

CURTIN UNIVERSITY LIBRARY'S GREEN LIBRARY PROJECT

Constance Wiebrands
Acting Manager, Flexible Delivery and Lending Services,
Curtin University Library
Email: c.wiebrands@curtin.edu.au

Jayanthi Joseph
Librarian, Research and Learning Services,
Curtin University Library
Email: j.joseph@curtin.edu.au

Kate Conway
Science and Engineering Faculty Librarian,
Curtin University Library
Email: c.conway@curtin.edu.au

Abstract:

This paper describes Curtin University Library's Green Library Project. The project originated in a desire expressed by some library staff members to 'go green' at work and was adopted as one of the library's 2007 strategic initiatives. It will examine what the library has been able to achieve so far, and discuss practices it hopes to introduce and embed in the future.

Many areas were identified where significant improvements could be made. These included the air quality in the building, reduction of energy and water consumption, use of recycled and sustainably produced consumables, better recycling and toilet facilities, and staff awareness. Communication with library clients was especially important, particularly where changes would possibly have an impact on the services they were accustomed to.

Some formidable barriers have been encountered in this process, which resulted in substantial limitations on the changes the committee has been able to make to date. These included the costs involved in altering existing infrastructure, a lack of sustainability policy and services at the wider University level, and apathy and resistance to change. Despite these difficulties, there continue to be many benefits to this ongoing project. For instance, the library was well placed to participate in the University's highly publicised 2008 Earth Day activities, and our Green Library activities were promoted. This had the added effect of promoting the library in general. Certainly any steps we can take towards reducing the library's carbon footprint are positive ones.

INTRODUCTION

This paper describes the Green Library Project at Curtin University Library. The project originated in a desire expressed by some library staff members to 'go green' at work. The project was adopted as a strategic initiative for 2007 and was initially conceived of as a finite project which would run through to December 2007. A committee, consisting of representatives from each area of the library, was formed, with the aim of producing a report identifying areas in which efficiencies could be made and recommending achievable targets. These initiatives would then be implemented during the second half of the year.

The committee decided that, in order to tackle these issues, it would be important to involve library staff and clients. We hoped to raise awareness of environmental issues and to foster a dialogue with staff and clients on the implementation of initiatives. By soliciting ideas from those who would be affected by any changes, we aimed to give them ownership of the project and so to elicit more positive reactions than would otherwise be the case. We decided to make use of the library and staff blogs as well as the project wiki to facilitate this communication.

GETTING STARTED

The committee met monthly, with its inaugural meeting in April 2007. Members of the committee were largely self-selected. Each member had an awareness of environmental and sustainability issues, and the enthusiasm and motivation to work towards improving office practices. As its first priority was to determine areas in which existing practices could be improved, the committee's first activity was an environmental scan. This scan suggested a number of areas of focus, including resource use, equipment efficiencies, and increased awareness among staff and client groups.

A visit to the recently-built Edith Cowan University Joondalup Campus Library was also organised. This building has had several green features incorporated into its design, including "very carefully designed to exclude all direct sunlight whilst maximizing the amount of natural light" (architecture.com.au 2007). Such examples were inspiring, if unachievable for us. Other green practices in place at Edith Cowan such as recycling bins were noted.

Meetings with different service teams from across the University were arranged to discuss improvements to the services and resources that were available to the library, such as recycling bins. Committee members also attended seminars and talks on sustainability and related issues to ensure that their knowledge on the issues was comprehensive and current. They have also ensured the information obtained from such talks is shared on the staff blog, to increase staff awareness of the issues involved, and to encourage discussion and the sharing of ideas.

ACHIEVEMENTS

Paper

Despite earlier predictions of information technology ushering in a paperless office, paper is still heavily used by library staff and clients alike. In this area our aim was to:

1. Encourage an overall reduction in the use of paper
2. Purchase of paper that had less impact on the environment
3. Facilitate the recycling of used paper

Investigations were made into the cost and quality of recycled paper. The committee found that recycled paper was only fractionally more expensive than normal paper and increased costs could be recovered through charges for photocopying/printing. The following comparison, based on costs provided by our supplier shows the difference:

	Non-recycled	Sugar cane	Recycled
Cost per ream	\$3.60	\$4.20	\$4.85
Cost per page	\$0.72	\$0.84	\$0.97

'Sugar cane' is paper made from sugar cane pulp, left over once the juices have been extracted, which is otherwise a waste resource. Considerations in our choice of paper had to include price and quality as well as environmental credentials. The paper that we selected to replace the non-recycled paper is 'Green Wrap' paper from Fuji Xerox, which contains 60% recycled fibre sourced from pre- and post-consumer waste. It has an archival rating of 200 years.

As a result of the work of the Green Library project, recycled paper is now widely used by library staff and clients. This includes the paper used by library clients for printing and photocopying. There have been no complaints about the quality of the recycled paper. Indeed, when it was introduced, student responses to the recycled paper were overwhelmingly positive. In fact, before recycled paper was made available in public use printers in the library the following suggestion was made by a student:

Hello, I have a query regarding the use of copy paper in the Library's Photo copiers. I believe at present that only standard non recycled photo copier paper is being used. I have contacted the State Manager of Lanier who has told me that the Lanier LD045 (the most common photocopier in the Library) is able to be used with recycled paper. Could there be a copier set up to run with recycled[sic] paper for students that have enviromental concerns? If this is successful would the Library Administration then consider replacing the non recycled photo copy paper in all of the machines with recycled paper?

The student even took the trouble of making a note of the library photocopier supplier and contacting the company manager! When this query was posted on the library blog (Parisotto 2007), it received several supportive comments from other students, with one commenter noting that:

I agree with the proposal. It's high time Uni students be more involved with being 'environmental-friendly'. Most times the purpose of using the photocopiers are for research notes/materials. Unless it's for formal submission, I do not see why we cannot use recycled paper.

An earlier attempt (in 2001) by the library to introduce the use of recycled paper in library photocopiers and printers met with less-than-positive responses. Because some committee members remembered these negative responses, the initial introduction of recycled paper in public use photocopiers and printers was done on a small scale (one photocopier and one networked printer) in February 2008. Students were surveyed and invited to leave comments on the library blog. Because responses were overwhelmingly positive, by the end of March 2008 the decision was taken to provide recycled paper in the majority of public use printers and photocopiers, with only a small number of these still stocked with non-recycled paper, for users who might require it. We believe that the negative responses in 2001 were largely due to the quality of the paper that was tried at the time. The quality of recycled paper has since improved significantly, which has likely contributed to its acceptability this time around. Awareness of environmental issues is no doubt also a factor in the acceptability of recycled paper.

In order to assist staff with the process of recycling used paper, each staff member has been supplied with a small desk-side bin for discarding used paper. This encourages recycling, as staff are not required to walk to a central recycling bin every time they want to discard paper. Staff members are also encouraged where possible to reuse paper that would otherwise be discarded, for example, as scrap for note-taking. Used paper is also cut up and provided as scrap paper for students.

All staff printers are set to default to double sided printing and margins have been adjusted to fit more on a page (for example reducing margins from 3.175cm to 2.54cm and font size from 12 to 11 can increase the amount of information presented on a page by 27%.) Staff have also been encouraged to do other small things like using the Print Preview function to check the layout of pages before printing, and reducing the amount of information provided in email signatures, especially for internal communication. Many staff members have also incorporated in their email signatures reminder messages such as: "Please consider the environment before printing this e-mail". Cardboard boxes in which new books are received are recycled for internal use.

Energy consumption

An audit of existing practices was conducted, including an audit of lighting in the Library building by Synergy, the West Australian electricity provider. A lux meter was used to test the various lighting intensities within the building. This testing revealed that the light intensity in some areas of the library was too high and could be reduced. This was relatively simple to achieve, by reducing the number of fluorescent tubes in the light fittings in these areas.

Lights in rooms in public and staff areas are switched off when not in use. Appropriate signage near the light switches reminds users to switch them off when they leave the rooms. All computers in the library are set to switch off automatically when the library is closed.

Other practices, such as purchasing energy efficient equipment and improving the use of shading, window films and reflective roof coatings to reduce building temperature have been noted and will be implemented where possible.

Water consumption

Reduction of water consumption by installing dual flush toilets and waterless urinals, for example, is an important strategy. The library has already begun to do this, with a number of public toilets having been refitted with dual flush cisterns as part of the building maintenance program.

Re-use of waste and storm water is another strategy that could be considered, however this would require university-level input and support.

Air quality

Most of us take air quality for granted. Maintaining good air quality has obvious benefits for health and wellbeing. According to the Green Building Council of Australia (Hechtman 2006), substantial productivity losses occur in buildings with poor air quality.

This is another area where the library has had limited control. The library building is an old one, with two sections constructed at separate times. Each section has a different airconditioning system in operation. Ideally, a smart air-conditioning system should draw in 100% fresh air whenever the external conditions are appropriate. Currently, 90% of the air in the library building is recycled, with only 10% being drawn from external fresh air sources. This is not ideal, however replacing the library's airconditioning system would involve high costs and is outside the scope of the Green Library project at this stage.

The committee also learned about the synthetic materials used in typical office furnishings. These materials emit vapours which may be dangerous to human health. Unfortunately, this is another area where replacement of existing fittings and furnishings is cost-prohibitive. Furthermore, the library relies on the university's Properties Office to supply furnishings and fittings so to some extent the implementation of environmentally friendly furnishings is dependent on the goodwill of the Properties Office.

The Green Green Office Guide produced by the University of Western Australia's Environmental Services office (University of Western Australia Environmental Services 2007) quotes findings that indoor plants, which are able to absorb these emissions, reduce fatigue and cold symptoms by more than 30%. This is something that could be

investigated further. It would seem that students are aware of these issues, with a recent request for "more plants in the library"!

Publicity

Communication with library clients has been especially important, particularly where changes made could have an impact on the services clients were accustomed to. For instance some members of the committee were apprehensive about clients' responses to some changes (such as introducing recycled paper) and felt that it was important to inform and maintain a dialogue with clients on all the proposed changes.

The library blog was the main tool used to communicate with and inform clients about proposed changes, and has been very useful for inviting comments and ideas from library clients. Responses have more positive than expected, and would indicate a broad awareness and acceptance of sustainable practices. We felt that it was important to publish and openly acknowledge criticism from library clients and discuss the issues with them. This has served to highlight the areas in which we can improve (many of which we were already aware of) and include library clients in the process. As noted earlier, this proved to be very successful, with many clients posting comments in response to blog posts about new initiatives such as recycled paper and switching lights off in unoccupied rooms. At one point when there had been a significant amount of publicity on the library blog about the recycled paper trial, one library client criticised the library, submitting the following comment (Wiebrands 2008) via our paper suggestion box:

Turn your lights off after you close! What was that rubbish on your site about a "green library". Hypocrites!

Turn off like the 2nd-6th floors after you close!

After some deliberation we decided to publish the comment on the library blog, with the following response from the library:

Thank you for your comment. We are aware that we are still leaving lots of lights on on all floors of the library - this is due to security requirements. We are investigating how to reduce our after-hours lighting, while continuing to maintain security levels.

Many of the changes we'd like to put in place will take time and resources to implement, and are part of ongoing work to improve our operations. We'll keep you informed.

We felt that it was important to communicate both positive and negative aspects of the process with library clients, in the interests of transparency and continued dialogue. This has been a successful approach, in that our clients continue to give us plenty of

feedback, commenting on areas of service outside the library and commending the library on taking the lead in trialling sustainable practices.

The Library and the Green Library project were showcased when the University participated in Earth Hour in 2008 (Curtin University of Technology 2008). As one of the few areas in the University that had a Green programme, we were invited to showcase the work on the University webpage promoting the University's participation in Earth Hour. A link to a webpage listing the work that had been done to improve Library practices was posted on the University page.

The screenshot shows the Curtin University website's 'Earth Hour every day' page. The breadcrumb trail at the top reads: Curtin home > About us > What we do > Environmental sustainability > Earth Hour every day. The main heading is 'Earth Hour every day'. Below it is a large graphic with the number '60' in a stylized font, representing 60 minutes, and the text 'EARTH HOUR' below it. To the right of the graphic is the WWF logo. The text below the graphic states: 'There are simple steps you can take each day around the work place and at home to help save our planet.' It then says: 'If you missed out on Earth Hour 2008 don't worry. You can still take part in Earth hour everyday by following these simple steps.'

At work

As well as the very simple things you can do in the office, like printing double-sided and using recycled paper, there are many other ways to help your workplace reduce its carbon footprint.

- **Get off standby.** Speak to your office manager about turning off any equipment that is not being used, including computer screens, photocopiers and printers, particularly when you leave at night.
- **Turn off lights at the end of the working day.** Before you leave, remember to turn off any unnecessary lights and your computer. Remember to unplug your mobile phone or laptop charger when it's not in use. Speak to your manager about installing motion-sensor lighting after 5.00pm when most people have gone home.
- **Find out what's happening in your workplace.** Ask about your company's emissions reduction policies and find out what's already happening. Look for ways to reduce energy use in your workplace and encourage improvements. If employers know their employees are keen to make their workplaces environmentally friendly, they'll be even more inclined to take action.
- **Encourage your organisation to have measurable emissions reduction targets.** Many Australian

Useful links

- [The Earth Hour website](#)
- [WWF Australia](#)
- [Curtin University Sustainability Policy Institute \(CUSPI\)](#)
- [Curtin's Robertson Library goes green!](#)
- [News @ Curtin: 20-03-08 What are Exmouth Residents' Perceptions of Tourism?](#)

Figure 1 Screenshot of Curtin University's Earth Hour webpage

The Green Library Committee was nominated by the Curtin University Sustainability Policy Institute for the NEWS.com.au Green Awards in the Green Business category in 2008. While we did not win the award, it was pleasing that our efforts did attract notice from another area of the University.

NEXT STEPS

The work of the Green Library committee continues, despite the fact that a number of original committee members (including the convenor) have since left the Library. Work is ongoing on a number of small projects such as the introduction of double-sided printing for library clients, and the provision/sale of re-useable "green bags" for client use.

Library staff members have been generally positive about most changes in library practice, however ongoing encouragement, awareness raising and discussion about the issues involved remains important. The Green Library Committee regularly posts information and suggestions on Green issues on the library staff blog and invites comments and suggestions from staff.

Work on these green initiatives has tended to focus on the Robertson Library on the Bentley campus in Perth; staff and clients at the library branches in the city, Kalgoorlie and Muresk could be included in future activities.

The University has appointed an Environment and Sustainability Development Officer; the Green Library committee hopes to work with this Officer to contribute further to reducing Curtin's ecological footprint.

CONCLUSION

Some formidable barriers have been encountered during the course of this project, which have resulted in substantial limitations on the changes the committee has been able to make to date. Perhaps the main frustration has been the inability to make any impact on the waste of resources inherent in the library's infrastructure. The problem of over-reliance on an inefficient air-conditioning system, for example, could only be solved by the re-fit of the library building, or by the demolition of the existing building and the construction of a new library, built with sustainability at the forefront of considerations. Neither of these solutions could be implemented by the Green Library committee, or even by the library alone; decisions of this magnitude would need to be taken at the University level.

We have been hampered generally by a lack of interest in campus sustainability at the University level (despite the burgeoning of sustainability courses and research). For example, there is no University or campus sustainability policy and environmental initiatives seen at some other universities, such as worm farms and solar or wind power, do not exist at Curtin. The fact that we have been unable to tap into University 'green' facilities has limited what we have been able to do on our own. However, the appointment of an Environment and Sustainability Development Officer would indicate that this lack will be addressed in the near future.

We have also had only limited success in introducing measures which entailed a significant expense. Improvements to air quality by improving the airconditioning in the library building, for instance, would require a significant capital investment.

Despite these difficulties, there have been some achievements:

Reduction in energy use:

Reduction of lighting where possible e.g. in corridors

Remote switching of all pcs to standby mode when not in use
Introduction of a policy of purchasing energy-star-rated office equipment
Introduction of shading, window films and reflective roof coatings
Encouraging staff and clients to turn off lights and computers

Reduction in paper use and an increase in recycling of paper

Use of recycled paper in all staff & students printers & photocopiers
Introduction of desk-side recycling bins for staff
Encouraging staff to avoid unnecessary printing and to re-use waste paper

Production of a Green Library report

The project has had the additional benefit of allowing the library to be seen in a positive light by clients.

The Green Library project continues to monitor the activities of other libraries in order to adopt their ideas wherever possible. We hope that by taking the lead in this area we will encourage a more systematic adoption of environmentally sustainable practices at the campus and University levels.

References

- architecture.com.au. (2007). "Edith Cowan University, Joondalup Campus - New Library Building by JCY Architects & Urban Designers." Retrieved 10 January 2009, 2009, from http://www.architecture.com.au/awards_search?option=showaward&entryno=2007060645.
- Curtin University of Technology. (2008). "Earth Hour every day." Retrieved 15 January, 2009, from http://about.curtin.edu.au/what/earth_hour_everyday.cfm.
- Hechtman, M. (2006). "Go for gold: green-star rating and healthy staff." Retrieved 10 January, 2009, from <http://www.gbca.org.au/media-releases/go-for-gold-green-star-rating-and-healthy-staff/1202.htm>.
- Parisotto, L. (2007). "Recycled paper in library photocopiers." Retrieved 15 November, 2008, from http://apps.library.curtin.edu.au/blogs/public/index.php/2007/10/16/recycled_paper_in_library_photocopiers.
- University of Western Australia Environmental Services. (2007). "Green Office Guide." Retrieved 15 November, 2008, from http://www.fm.uwa.edu.au/about/sustainability/green_office/green_office_guide#spacegreening.
- Wiebrands, C. (2008). "Turn off the lights." Retrieved 15 January, 2009, from http://apps.library.curtin.edu.au/blogs/public/index.php/2008/03/27/turn_off_the_lights.