural systems are maintained at Macquarie University by detailing, protecting, enhancing and linking existing biodiversity nodes. A major goal of the Biodiversity Group was to establish an ongoing bushcare group at Macquarie University. The primary aim of the group is to re-establish the riparian zones along the banks of the creek and reducing mowing.

Useful links:
• Bushcare@MQ: http://www.mq.edu.au/sustainability/actiongroups/biodiversity/bushcareatmq.html
• Biodiversity, Sustainability@MQ: http://www.mq.edu.au/sustainability/actiongroups/biodiversity/biodiversity.html

Continue walking along Mars Creek bank towards the X Buildings, until you reach a stone woman-shaped sculpture overlooking the creek.

9- Water is Life Sculpture

In the year 1998 Edna Marion Watson and Patricia Karbo Jarvis, women from the Aboriginal Darug group, created a stone arrangement to celebrate the important water played for their traditional society. This site is one of the original locations occupied by this indigenous community prior to Australia’s settlement.

The arrangement begins with a woman-shaped rock, decorated with traditional carvings. To its left find a rock with human and animal footprints carvings, and follow their direction to find more rock sculptures until you reach the creek’s bank.

The footprints belong to different animal species that can be found at Macquarie’s waterways such as the common waterhen; the snake-like carving represents the creek’s water.
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10- Co-Generation Plant

Walk towards the library, and direct your attention to the big silo-like tower on the left-hand side of the building.

This silo-like structure is in fact a storage tower belonging to the Co-Generation plant (the building directly behind it), which uses gas to produce electrical energy to power the surrounding buildings, while using the recovered heat to run an absorption chiller as well as warm the pools at the aquatic centre. The system started operating in 2001 and is effective in reducing greenhouse gas emissions by 44% when compared to traditional systems. Check the plaque on the building to see previous awards won.

Useful link:

11- Mixed-Mode Building, E4A and E4B

Walk towards Wally’s Walk, take it and walk towards Eastern Road, when you reach it turn right and walk until you arrive to the Buildings E4A and E4B.

This building, completed in 2006, won the Bronze Medal in the 2003 Australia Green Buildings Awards in recognition of the environmental sustainability of the project. This intelligent design building has a semi-automated louvre system that ensures the use whenever possible of natural ventilation, the air-conditioning being activated only when the internal temperature of the building reaches 26º Celsius.

Useful link:
- Air-Conditioning Set Points, Sustainability@MQ: http://www.mq.edu.au/sustainability/actiongroups/energyandemissions/energyandemissions.html

The tour ends here.

Feedback

Your opinions are valuable for us and we would appreciate that you send any feedback or comments via e-mail to sustainability@mq.edu.au; with your help we will be able to continually update and improve this tour!
Overview

Sustainable Development‘ and ‘Sustainability’ are concepts that emerged both as a response to environmental and social problems, and as a compromise between a country’s sovereign right to develop and the need to prevent the ever-growing deterioration of ecosystems vital for human wellbeing. The concept of sustainable development is now a principle of main importance both in international law and domestic legislations around the world.

Although the notions that cement the principle were scattered among international instruments and academic texts for several decades, it made its first formal appearance before the international community as a plan of action in the seminal work by Gro Brundtland called ‘Our Common Future’ (1987). From here, the concept made its way into important instruments such as the Convention on the Protection of Biological Diversity in 1992, after the Earth Summit held in Rio de Janeiro, Brazil.

It was within the Brundtland Report that sustainable development was first defined as ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’. From this understanding, the broader, more encompassing concept of sustainability was derived, which aims, in essence, for a balance within the principles of environmental protection, social justice, economic well-being and biological and cultural diversity.

What can I do?

There are numerous ways to make the planet a more sustainable place, and Macquarie University is committed to providing the community with information on how to act sustainably both inside and outside the campus.

Volunteer

We are constantly undertaking initiatives that need some extra skills and people power. If you would like to help out, please complete the Contact Us form on the Sustainability website or email sustainability@mq.edu.au. Include some background information as to what you are studying or where you work so we can find something suitable to your skill set or interest.


Champions

Bring the principles of sustainability into your home and workplace. For practical tips, ideas, recipes, and resources, visit our Living More Sustainably page regularly. Contact us to let us know what you are doing so we can celebrate your achievements together!

Macquarie University offers you the opportunity to be part of the sustainability experience by joining any of the Action Groups for the following areas:

**Bushcare@MQ**

Bushcare@MQ is helping to ensure self-sustaining (or minimal management) natural systems are maintained at Macquarie University by detailing, protecting, enhancing and linking existing biodiversity nodes.


**Learning and Teaching**

The biggest impact universities can have on the future of our planet is through approaches to learning and teaching that equip graduates with the skills they need to actively contribute to economic, social and environmental sustainability in all facets of life. This can be achieved through active participatory learning, creation of shared experiences and the development of a collective vision of sustainability which ultimately will help reshape the world.


**Procurement**

Procurement relates to the acquisition of goods and/or services and traditionally has involved trying to obtain those goods and services by sourcing the best possible price for the best possible product. However, considerations of sustainability need to be included in this process.


**Transport**

In recognition of the complexity of transport issues, Macquarie University has engaged GTA Consultants to develop a Sustainable Transport Strategy and a draft policy in conjunction with our own Transport Action Group.

Visit the transport page to learn about the most efficient ways to get to Uni while caring for your carbon footprint!


**Water**

Considered an infinite resource, water is often used negligently and unnecessarily. This is not the case. With the continuing changes to weather patterns, growing populations and use of water, we need to take active steps to conserve its use in order to help meet future needs, as well as preserve the environment.


**More Information**

We invite you to visit the Sustainability website to check the multiple alternatives available for you to get involved with initiatives and projects undertaken at Macquarie University.

For more ways to get involved or learn more about sustainability, please visit [http://www.mq.edu.au/sustainability/getinvolved/getinvolved.html](http://www.mq.edu.au/sustainability/getinvolved/getinvolved.html). And remember there are plenty of things you can do every day to be more sustainable, some of which are listed on the Living More Sustainable pages at [http://www.mq.edu.au/sustainability/resources/livingmoresustainably/livingmoresustainably.html](http://www.mq.edu.au/sustainability/resources/livingmoresustainably/livingmoresustainably.html)