

Sustainability key to Macquarie University's new library

Sustainability is nothing new to Macquarie University Library. We created our own Sustainability Working Group in 2008 and have since instituted many changes as we strive to become a more environmentally friendly organisation.

Some simple measures we have taken in recent years include:

- setting all printers (staff & student) to black & white double-sided printing as default
- providing mobile phone, printer cartridge, and battery recycling points in the library
- giving used paper to a nearby childcare centre
- replacing the use of taxis with environmentally friendly 'Green Tomato Cars'

A staff photo competition on sustainability was run earlier this year with the winning photo *Five "Green" Bottles* by Caroline Dumapit reproduced here.



Five Green Bottles, Caroline Dumapit

These have been small but effective steps and helped the library take second place in the University's inaugural Sustainability Challenge in 2009 (behind the Faculty of Arts – Dean's Office & Administration). The Challenge measured participating departments in areas such as energy use, disposal of waste, staff participation, and governance.

The scope for improving our sustainability has been limited until now by our present library building which dates from the 1960s and 70s. The decision in 2006 to construct a new library building allowed us to not only design a library that is learner-centred, but also to incorporate new standards of environmental sustainability into the project.

Sustainable future – new library – what next?

If you've been to Macquarie University lately, you've probably seen the new library building fast taking shape on the southern side of the campus. As part of a university that has had a dedicated Sustainability Office for a number of years and has just won a NSW Government Green Globe Award, sustainability was always going to be a key component in the planning, design, and maintenance of the new library building.

Our intention with this project is to achieve a five-star Green Star rating under the Green Building Council of Australia's Education v1 rating tool, making the new library the first building at the university to use this tool. Green Star is a comprehensive, national, voluntary, environmental rating system that evaluates the environmental design and construction of buildings.

The library is being built where possible from material that is either renewable or recycled, such as concrete. The design process took into account the expected life cycle of the building, including the eventual disposal or recycling of materials used in the construction.

Inside, the building will be divided into zones where motion sensors can adjust lighting and air conditioning

depending on the activity in a given zone. The library will also have an online Building Management System with automatic monitoring providing feedback on air quality, water usage, and emissions.

Improving the air quality in the building by reducing the presence of formaldehydes and volatile organic compounds (VOC) in the air is a key goal, and this will in part be achieved by having ventilation rates that exceed industry standards by 50%.

Furniture for the new library will have Good Environmental Choice – Australia (GECA) certification where possible and similar standards will apply to future purchases of equipment and furniture. Durability is another important issue, especially given that we have an average of 5500 visits a day now and expect this figure to double in the future. The less we replace furniture and equipment, the more sustainable we can be. The library will also include bike racks and showers to encourage our staff to ride or walk to work.

Innovation Areas and Education

One of the Green Star credit points the library will be addressing is innovation. The most significant innovation in the new library is the Automated Storage & Retrieval System (ASRS) where much of our collection will be held. A major sustainability benefit of the ASRS is that our large collection will be stored in a footprint just one seventh the size that traditional shelving would have required. This means the library building does not need to be as large as an open access collection would ordinarily demand, allowing more space for study and research, as well as reducing our energy consumption. And, as the ASRS is humidity regulated, it will help ensure the conservation of our collection.

Another innovation in our new library will be the 'green roof'. The roof will feature drought tolerant native plants, drip irrigation, and will collect rainwater. The collected rainwater will be used to water the plants and in the library toilets.

Within the library itself, there will be learning resources and space dedicated to educating others about what we are doing for sustainability. The new building will be used as a case study for students doing a variety of environmental subjects and will be incorporated as part of campus tours on sustainability practices within the university. Library staff will in effect become ambassadors for sustainability and will actively help in the education of others.

Becoming sustainable is a stated Macquarie University goal, and with the new library building, Macquarie University Library is continuing to lead the way.

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