

# inside newsletter



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## president's message

**Andrew Frowd**  
Queensland University of Technology  
TEFMA President



Welcome to the 2008 spring issue of TEFMA's *insideneutral* magazine. A big thanks to Bart Meehan

of the ANU and his team for putting together another great issue. I am sure you will find the articles included informative and interesting, particularly those from our scholarship winners. I hope these articles – and those from recent issues of our magazine, available online – inspire other members to take advantage of the range of scholarships on offer.

I am sure by now that your institution has received the 2007 TEFMA Benchmark Survey and you have reviewed your institution's performance relative to your benchmarking partners. I hope that the new Benchmark Survey on carbon emissions was of interest given the amount of public interest and comment on the forthcoming carbon trading regime to be set up by the Federal Government. It is hoped that this survey will be further developed

### disclaimer

The opinions expressed in this publication by the contributing authors are theirs alone and do not necessarily reflect an agreed view by TEFMA members, its President, its Board or its Business Partners.

next year so as to become a realistic indicator of the carbon emissions for each institution.

The TEFMA workshop in Brisbane in June on Critical Incident Management was a great success. TEFMA continues to give real value for money with industry-specific workshops for members. Workshops planned for 2009 include 'Measuring and Minimising our Carbon Footprint' at the University of the Sunshine Coast in July, a Contract Management course to be held at the Victoria University, Wellington, NZ, in March, and Massey University, NZ, hosting a Grounds Workshop in October.

The Leadership Development for the Facilities Manager course at Mt Eliza was held in August, with 24 participants for this very popular program. This course is designed for the future 'facilities manager' within your institution and consistently receives excellent feedback from participants as being relevant and informative for their careers in higher education facilities management.

The TEFMA Board has recently undertaken a membership survey to ascertain what is wanted from TEFMA as your professional association. The outcomes from the survey are on the webpage for your information and will be a prime input to the Board's biennial strategic planning session to be held in December. The

Board has decided to reframe the association's membership structure to encourage membership for *all* staff in the facilities area of a member institution. This will do away with individual payments for associate members. Depending on the current number of associate members, this may result in a fee increase for a number of member institutions, phased in over a two-year period. This one-off fee per institution for all facilities staff will simplify administration and allow even greater access for facilities staff to TEFMA scholarships and workshops/courses.

The recent TEM Conference in Christchurch was another outstanding event, with a good range of presentations and some wonderful social events. A report and some photographs are included in this issue. Our thanks to Peter Molony and his Organising Committee for all their efforts in staging this event.

Finally, I'd like to pay tribute to Mike Quinlan, John Cameron, Chris White and Jenny Denman, who have completed their terms on the Board. I would also like to thank all those who volunteered to be on an organising committee or working group. As a largely voluntary organisation, we only survive through the personal commitment of our members who take on these roles and the support of their institutions. ●



## around the traps



Around the traps is a new column that allows TEFMA members to include a quick update on matters of interest happening at their institution. It may be new projects, innovative ideas, new senior staff or just something so odd it's interesting! We look forward to building this column in future issues of TEFMA *insideneutral* magazine! Please send contributions to [bart.meehan@anu.edu.au](mailto:bart.meehan@anu.edu.au).



### Jenny Bentley, Victoria University of Wellington, NZ, reports:

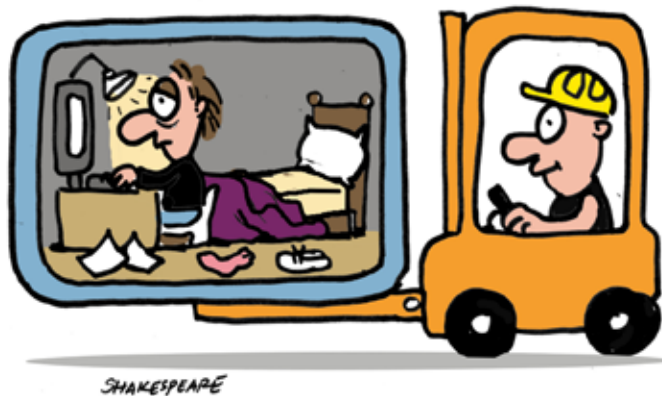
- Victoria has a 386-bed hall of residence under construction, together with a new four-floor teaching and science research building. Plans are also well advanced for a Library upgrade and staged development of a new central student hub.
- Central Government is now requiring the formal development of capital asset management plans, which is providing impetus to complete the documentation around our financial planning for renewals and investment.



### Bart Meehan, Australian National University, reports:

- The ANU is currently reviewing the viability of building student accommodation using a modular design. The units, which would be manufactured

ANU IS CONSIDERING NEW STUDENT ACCOMMODATION.



in China, would be shipped to Australia fully fitted out and constructed quickly on site. A final decision on the project will be made shortly.

- The ANU is currently developing the third generation of its Campus Environmental Management Plan. The plan will cover the period 2009–2015, and will establish a range of sustainability targets including reducing greenhouse emissions by 35 per cent by 2020 and halving potable water consumption in the same period. These targets, as well as others in a broad range of environmental areas (biodiversity, recycling, travel, environmental risk, building and landscape design and community education), will be subject to final approval early in the new year, with the new plan release in the first half of 2009.
- The ANU is in the preliminary sketch plan (PSP) stage of a major science precinct development, in which a number new laboratory buildings and animal houses will be constructed. There are many challenges (finding on-site parking for 400 trades contractors being one of them). We are currently looking at ways to make the buildings/operations highly environmentally efficient, including development of on-site black water recycling and tri-generation.



## around the traps



### Alan Egan, University of New South Wales, reports:

- Having the swallows come back to Capistrano is much the same as having the cranes come back to campus [type 'swallows' and 'Capistrano' into your search engine! – ed]. It means that UNSW is back in the building business as cranes dot the campus (there are no swallows, however). Two student housing projects of 1300-plus beds, a cancer research centre, a multi-storey car park in the wings and a bulging list of mid range constructions have soaked up all FM's spare time. New UNSW FM star recruit Peter McGeorge (ex University of Sydney) is leading the major works charge, tackling a long construction list and relishing the challenge.
- UNSW FM has just created a new printing and design unit called Print Post *Plus* – known simply as P3. Jenny Denman, Manager Campus Services, has crafted a partnership with Fuji Xerox to combine a number of services into one unit: mail, design and printing, including online desk-to-desk printing and delivery. It was a long

negotiation but judging by the initial response from campus clients the new P3 looks like a winner for UNSW.



### Alison Blackburn, RMIT University, reports:

- RMIT is rolling out a \$500 million capital works program across its City, Bundoora and Brunswick campuses and its offshore Saigon South campus in Vietnam. The capital works program will be distinguished by leading-edge sustainable design features. All refurbished buildings will be designed to a four-star Green Star rating and new RMIT buildings will be designed to a five-star Green Star environmental standard.

- Two new landmark buildings are set to strengthen the RMIT 'Precinct' within the city of Melbourne. The Design Hub is a high-profile, innovative and sustainable design research centre. The 11,000 m<sup>2</sup> building, set to open in late 2010, will have a translucent 'smart skin' made up of more than 16,000 sandblasted glass cells, some of which have the capacity to harness solar power. And the Swanston Academic Building is RMIT's largest construction project to date and will provide state-of-the-art learning and teaching facilities for the university. The 40,000 m<sup>2</sup> new home for RMIT Business, set to open in 2012, will provide increased student recreation, study and retail space. View RMIT's capital works program at [www.rmit.edu.au/capitalworks](http://www.rmit.edu.au/capitalworks). ●

## your magazine – your forum

If you don't have the time to write a full length article but have some interesting news about your institution, here's your opportunity. With this new column, Around The Traps, we offer TEFMA members a noticeboard for your institution's important events and activities. Take advantage of it! Please send your (short) contributions, along with a thumbnail of your institution's logo, to [bart.meehan@anu.edu.au](mailto:bart.meehan@anu.edu.au), Tel: (02) 6125 4148.

## cardax – more fun than disneyworld



*Tracey Bartlett is the Security Systems Officer for Queensland University of Technology. She has been*

*with the university for 19 years, 16 of them with Security. She holds a Certificate in Security and Intelligence and a Certificate IV in Control Room Operations. She was the recipient of the 2007 TEFMA/Proslys Security Scholarship and undertook a short study tour of New Zealand in February 2008.*

In early 2007 I applied for the 2007 TEFMA/Proslys Security Scholarship and was fortunate to be the successful applicant. After having my hopes dashed of partaking in an informative security study tour of Disneyworld Orlando, I looked closer to home.

The first decision was – what did I want to know and where could I go to find out? At QUT, Cardax is the standard access control and electronic security monitoring system, so I wanted to visit institutions that use Cardax. But not just as an exercise to say, “You use Cardax, great, so do we”. I wanted to know how other institutions use Cardax, how is it funded, who has ownership of it, how is it installed and programmed, who has access to it, what alarms are monitored, if it is integrated with any other electronic systems on the campus, any quirks and shortcuts that make life easier for the operators, and so on. Every institution is different so what works for one may not appear to work for another until you have a chat and a take a closer look.

I recall conversations with work

colleagues, both here at QUT and at other institutions, that I have had over the past couple of years of their recent (at the time of the conversation) return from New Zealand and their good fortune to have been able to visit the offices of the Gallagher Group in Hamilton, meet with the Gallagher Security Management Systems (GSMS) team, the people behind Cardax, and to be taken on a tour of the factory that manufactures the Cardax products. They always spoke highly of the hospitality received by the staff of the Gallagher Group, of how much they enjoyed the factory tour and expressed surprise at the range of various products manufactured.

So the two things I decided were: first, I wanted to see where Cardax came from and, as it's based in New Zealand, the second was pretty much a forgone conclusion – visit institutions in New Zealand that use Cardax.

I contacted three: University of Canterbury in Christchurch, University of Otago in Dunedin and University of Waikato in Hamilton. I told them who I was, why I was making contact and asked if I could visit. I was fortunate to receive favourable replies. Cardax in Hamilton was also very agreeable to my visit.

So in February 2008 I flew to Christchurch. First stop, University of Canterbury, where I met with Chris Hawker, Group Manager Operations, at the Facilities Management offices and we talked about the university and security in general. Shortly after, we walked over to the security office where

I met Owen Phillips. Owen very kindly showed me their Cardax system and explained the University of Canterbury way of installing, programming and managing Cardax. It's always a learning experience to talk to others and see how they manage their systems – I definitely picked up a couple of tips.

While I was at the security office, a security officer arrived on a Segway (a two-wheeled personal transporter). It was the first time I'd seen one other than in a brochure – interesting to see them in action. I was offered an opportunity to try one out but as there is a pond in front of the office, I decided to decline the invitation.

Next stop, University of Otago in Dunedin. I arrived in the middle of Orientation Week and the university students in Dunedin certainly appear to know how to celebrate O Week. On my first night in Dunedin I was having dinner at

a place on the Octagon when I noticed the police had closed off all roads leading into the Octagon – not a good feeling when you don't know what's going on. However, a

few minutes later, hundreds of toga-clad students appeared from around the corner heading across the Octagon to the theatre for an O Week event. It was a sight to see.

The following morning I met with Andrew Ferguson, Deputy Proctor at the university. The University of Otago has a large student population, the majority of whom reside either on the campus or in the suburbs immediately to the north of the university. Here at QUT there are no student



▷ residences so it was interesting to hear how Otago manages such a large student population right on its doorstep while maintaining good relations with the non-student residents of Dunedin

The next day it was on to Hamilton and the University of Waikato. I met with Ray Hayward, Security Manager at the university. Once again it was interesting to see and hear how another university installs and manages its Cardax system. Ray took me for a tour of the university both on foot and by vehicle to the outer reaches. At any university, at any time, you can be assured that there is some form of construction work going on and Waikato was no exception. When I was there preliminary works were under way for the expansion of the library building and during our tour of the university Ray pointed out areas earmarked for refurbishment or construction – busy times at Waikato.

My final day in New Zealand was spent with the GSMS team in Hamilton. It was a very full day, starting with the tour of the factory I'd heard so much about – I thoroughly enjoyed it. I met so many people at GSMS and really appreciate the time taken by those persons to talk to me about the Cardax product. I would like to thank Natalie Ward, Brand Manager – Cardax, for the time she spent with me that day. Natalie, it was very much appreciated.

After lunch, Michael Collins, Business Development Manager with GSMS, took me to visit with Shane Goodall, Security Manager at Wintec, Waikato Institute of Technology. Once again, it was very informative to talk to another

**tefma scholarships – apply now**

Are you interested in getting assistance to develop your skills or the skills of your staff? Apply for a TEFMA Scholarship!

TEFMA provides a number of scholarships that cater for a range of disciplines and levels working in the tertiary education facilities management sector. Scholarship winners have invariably found their experiences rewarding in so many ways. You can read the enthusiastic reports from various scholarship winners in this and previous TEFMA *insidenewsletter* magazines.

For more details on each TEFMA Scholarship, please check out the TEFMA website: [www.tefma.com/education/scholarships/index.jsp](http://www.tefma.com/education/scholarships/index.jsp).

user of Cardax and see how and why they do what they do.

I would like to take this opportunity to thank TEFMA for awarding me the TEFMA/Prosys Security Travel Scholarship. It was a rewarding and informative experience. I would also like to thank all the

people who met with me and took time out of their busy days to show me around their workplace and answer my questions.

Finally, I would encourage fellow colleagues in the security field to apply for this worthwhile scholarship. 🍷

### temc 2008

For a report of TEMC 2008 held in Christchurch, go to page 8.



## improving logistics of fleet and mail services



*Estely  
Pruze,  
Fleet  
and Mail*

*Manager, Facilities Management  
at the University of New  
South Wales, reports on her  
TEFMA/Zauner Construction  
Travel Scholarship.*

As the Fleet, Mail Manager within the Facilities Management department at the University of New South Wales (UNSW) I visited two universities to help me expand my knowledge and to look at new ways to improve the logistics of the fleet and mail services at UNSW in order to make it more effective and efficient for both the UNSW staff and students.

First, I would like to thank the TEFMA Board for awarding me the 2005 Zauner Construction Travel Scholarship. I would also like to thank Jenny Denman, Manager Campus Services, Facilities Management at UNSW, for her support in my scholarship application, as well as the two universities I visited – RMIT and La Trobe in Victoria – and especially their staff members for the time they shared in discussing their experiences, knowledge and ideas. We managed to bounce new ideas and concepts together to help formulate a better strategy for the future.

My first visit was to Mail Services at La Trobe University – Bundoora Campus, which is responsible for servicing 211 departments twice a day and the city campus once a day. The mail unit is staffed by a manager, supervisor, one permanent staff member and 3.5 casual staff members. Students are regularly recruited as casuals as they are already familiar with the campus and location of the departments. This means little training is required, which is a benefit for the university and especially for the students, who have casual employment within the environment in which they study. The mail service at La Trobe is run very efficiently; it also provides a same-day turnaround and is full charge back on a monthly basis.

I then spent some time with the Fleet Manager and our discussion included the pros and cons of outsourcing to a leasing company or keeping operations in-house.

There are 260 vehicles at La Trobe, which comprises tools of trade, departmental vehicles and vehicles with dedicated drivers' departmental, senior executives' salary sacrifice and staff novated leases. Vehicles have a turnaround time of two years or 40,000 kilometres and management fees are passed on to the departments.

There are many challenges in operating such a diverse fleet and documentation in the form of policies and procedures is a major key to the success of La Trobe's organisation for an efficient fleet management.

My second visit was to RMIT University city campus where unlike other universities it is not closed off or surrounded by walls; this campus occupies a relaxed, friendly, vibrant section of the city of Melbourne. The mail services are provided by Converga as they are an RMIT preferred supplier and the contract is managed by Facilities Services, Property Services. Mail services conducts distribution four times a day, all mail, and documents are processed within 24 hours. Mail services at the city campus are a challenge for distribution as, with the location in the busy CBD, vehicle access can be limited.

During these visits I had the opportunity to compare an in-house versus outsource services scenario in which I concluded that both can be very efficient and cost-effective, depending on circumstances.

In summary, I appreciated the opportunity to view these operations and was grateful to meet and exchange experiences with other university colleagues. To the TEFMA Board, thank you again. ●

## temc 2008 – connected in christchurch

September in beautiful Christchurch – and 620 delegates gathered to exchange ideas and network at the 2008 Tertiary Education Management Conference. Thanks to all our sponsors, with the major sponsor again this year being Campus Living Villages.

This year's conference was a tremendous success, not only in terms of the number that attended but also through a program that covered a wide range of issues that are critical to the future of our sector. The presentations were split into streams that focused on investing in people, students, infrastructure, buildings technology, performance monitoring and sustainability. Presenters came from across the sector, with many travelling 'across the ditch' to share experiences with our Kiwi colleagues. We also had guests from all parts of the world, with TEFMA hosting representatives from AUDE (UK), APPA (US) and HEFMA (South Africa).

Of course, no conference is all work and no play. The Welcome Reception was held in the beautiful Christchurch Art Gallery Te Puna o Waiwhetu, while the Conference Dinner (sponsored

by Woods Bagot/Mosaic Space Consulting) was held in the Air Force Museum, where the delegates were surrounded by the memories and memorabilia of RNZAF history. The 1940s theme gave the more adventurous the opportunity to dress up in the mode of a Humphrey Bogart movie, while the music provided by an NZ group called the Beat Girls moved from period appropriate (Andrews Sisters melodies) to rock'n'roll. The dance floor rumbled to stamping feet for most of the night.

The TEFMA Dinner (sponsored by Dalkia Technical Services) was held in the Christchurch Town Hall. Delegates and guests were ushered into an elaborately decorated hall, barely lit except for a light trained on the organ posed high above the stage. A figure appeared dressed in a cloak, sat down and began to play the first notes of *Phantom of the Opera* ... the theme for the night. The next two hours



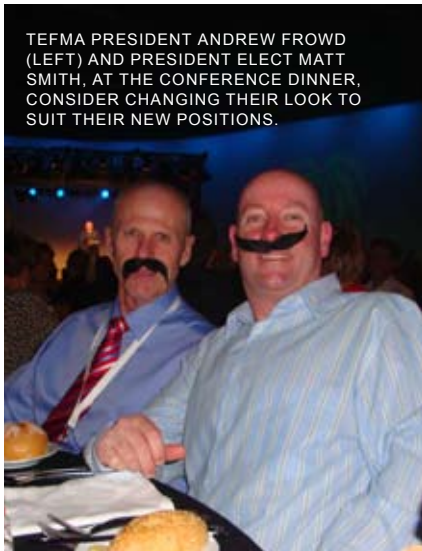
PETER MOLONY, CHAIR OF TEMC 2008 ORGANISING COMMITTEE.



DALKIA IS ACKNOWLEDGED FOR THEIR CONTINUED SPONSORSHIP OF THE TEFMA DINNER.

TEFMA DELEGATES ENJOY A GREAT EVENING TO THE STRAINS OF PHANTOM OF THE OPERA.





TEFMA PRESIDENT ANDREW FROWD (LEFT) AND PRESIDENT ELECT MATT SMITH, AT THE CONFERENCE DINNER, CONSIDER CHANGING THEIR LOOK TO SUIT THEIR NEW POSITIONS.



APPA PRESIDENT ELECT POLLY PINNEY AND OTHER DELEGATES LEARN SOME TRADITIONAL MAORI SKILLS.

were a combination of good food, good company and a great show with fantastic local singers Mark Hadlow and Brigitte Murray. And, of course, there was the occasional appropriate beverage.

The evening also afforded an opportunity to present the annual scholarships (see separate box).

Finally, congratulations to Peter Molony and his Organising Committee for all their work.

The effort really showed – and has set a benchmark for future conferences. 🍷



MARK DORIAN, UNIVERSITY OF SOUTH AUSTRALIA, RECEIVES HIS TEFMA/ZAUNER CONSTRUCTION TRAVEL SCHOLARSHIP.

## tefma scholarships

[www.tefma.com/education/scholarships/index.jsp](http://www.tefma.com/education/scholarships/index.jsp)

Congratulations to the following scholarship recipients, presented at the TEFMA Dinner, TEMC 2008:

- Maurie Pawsey Scholarship – Sherron Irwin, University of Queensland
- TEFMA/OPUS Management Development Scholarship – Nathan Warburton, University of South Australia
- TEFMA/Currie & Brown Conference Scholarship – Dale Washington, University of Adelaide
- TEFMA/Zauner Construction Travel Scholarship – Mark Dorian, University of South Australia
- TEFMA/PROSYS Security Scholarship – Justin Faggotter, University of South Australia.

A full list of winners, past and present, along with details of how to apply for the annual scholarships, are available at [www.tefma.com/membership/awards/index.jsp](http://www.tefma.com/membership/awards/index.jsp). There are some fascinating and humorous reports from past winners in recent issues of the TEFMA *insideneutral* magazine: [www.tefma.com/infoservices/publications/newsletter.jsp](http://www.tefma.com/infoservices/publications/newsletter.jsp).

## an fm student working at your organisation



*Floor Schepens is an overseas facilities management student undertaking a graduate*

*internship in Western Australia. Floor would like to inform Australian companies about the benefits of having a FM student working in their organisation. Following is her article and notes on her work at Edith Cowan University. This article first appeared in Facility Perspectives magazine.*

My name is Floor Schepens and I am a facilities management student from the Netherlands. I am a fourth-year student and I hope to graduate in 2008. As part of the Facility Management Bachelor Degree I follow at the NHTV Breda University of Applied Science in the Netherlands, I chose to undertake a graduation internship in Australia to get more work experience. I worked for six months, from December 2007 until May 2008, at the Facilities and Services Centre of Edith Cowan University (ECU) in Joondalup, WA.

I am writing this article because I want to inform organisations in Australia about the possibilities and benefits of having a facilities management student working at their organisation. I want to inform people about my experiences of facilities management in Australia compared to my experience of facilities management in the Netherlands. I chose to come to Australia because I wanted to improve my English language skills and I thought it would be

interesting to see how facilities management is practised in another country. I thought it would be an experience to live and work in another country for a few months, speak another language, get to know the culture, habits and to meet new people.

### Opportunities

It can be very rewarding for an organisation to have a facilities management student working for their organisation. I am a student from the Netherlands but that is not the only country with facilities management bachelor degrees. Australia has a facilities management bachelor degree as well. I see that Deakin University offers this course at the Geelong Waterfront campus. The bachelor degree takes three years, with one or two optional honour years. In these honour years students write a thesis and they work off campus as interns in the facilities management industry. This is a great opportunity for students to get more hands-on work experience! It can offer a lot of benefits to have a facilities management student working at your organisation. It is useful to let a student take a look at your organisation with 'fresh' eyes and it can be interesting to hear what a facilities management student thinks of the way things are planned in your organisation.

A facilities management student can offer your organisation a lot of theories and practical methods to work with. A facilities management bachelor degree offers a range of literature to students; the student can 'transfer' the information to your organisation. Your 'method'

of working can be reviewed and if there is any applicable and informative literature, a new process can be implemented giving your organisation a business improvement.

A facilities management student working at your organisation is an easy way to pick up current trends in the facilities management industry, because students work with current best practice all the time, for example when they work on assignments.

It is great if organisations are able to offer a student a place to work and to obtain work experience in the facilities management industry. It is an excellent opportunity for both parties: the student works to get knowledge and has the possibility to show what he or she has got; the organisation gets an additional resource with minimal impact on costs.

### Experience

My experience with facilities management in Australia has been better than I imagined. I didn't know what to expect because I didn't know much about how facilities management is organised in Australia. I always had the impression that the Netherlands was one of the most developed countries relating to facilities management. Since working in the facilities management industry in Australia I see that Australia is well advanced in this discipline. I have been here for a few months now but there are a few remarkable things I have experienced. There are a lot of similarities between Australia and the Netherlands in the facilities management area. ▶

► Outsourcing in both countries is very popular and often used. There is a lot of outsourcing occurring, big contracts for example in the maintenance or cleaning industry. My experience is that facilities management theories and methods are becoming more popular. For example, organisations implement service level agreements (SLAs) or key performance indicators (KPIs) to define the levels of service for clients or organisations to implement the 'Balanced Score Card' as a strategic planning and management tool.

Both countries do a lot of benchmarking. Australia as well as the Netherlands has national facilities benchmarks on different areas. Each country has a facilities management association. In Australia this is FMA Australia (Facility Management Association of Australia), in the Netherlands it is FMN (Facility Management Nederland). Both associations are connected to the IFMA (International Facility Management Association).

The difference between the countries is that education in facilities management is far more developed in the Netherlands. The Netherlands has nine facilities management bachelor degrees and approximately 1000 'new' facilities managers graduate each year. In other countries, for example Australia, what we know as 'facilities management', is often part of a building program

or hospitality education. The quality of facilities managers in the Netherlands continues to improve, and more and more is being published about the subject and students are trained differently. Australia is working on the education in facilities



management, to start with the Facilities Management Bachelor Degree at Deakin University.

### Positive environment

In summary I have had a positive experience during my time in Australia. This applies to both my work and social experience. My English language skills have improved, which will be very useful in the future. I have enjoyed my work experience at Edith Cowan University and I have learnt a considerable amount. It has been a great opportunity to finally put

in practice what I have learned at university over the past few years. It is all very interesting and useful for my graduation and for my further career.

All I have to say about Australia is a very positive environment; the people are very friendly, helpful and genuine. The landscape is gorgeous and the weather is even better! I would definitely advise any student to undertake an internship in Australia because it is a great experience.

### Work experience at ECU

I work at the Facilities and Services Centre at Edith Cowan University on the Joondalup Campus in Joondalup, Perth, WA. The Facilities and Services Centre looks after four campuses: a regional campus in Bunbury and three metropolitan campuses in Mount Lawley, Joondalup and Churchlands. Churchlands will shut down in June. I mainly work in the Buildings and Services branch, which is responsible for Maintenance, Cleaning and Grounds Maintenance. In these areas I work on different projects and I attend meetings.

During my internship at Edith Cowan University I work on the following four main projects:

1. **Cleaning audit.** ECU wants to review the current cleaning contract and the current cleaning services. An external consultant will undertake cleaning audits and will review

▶ the contractor’s performance on occupational health and safety, environmental management and risk management. Before I started this project I reviewed the current cleaning contract to familiarise myself with the contract requirements. I have done research to find out which cleaning consultants there are in Australia and which have the expertise to undertake the cleaning review for ECU. I then wrote a letter of invitation, developed a scope of work and reviewed ECU’s quotation form and contract terms and conditions. I have had contact with different consultants and the documents are ready to be sent out.

**2. Service level agreement (SLA).**

To manage service delivery the Facilities and Services Centre established service level agreements (SLAs) with their customer (i.e. Faculty/ Centre). The agreement will revolve around services that each Service Centre will and will not provide for each other and who has responsibility.

I have worked with SLAs at university, so I know a bit about the subject. ECU had a draft version of an SLA written. I reviewed this and compared this SLA to the methods and theories I learned at university. I made some changes and I made my own version of the SLA. While I was writing the SLA I conducted meetings and liaised directly with the customer. I updated the ‘items to maintain’ in the schedule and I discussed my version of the SLA with the Maintenance Manager and my supervisor. I then had

follow-up appointments with the customer to discuss the SLA.

When I finished my first SLA I developed an SLA format (template), which can be used over and over again for writing an SLA. It is useful for the Facilities and Services Centre because it can be used after I return to the Netherlands. On completion of this SLA I commenced work on a new SLA for a different customer. I am still working on this SLA.



**3. Maintenance.** One of the key functions of the Buildings and Services Department is maintenance. Together with the Maintenance Manager I work on the management and administration of a comprehensive maintenance contract for mechanical fixed plant and equipment. The contract is valued at over \$1 million per annum. I attend weekly operation meetings and monthly contract performance meetings, I attend site inspections and I raised jobs in FMMS – ECU’s computerised maintenance management system. Besides that I have commenced reviewing the contract in readiness for contract re-tender.

**4. Signage.** Signage is one of the projects the university’s Planning and Development area works on. A review and upgrade of ECU’s external campus corporate signage

needs to be undertaken. I was involved in this project that entails reviewing of existing signage, identifying and documenting changes, taking pictures of all the signs and developing new signs with AutoCAD.

Additionally, I work on a number of different smaller projects. Together with the Buildings and Services staff I review the existing procedures and flow charts and consolidate these into ‘work instructions’, including sections addressing Environment and Risk. I facilitated this process. I undertook elements associated with the implementation of the Balanced Score Card, for example a check of the KPIs. During my studies I worked with the Balanced Score Card so I had prior knowledge of this. I put the information together for the TEFMA Benchmark for 2007. I liaised with all managers to obtain relevant information. I have also had contact with IT Services to solve IT problems in our area. ●

**what’s new?**

Remember, if you want to know what is happening in TEFMA, visit the ‘What’s New’ page of the TEFMA website at: [www.tefma.com/whatsnew/](http://www.tefma.com/whatsnew/).

## rmit building art



*Chris Box is the Human Resource and Communications Coordinator for RMIT University's Property Services Group. In part this*

*role entails editing an in-house magazine and issuing works bulletins to advertise and promote Property Services' achievements and to inform the RMIT University community of the impact of*

*construction/refurbishment projects. This article discusses the metamorphosis of the university's Building 15 through the work of artist Rowena Martinich; it was achieved partly through the support of Property Services.*

A plain but functional glass wall of one building on RMIT University's city campus has been transformed into a vibrant artwork. The artist, Rowena Martinich, has already completed her Bachelor of Arts

– Fine Arts Painting (Honours) with RMIT and this work relates to her Masters candidature in 'Art in Public Space'. The assignment is affiliated with RMIT's Design Research Institute and their Intervention Through Art program and will also be included with the 2008 State of Design Festival.

Rowena's imagination was fired by the site back in February and her proposal was processed to allow the installation to begin in June. It will be a feature of the building for six months.

The as yet unnamed piece took three weeks to paint on clear adhesive MACtac vinyl sheets. Rowena began by painting the sheets in paired panels and then laying them out in an underground car park where such an expanse was necessary to accommodate the 15.5 x 8.5 metre size of the work. The sheets were installed by a specialist outdoor billboard firm (Sneaker Co). Her other

ROWENA MARTINICH AND HER ARTWORK.



- ▷ sponsors include Celmac (for the vinyl adhesive film) and Viponds (for the paints).

To me the installation has two personalities. The one viewed from outside is a confrontational work and it was Rowena's intention to interrupt the vision and grab attention of passers-by. This was achieved by a combination of its size, fluoro colours, unexpected placement and a use of bold, abstract paint strokes in deliberate opposition to the neat gridlines of the windows' construction. From inside, the light passing through the artwork presents something like a stained-glass window, albeit one from a 'grunge' cathedral.

Rowena hopes the installation will lead to similar assignments in the future. RMIT does too. 🍷



## upcoming events



TEFMA provides an ongoing series of workshops and conferences. Please visit the TEFMA website ([www.tefma.com](http://www.tefma.com)) for a full list of up-to-date TEFMA events, information services and 'What's new'.

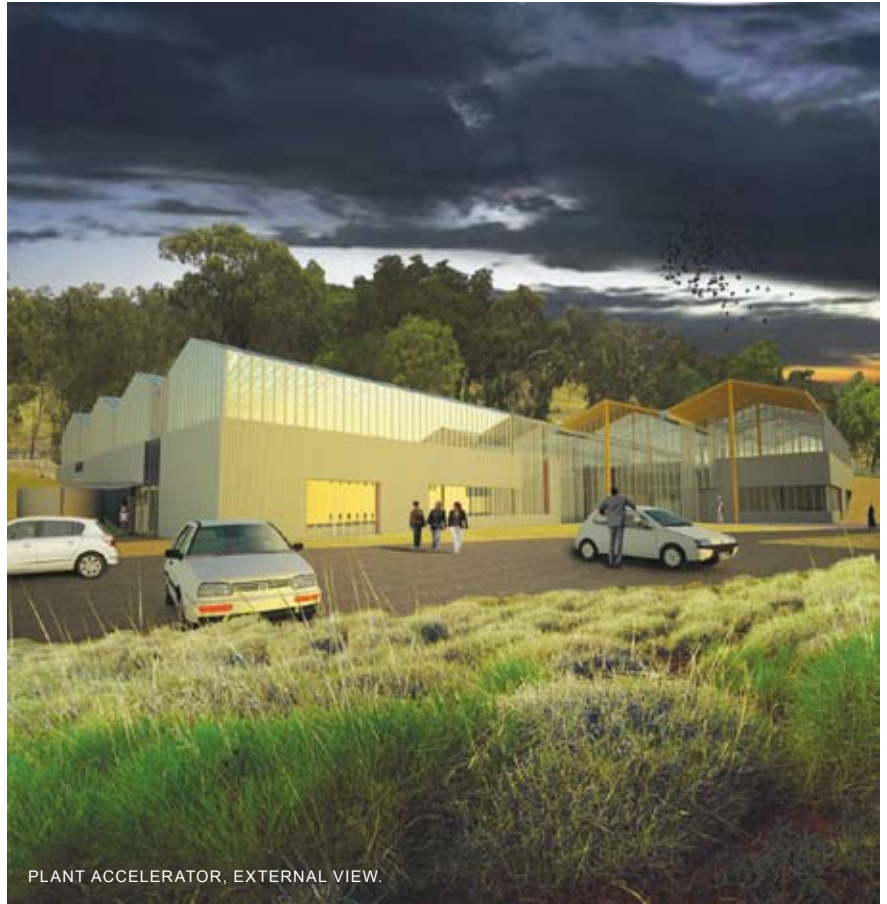
## plant accelerator is a super greenhouse



*Greg Badger and Harald Baulis, University of Adelaide.*

*Greg Badger has been with the Property Services Division of the University of Adelaide since 1981 and is currently located at the Waite Campus in the role of Manager Projects. Greg has been responsible for the delivery of numerous key projects over the years including the successful delivery of the Bonython Hall airconditioning upgrade at the university's North Terrace Campus and the \$30 million Wine Innovation Building at Waite. Harald Baulis has a background in Strategic Facility Planning and has been with the University of Adelaide for three years as the Manager of Strategy and Space Planning. Key projects include the facility planning and introduction of space standards across a number of major projects and the development of Campus and Faculty Masterplans.*

Adelaide will become home to a 'super greenhouse' that will place it at the cutting edge of international plant research and its rapid application to the agriculture and bio-plant industries. To be known as The Plant Accelerator, the \$26 million super greenhouse will be built at the University of Adelaide's Waite Campus at Urrbrae, as the largest and most sophisticated public facility of its type in the world. ▶

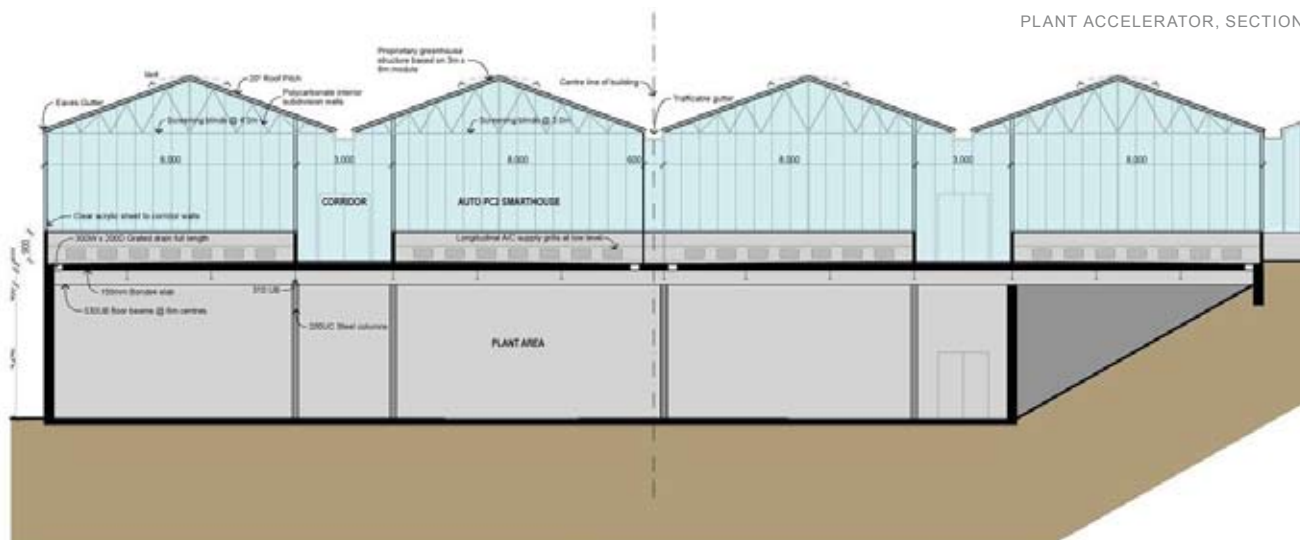


PLANT ACCELERATOR, EXTERNAL VIEW.



PLANT ACCELERATOR, AERIAL VIEW.

PLANT ACCELERATOR, SECTION.



▷ It is the national flagship of the new Australian Plant Phenomics Facility and is being jointly funded by an alliance of the Commonwealth (\$11.35 million), the SA Government (\$10 million) and the University of Adelaide (\$4.8 million), under the National Collaborative Research Infrastructure Strategy (NCRIS). Turning the first sod for The Plant Accelerator at the recent Waite site opening, the South Australian Premier, Mr Rann, said the centre

would spearhead research to benefit agriculture and horticulture, particularly in the context of climate change and environmental degradation. “This South Australian facility will play a leading international role in achieving more sustainable agriculture, enhancing biodiversity and improving the yield and quality of crops that can tolerate drought, raised salinity levels and disease,” he said.

The Plant Accelerator will feature a series of 50 high-tech glasshouses

and laboratories that will house more than one kilometre of conveyor systems that will deliver plants automatically to state-of-the-art imaging, robotic and computing equipment. This will allow continuous measurements of the physical attributes (the phenotype) of up to 160,000 plants a year.

The accelerator mode of this facility will come from its ability to identify more rapidly those varieties that will be successful and therefore reduce the time to market. “South Australia’s research base will be provided with seamless and affordable access to its cutting-edge technologies, and our agribusiness industries – food, wine and agriculture – will be the first to benefit from the application of its fruitful research,” said Mr Rann.

Vice-Chancellor and president of the University of Adelaide, Professor James McWha, said the NCRIS funding was welcome support. “The new facility will be world class in every respect and will help in national efforts to provide a competitive edge for Australia’s \$27 billion annual agriculture export industry,” he

### key aspects of the project scope

- Double level facility with greenhouses above the other facilities.
- Allowing for greenhouses of two modules, totalling 1510 sqm usable area.
- Type 1 / PC2 operational greenhouses of 756 sqm GFA – premium greenhouse able to comply with OGTR PC2 for Exotic Plants and isolated to avoid spore movement.
- Type 2 / PC2 Capable Greenhouses of 756 sqm
- GFA – similar to Type 1 but able to be upgraded to comply with OGTR PC2.
- All greenhouses from off-the-shelf and proprietary construction, with substructure of metal sections and clad in 16 mm thick Plexiglas Alltop SDP16/ 1230, 600 mm module, 4.0 m to underside of truss. Internal walls to corridors: single wall acrylic or glass. Internal walls between greenhouses: 6 mm twin wall polycarb or single wall acrylic.



▷ said. Professor McWha noted there would be a “critical mass of 1200 researchers” from at least eight organisations on one campus. “The facility will further raise the national and international prominence of the Waite Campus as a centre for excellence in plant science, genomics and breeding research and will attract additional international scientists and postgraduate students,” he said.

Property Services at the University of Adelaide set the following objectives for the project:

- A world-leading, innovative technical and functional design solution incorporating efficient work flow practices and systems.
- Maximise the development opportunities of the site.
- Energy-efficient building and engineering services systems appropriate for the building type employing sustainable design solutions, such as water neutral, cogeneration.



PLANT ACCELERATOR, PLAN

- A modular approach to greenhouse arrangements incorporating functional flexibility designed to allow future extension of the automated conveyor system.
- A cost-effective solution that meets the budget parameters and incorporating systems with low recurrent, maintenance and replacement costs.
- Meet key milestones and program details and provide design, program and costing details.
- Compliance with the objectives of the Waite Campus Development Strategy. ●

## plant accelerator – project details

### Consultant team and project group

Principal consultant/architects	H2o architects + Phillips / Pilkington Architects
Mech./Elec./Fire/Hyd. engineers	Lucid Consulting Eng.
Structural/civil engineer	Wallbridge & Gilbert
Landscape architect	Taylor Cullity Lethlean
Certification reviewer	Katnich Dodd
Development approval	QED
Business model planning	PKF Mark Morelli
For University of Adelaide: Greg Badger, Steve Busted, Stewart Corner, Harald Baulis	

### Area covered by the project

Function	Final area (sqm)
Greenhousing	1511
Plant Imaging	268
Potting & Germination	487
Growth Room Modules	247.5
Administration	481.5
Research	74.5
Plant / Support	578.5
Water Storage	(250)
Other circulation	836
<b>TOTAL</b>	<b>4484</b>
<b>(gross area)</b>	<b>(2686.5+1797.5)</b>

## fire on the water



*Geoff Dennis is the Operations Manager, Property Facilities Division, at the University of Queensland. Geoff was the TEFMA*

*President in 2007 and served on the TEFMA Board for six years.*

In April 2007, a major fire destroyed 12 buildings located at the University of Queensland's Heron Island Research Station. Heron Island is a small coral cay island that is part of the Great Barrier Reef and is located 72 kilometres off the coast of Gladstone in Central Queensland. There are three groups who have facilities on the island. These are UQ, Voyages Resort and the National Parks and Wildlife Service (NPWS). Heron Island is a sensitive ecological habitat and lies in the centre of a World Heritage listed Marine Park.

This article describes the impact of the fire, the recovery process and what has been learnt from this experience.



SCENE OF DESTRUCTION AFTER THE FIRE.

### Heron Island Research Station fire

The fire is believed to have started in the main Research Laboratory and spread quickly to adjacent buildings. The newer buildings were eco-designed to complement ▶

NEW ACCOMMODATION BUILDINGS ON FIRE ON HERON ISLAND. (PHOTOGRAPH: CALLAGHAN MAR)



HERON ISLAND, WITH LOCATION OF THE THREE ORGANISATIONS THAT HAVE FACILITIES ON THE ISLAND.



FIGURE 1. FIRE RECOVERY MODEL.



FIRE SITE FROM THE AIR.

HERON ISLAND RESEARCH STATION SITE PLAN.

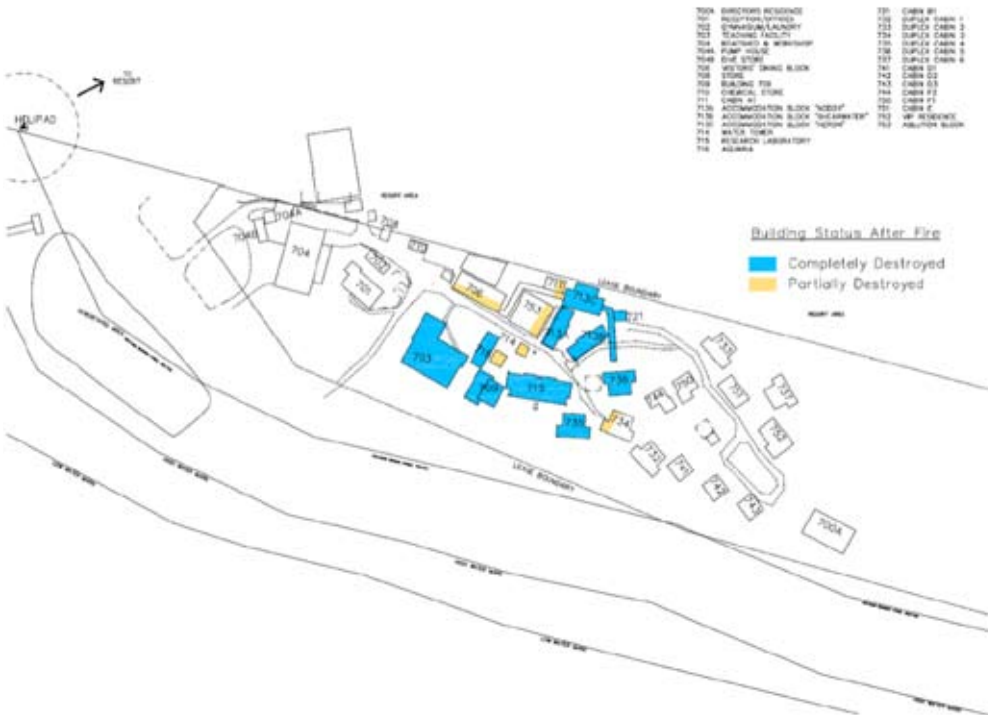
▶ the natural environment. They had been constructed from light timber (to limit weight of shipping construction materials to the island) and were on low stumps to allow for nesting wedge-tailed shearwaters (mutton-birds) that would otherwise burrow under and destabilise slabs of buildings. The space under the buildings allowed air to be sucked in to feed the fire and once it took hold there was no stopping it. Connecting timber boardwalks helped to transfer the fire between buildings.

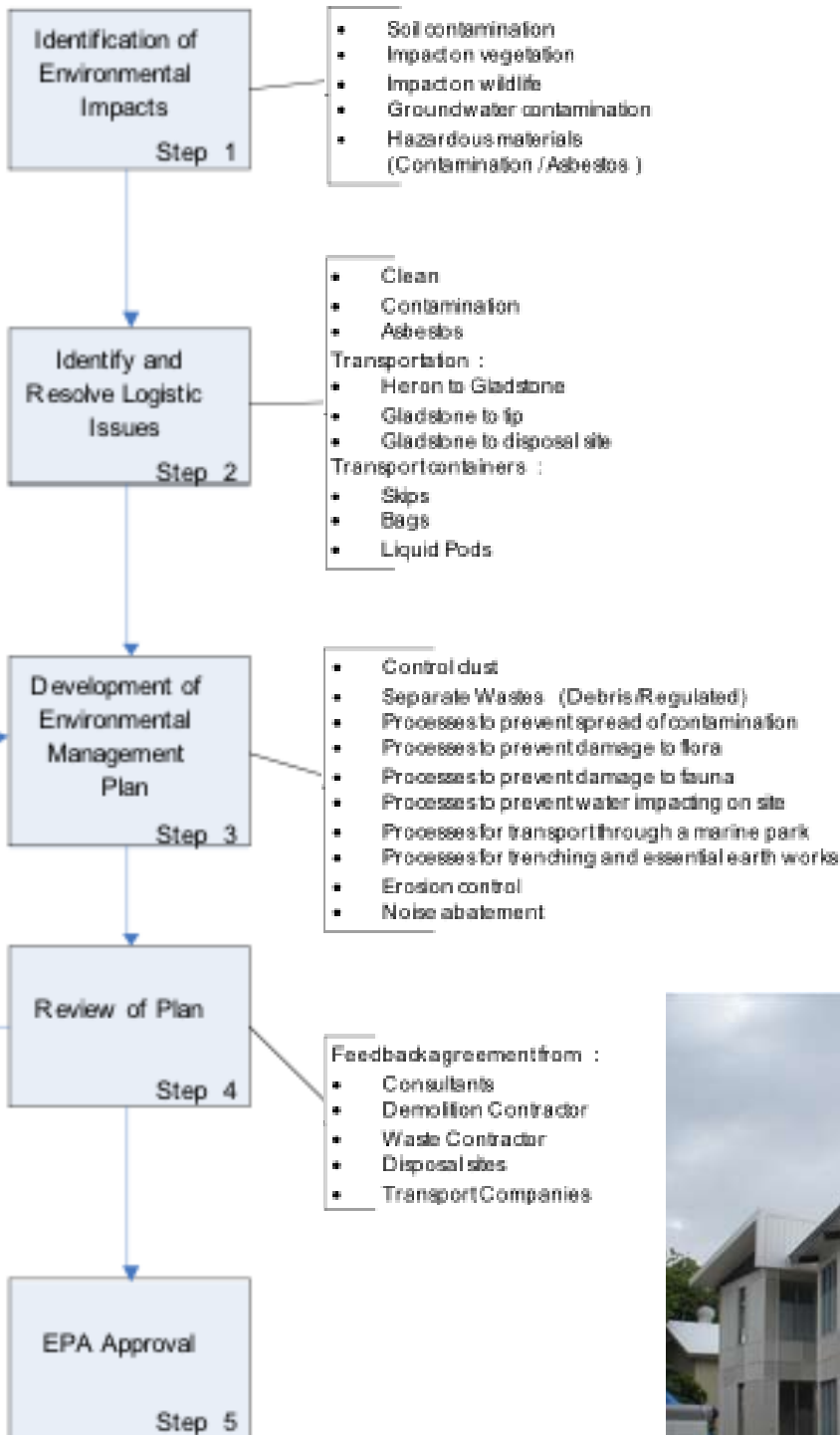
The buildings in blue on the site plan below were completely destroyed and the buildings coloured amber was partially damaged by the fire.

Before rebuilding could occur, the site had to be cleaned up and this process involved seven stages as per Figure 1 above.

**Stage 1**

Initially the site had to be fenced off to prevent tourists from the adjacent resort venturing into the ▶





▶ area. To achieve some short-term business continuity, services had to be urgently restored to the site. This involved re-trenching electrical supplies and water mains, and tracking down and repairing numerous underground potable and grey water services.

**Stage 2**

Before any clean-up could commence, a comprehensive Environmental Management Plan had to be prepared and submitted to the Environmental Protection Agency (EPA) for approval. Figure 2 below illustrates the framework of this plan. Soil sampling results identified that the top layer of sand was heavily contaminated with a mixture of ash, arsenic, chromium and copper. These chemical deposits resulted from the breakdown of treated timber consumed in the fire.

**Stage 3**

Once EPA approval had been obtained, the clearing of surface ▶



FIGURE 2. FRAMEWORKS FOR THE RECOVERY ENVIRONMENTAL MANAGEMENT PLAN. (SOURCE: STUART GREEN, UQ)

- ▶ debris commenced. The slowest part of this process was getting the debris off the island as the capacity and availability of the barge was limited. Once an area was cleared of debris, black plastic was put down to prevent rainwater from leaching the surface contaminants deeper into the sand.

#### Stage 4

The most tedious stage of the process was to carefully remove only the top layer (60 mm over 3000 m<sup>2</sup> fire footprint) of contaminated sand. Both the spread of contaminants and the taking of clean sand had to be minimised (as the site is a National Park and to do so could incur penalties). The contaminated sand was taken up and double bagged then placed and sealed in skips to minimise the potential for loss as it was barged through the Marine Park to the mainland. There it was transported from Gladstone by road to the contaminated waste dump located near Ipswich. As for Stage 3, the removal of more than 300 large bags of sand from the island was a logistical nightmare. The barge servicing the island could take only 23 bags at a time and could do this only twice a week. Occasionally a larger barge was also used but access to it was limited. All transportation, holding, transfer and final disposal sites along the sand's route had to be coordinated and comprehensive document tracking undertaken of the contaminated sand (considered a regulated waste) from the point of excavation to final disposal. This entailed three transfer sites (one on the island and two at Gladstone)

and four different vehicles.

#### Stage 5

This stage involved repairing buildings that were partially damaged during the fire. These buildings were critical to business continuity and the recovery effort.

#### Stage 6

A number of structures and underground tanks had to be demolished and removed from the island. Many of these tanks contained contaminated water that also had to be removed, similar to the contaminated sand. The tanks also had to be decontaminated before demolition could begin. Additionally, a number of trees had to be removed or treated for restoration. These pisonia trees are environmentally significant to the island birds and are the only type of tree that black noddies will nest in.

#### Stage 7

Because a significant amount of accommodation on the station had been destroyed, some of the older undamaged buildings had to be urgently upgraded to meet fire safety regulations for increased accommodation capacity. This accommodation was required for the building contractors to stay in to commence the rebuilding phase of the recovery.

#### Key lessons

The key lessons learnt from this incident are as follows:

1. When an event like this happens, you just want to get stuck in and get the recovery process rolling. The recovery process was an enormous drain on our internal resources, and

it has been difficult (and still unresolved) to recover the cost of internal efforts through the insurance claim. Next time I would engage external resources to either directly manage the recovery process or to directly replace internal staff managing the recovery process. This way it is a clear claim resulting from the fire. In the Heron Island case, some of our staff were working long hours to manage the recovery while also carrying out their normal duties. As it turns out, it is difficult to claim internal labour in this circumstance.

2. It is essential to have a documented and tested Critical Incident/Crisis Management Plan in place. In the Heron Island fire, the plan was invoked and the Crisis Management Team members carried out their roles effectively. However, the incident did find some flaws in the system and these have since been addressed and the plan updated. One of the key problems with this incident was the difficulty in obtaining accurate and reliable information in the very early stages of the recovery. Another issue was the unforeseen complexity of the environmental clearances required to get the clean-up started.

3. Remote sites require extra consideration when designing Critical Incident/Crisis Management Plans for your institutions. They are more difficult to get to, to communicate with, to monitor potential risks, and to find suitable contractors.

4. Prevention is far better than recovery! ●

## supercell storm



### emergency management response by the Australian national university

*Bart Meehan is the Associate*

*Director, Facilities and Services, at The Australian National University, based in Canberra. He has extensive experience in establishing corporate sustainability programs for tertiary institutions and has been responsible for the ANUgreen Program since its creation in 1999. The environmental sustainability management program has achieved national recognition and has been successful in improving corporate sustainability on campus.*

At 9.30pm on 28 February 2007 a 'supercell' storm hit Canberra, ACT, causing major damage to the city and the Australian National University, which has its main campus located on the western fringe of the city centre.

This article provides a case study on the emergency management strategy employed by the university in response to damage caused to campus facilities and consequent disruption to academic activities.

### Background

The Acton campus of the Australian National University is located on the fringe of the Canberra city centre (known as Civic). The campus is 145 hectares, with approximately 200 buildings, of which 70 per cent were constructed prior to 1975. With no boundary fencing and multiple entry points, it has easy

public access. This campus is the main location of the university's academic activities, with teaching and all but one of the research schools based on this site. (There is a research school based on the Mount Stromlo campus, located approximately five kilometres from Acton. This campus did not sustain any significant damage due to the storm.)

Acton is also the location for most of the student residential accommodation, university libraries, animal facilities, glasshouses and various commercial businesses. On a normal day during semester, there will be between 15,000 and 20,000 people visiting the campus.

The university's teaching year is split into semesters, with first semester beginning in late February/early March. Hence, when the storm hit the campus, the teaching year had just begun, with classes scheduled and residences

full of first year and returning students.

### Storm cell hits campus

Canberra had been hit by six severe storms in the two months prior to 28 February 2007. The storm that struck on that night was a "rare rotating storm called a supercell thunderstorm" 1, a weather phenomenon so powerful that it could cause tornadoes and generate winds of up to 200 km/h, as well as torrential rainfalls and huge hailstones. Canberra had not experienced one for at least a decade. The storm commenced as the "wind changed and cooler air arrived" 1, pushing the humid air up into an unstable atmosphere, where it began to rotate.

At about 9pm the supercell formed, growing to a height of eight kilometres. What followed was a massive hailstorm (with hailstones up to five centimetres in diameter) and torrential rain, which was very localised on the Civic centre and the campus.<sup>1</sup> ▶



HAILSTONES COVERED THE CAMPUS; SOME WERE STILL THERE SEVERAL DAYS LATER.

▷ The thunderstorm that struck Canberra on that night was a rare and highly destructive type of storm, the Bureau of Meteorology said. "It was probably one of the most intensive storms we've seen," Kenn Batts, from the Canberra Meteorological Office, said.

Manager of weather services for the bureau's NSW/ACT branch Rob Webb said the storm was caused by moist, warm air from the east, which had been sitting over the ACT for three weeks. This humid air had caused the regular thunderstorms of recent weeks.

The first signs of a problem on the ANU campus came with reports to the campus security office that there was flooding on the roads. The hailstones had congealed and in some areas had plugged stormwater drains. With nowhere to run off, the subsequent rain made some roads impassable and the surface water began to run under entrance doors. The security office then began to receive reports from staff and students who had been working late, advising that water was running through ceilings and offices were beginning to flood.

The security staff followed the standard operating procedures that had been established for building problems – individual flooding, usually from failed water pipes, had happened in the past and a response strategy had been developed to manage this type of event. The maintenance manager was called in to inspect the affected buildings and make a determination on what immediate action needed to be taken to minimise damage. At this point, no-one had a real understanding

of the extent of the damage caused by the storm. (This officer travelled in from a part of Canberra that had not suffered significant damage from the storm and hence the roads were passable. Other staff who travelled to campus later that night from different suburbs, did encounter problems with roads that were blocked by fallen trees, flooded or were iced over with hailstones.)

The inspection of buildings commenced about 10.30pm and was complicated by the fact that a number of buildings had lost power because electrical systems had failed. In the darkness it was difficult to make an accurate assessment of the damage but as the inspections continued it did become clear that damage was widespread and in many cases quite extensive. At about 2am, the maintenance manager contacted and advised that, on the limited inspection that had been completed, he had concerns about the safety of the buildings. As a consequence, a decision was made by the Acting Vice-Chancellor (President) to close the university until a full damage assessment had been completed.

Given there was no universal strategy for contacting all staff and students, advice on the closure of the campus was put out via the media (television and radio) about 6am on 1 March.

The inspections that were carried out in daylight confirmed the earlier assessment that there was significant damage in a number of major buildings and that 170 buildings had suffered some form of damage. Before these buildings could be reopened they

had to be classified as safe for reoccupation, which meant that electrical systems and structural integrity (particularly where water had flooded the building via the roof, potentially damaging the roof supports) had to be tested.

In accordance with the ANU emergency management strategy, an emergency response team was established and resources deployed to complete the safety inspections and commence clean-up of the buildings and the site.

The university remained closed for five days, reopening on 6 March 2007 (though some buildings, with minor damage were reopened earlier). The subsequent repair program for major damage continues and will not be completed before December 2008.

### **Response strategy**

The university had an emergency response strategy that, like many organisations, had emerged from the need to manage the potential impact on electronic systems at the end of the last millennium – Y2K. This initial plan was revised following major bushfires in 2003, which caused significant damage to the Mount Stromlo campus (also based in the ACT).

The basic structure of this strategy was to establish an emergency management team, made up of staff with relevant skills/experience, to deal with the specific event being managed.<sup>2</sup>

In this incident, given the campus-wide nature of the emergency, with the main physical impact being on buildings and grounds, a decision was made that the response would be managed out ▷

▷ of the Facilities and Services Division (which has responsibility for these areas of campus operations). The emergency management team was established and included representatives from university Maintenance, Gardens and Grounds and Security. The Manager, Security, was appointed as the *incident controller*, a position that is responsible for administrative coordination of the response, to minimise duplication of effort and maximise the effective use of resources. The controller was based out of the *incident control centre*, which was established in the university Security Office. This office had been designated as one location for a control room in the emergency response strategy and had been designed accordingly, with separate emergency power and emergency telecommunications systems.

The first meeting of the emergency management team was held the morning following the storm. The meeting also included members of the University Executive, directors of areas that had suffered significant damage and the media office. By the end of this meeting, several key decisions had been made.

The first decision was made quickly. The scale of damage meant that comprehensive safety assessments of the buildings would take time. Given that staff and students could not be allowed to return to the buildings until these assessments were completed, it was agreed that the university would remain formally closed for the remainder of the week. This also gave the emergency response



staff free access to the buildings, thereby expediting the inspections and the clean-up programs.

The second decision was to identify what staff resources would be needed to complete the inspections and clean-up

programs, as well as any minor repairs that might be required. ANU had a number of qualified tradespeople employed as *in-house* staff in both the Facilities and Services Division and in the science workshops based in its ▷

▷ Research Schools. It was agreed that the technical officers in the Research Schools would be responsible for conducting the inspections of their respective buildings, thereby freeing up Facilities staff to evaluate those areas that did not have in-house technical expertise. However, even with this arrangement there were not enough qualified staff to complete the necessary inspections. Hence, the team made the decision to use long-term university contractors to conduct electrical and structural assessments.

The third decision was the assignment of specific roles to members of the response team, particularly the Maintenance and Grounds staff. These officers were given the authority to deploy staff and contractors as they felt appropriate.

The fourth decision was the communications strategy. How would information be distributed to staff and students? Email was reasonably effective but some areas, which had their own email server, were off-line because of damage to power supplies. Further, as the university had found in the earlier bushfire emergencies, *person to person* contact was more effective in addressing the individual concerns that emerge among staff during emergencies. Hence, it was agreed that daily update meeting would be held until the university was reopened. It was also agreed that the Media Office (in line with the emergency response plan) would manage all media releases, as well as establish a web page that could

be used to update the campus community on the progress of emergency response.

#### **Review of emergency response**

As part of its standard procedures, the university reviewed the emergency response to identify what had worked and where improvements may be necessary. The areas for improvement included the following.

**Initial communications:** The *after hours* contact list was held by ANU Security and included not only the contact numbers for the University Executive and members of the emergency management team but also contacts for each of the building managers. In trying to make initial contact, the university Security staff found that some building managers' contact officer details were out of date, while other officers were actually on leave and the list had not been updated with the details of their temporary replacement. There were also a number of officers whose contact number was a mobile number and when this was called, the telephone was turned off. As a result of the review, new administrative procedures have been established to ensure the *after hours* contact list is checked regularly for accuracy and the university will be considering options for a web-based system that allows areas to easily update contact information, particularly during absences of the designated contact officer.

**Campus-wide communication:** Advising all of the campus community that the university

was closed proved to be difficult. A broadcast email only had limited effect (and, indeed, most people would not have seen it until they arrived at work). The decision to use the media (particularly radio) was reasonably effective but not all staff and students heard the message. A large number of staff did receive the message through an informal network in which work colleagues called each other. This was also the case in the aftermath of the bushfires in 2003. However, despite these various communications mechanisms, a large number of staff and students still arrived on campus as usual, only to find the university closed and to be denied access to their buildings. In reviewing additional options for campus communications, the university has established two new procedures. The first is an SMS register. Staff and students have been asked to register their mobile telephone number and in the event of an emergency this system will be used to text a community-wide message. The subscription rate has been high and a recent trial showed approximately 95 per cent of people who had registered, received the message within 15 minutes. The second is the development of a more user-friendly website, which will provide updated information on any emergency events affecting the campus. The key to this website design will be *good content management* that allows it to be updated easily and quickly by the designated members of the emergency management team.

▷ **Closure of the university:**

This incident highlighted that there was no formal policy for the closure of the university (a gap that probably exists in many organisations). While various officers could 'close' buildings or restrict access to parts of the campus, there was no statement defining who could suspend campus academic operations. Clearly, this delegation sits with the Vice-Chancellor, as chief executive, and the gap in policy has been addressed.

**Key response staff travelling to campus:**

The impact of the storm was wider than the campus, with some roads in the surrounding suburbs flooded or blocked by fallen trees. This meant that some of the response staff had difficulty travelling to campus in the immediate aftermath of the storm. This did not have a major impact on the initial response but did highlight a broader issue for the university about dependence on specific officers. As a consequence, a more appropriate back-up strategy has been developed for key staff.

**Feedback to the incident controller:**

As part of the incident management strategy, an *incident controller* was appointed. The primary role of this position was the administrative coordination of activities to ensure that key priorities were being addressed and there was no duplication of effort. In the first 12 hours, while the response of key staff was exceptional, several groups failed to provide feedback to the incident controller. From experience, this is not unusual in



emergency situations, as people single-mindedly focus on the response, but this behaviour is potentially counterproductive, with resources being wasted in duplicated tasks or on lower priority activities. All staff were briefed on the procedure by the end of the first day and the problems were rectified.

**Controlling access to buildings:**

With advice that the campus was closed, staff and students were also advised that they could not access their buildings. Controlling this proved to be difficult. While a number of buildings had electronic access installed and could be 'locked' using the access control system, at various times these



▷ buildings still had to be opened to allow emergency staff to check and clean them. Further, with limited security resources available, there was insufficient staff available to post at those buildings that were opened for inspection or were mechanically locked. As a consequence, some people did enter the buildings to gain access to their computer or priority work. In part, this was a product of a strong work commitment (something that was evident in earlier events, such as the bushfires) and in part, a lack of understanding of the risk. Whereas with other disasters, such as fire, the evidence of significant damage to building structures is clear; flooding has a much lower profile and people assume that the 'risk' has gone once the water has stopped.

### Emergency response – broader issues

In addition to these specific areas related to the emergency response, the post-incident review also identified several broader issues.

**Water damage:** In a majority of offices, staff had paperwork and text books stacked on the floor. The subsequent flooding caused significant damage and in some cases it was not recoverable. The university did have to secure a number of fan heaters to dry out the books before they began to be affected by mould. However, there was an insufficient supply of this equipment available locally and additional units had to be sourced interstate and trucked in overnight. The flooding also affected areas

where stationery was stored and replacement supplies needed to be identified quickly to allow departments to return to business operations. A number of computers were waterlogged and while still functioning, a decision was made that they presented a risk to staff and they were removed for safety testing. While most were designated to be safe, some subsequently failed and given the limited number of back-up machines available, some staff were forced to share computer equipment.

**Structural design:** The basic flat design of the roofs, and the 'box guttering' used for channelling stormwater away from buildings (which is typical in Australian buildings of the 1960s/1970s) did ▷

## attention TEFMA members – we need you

TEFMA is a strong and growing association, reflected in the pages of your magazine *insideneutral*. This publication relies on input from you – the members of TEFMA. Your magazine has benefited greatly in the past few years from interesting and informative articles submitted by members covering a diverse range of subjects.



So please keep your enlightening articles – and great photographs – coming in. Whenever you feel the urge to put finger to keyboard, at any time and not necessarily just before editorial deadline, please do so and send us the fruits of your labour.

Thanks to all those TEFMA members that have contributed to this issue and in the past. Now sit back and enjoy reading the current issue of your magazine.

Please send your submissions to Bart Meehan at:  
bart.meehan@anu.edu.au or Tel: (02) 6125 4148.

▷ not work effectively in the storm. The gutters became blocked with hailstones and consequently water backed up under the eaves, filling the roof space and flooding the building. As a result there was significant damage to ceilings and walls. The water also leaked through ventilation ducts and light fittings with the consequent concern about electrical safety. A number of buildings also had skylights installed. The structural integrity of some had degraded due to age, while others were simply shattered by the size of the hailstones and the force of the storm.

**Clean-up activities:** Like most organisations, the university has outsourced its cleaning function. Given that the clean-up of buildings was critical to reopening the university, the cleaning contractor became a key part of the emergency response team. The contractor formed his staff into teams and under direction of the incident controller, deployed them as needed to buildings that had been given an electrical safety clearance. There a key problem was encountered. In many buildings, windows and skylights had been shattered. Consequently, the broken glass presented a safety risk, which had to be removed before the full cleaning activity, such as water extraction from carpets and removal of rubbish could be completed, thereby delaying the clean-up program.

#### **Impact on key academic activities**

While the immediate response allowed the university to reopen within five days, the storm did have a major impact on several key areas of operation.

The majority of greenhouses used in research were destroyed, with subsequent impacts on research projects.

The research of Chemistry suffered significant damage, particularly on the top 3rd level and parts of the building were closed for up 16 weeks while repairs were completed. Ironically, the School was well prepared for this disruption as it had suffered a major building fire about 18 months before, which had destroyed much of the same areas affected by the storm. As a result, the School had a well-developed business continuity strategy that allowed it to relocate (or collocate) staff and continue academic operations while the repairs were finalised.

However, the most significant structural damage was caused to the School of Art and School of Music. In particular, damage to the concert hall (known as Llewellyn Hall), an important part of the School of Music's operation, was caused when flooding through the roof space damaged acoustic panelling, as well as seating and floor covering. The repairs were significant and would take up to 12 months to complete, forcing the university to cancel major commercial concerts (that had been booked up to 18 months in advance) as well as relocating School activities and the university graduation ceremony.

#### **Key elements of the response strategy that worked effectively**

In general terms, the review showed that the university's emergency management strategy worked effectively, particularly with its emphasis on fitting the *right staff*

into response roles and allowing them to use their experience to respond to issues as they arose. In essence, the underlying philosophy of not developing a prescriptive plan, allowed the response to be designed around the emergency event, thereby reducing duplication of effort and expediting response.

There were specific elements that worked very effectively in this incident.

First, the decision to establish daily briefings for representatives from all areas affected by the storm not only facilitated communication overall, but the 'personal' contact acted to reassure university managers and their staff that the emergency response was under control. This, in turn, allowed the response team to work without constant interruption from concerned staff and students.

Second, though not planned, the Media Office was collocated with the emergency response team in the control centre, because their own office had been flooded during the storm. This collocation facilitated the communications, with the media officers being given any new information about the storm damage or the progress of the program immediately, thus allowing them to generate *up-to-the-minute* media releases.

Third, as it did during the 2003 bushfires, the university began to secure essential equipment and materials from early on the morning after the storm, before demand came from other areas in the city.

Fourth, the use of long-term contractors as part of the emergency response team proved to be an essential part of the program for reopening the university within five ▷

► days. The university had made a business decision some time ago that, unless there was a clear financial advantage, maintenance and cleaning contractors would be engaged on long-term contracts (usually five years, plus options up to 10 years). The intent was to establish an effective business relationship with these companies. The long-term contract was intended to reinforce their commitment to the university and also to allow them to recruit, and retain, staff who would be fully employed on campus (in recent times, this has been particularly critical given the high demand for experienced staff in the Australian job market). Though not originally intended as a part of the emergency response strategy, this approach paid dividends. The contractors were committed to the university and deployed their staff to campus as a priority (despite demand for their services from other business areas in Canberra that had been effected by the storm). The staff they used knew the campus and therefore could largely work without in-house support/supervision. In essence, there was generally a relationship of trust that had been developed over time, which allowed the contractors to be seen as part of the response team.

Last, in the wake of the 2003 bushfires, the university had a number of problems with its insurers that resulted in protracted litigation. The insurance arrangements had been changed following the fires and based on the lessons learned, the university immediately appointed an external officer to manage its relationship with the loss adjuster. This claims manager was responsible to an ANU representative, appointed

by Director, Financial and Business Service (the senior officer responsible for insurance matters), who, in turn, worked with a team of university officers from various campus areas who provided advice on the extent of damage, repair costs and business continuity issues. This approach has addressed many of the administrative problems that arose following the bushfires.

#### Lessons learned

The key lesson learned by ANU, which can be applied broadly, is to ensure that the emergency management strategy has a clearly defined organisational structure with a chain of command to facilitate effective communication. This does not mean that all decision making should be at the top – quite the opposite. The members of the response team should be selected based on their skills and experience, then given authority to make decisions as appropriate. However, these various teams still need to be coordinated in the context of the larger response and therefore, understanding the extent of their authority and the command structure is critical in avoiding wasted effort.

The ‘membership’ of an emergency response team should also be defined broadly and where appropriate should include the long-term contractors employed by the organisation. To this end, these contractors should be engaged in the development of the emergency management plan and involved in any emergency trials.

#### Conclusion

The storm that hit the ANU on 28 February 2007 lasted for less than two hours. In its wake,

it left damage to 170 buildings and a repair bill estimated in the tens of millions of dollars.

The disruption to university activities, particularly given that the first semester had just begun, was significant. Yet despite that, the emergency response strategy was effective enough to ensure that the university was reopened after only five days (three business days), and while there continued to be some areas where it was not possible to continue business as usual, the business continuity strategies developed by these areas, which had back-up arrangements for the partial loss of buildings and equipment, combined with the financial support provided by the business interruption coverage in the insurance policy, allowed them to continue the academic activities without significant impact on the students or research. ●

*A version of this article was published previously in the Journal of Business Continuity and Emergency Planning – UK.*

#### Footnotes

1. Alexander, Cathy. ‘Supercell Strikes Like Lightning’, *Canberra Times*, 1 March 2007.
2. Meehan, Bart. ‘Fire on the mountain’, *Journal of Business Continuity and Emergency Planning*, Vol 2, No 2, 2007.

## **new facility sets high standard for medical teaching**



*Dan Champness and Harald Baulis, University of Adelaide.*

*Dan Champness joined the University of Adelaide Property Services team in July 2007 as a Senior Consultant. Dan's previous experience in project management has led to a seamless change to client representation on a complex package of projects within the Medical School. Harald Baulis has a background in Strategic Facility Planning and has been with the University of Adelaide for three years as the Manager of Strategy and Space Planning. Key projects*

*include the facility planning and introduction of space standards across a number of major projects and the development of Campus and Faculty Masterplans.*

On 17 July 2008, the University of Adelaide unveiled the most high-tech medical teaching facility South Australia has ever seen – Bio Skills SA – complete with human simulator robots and a fully integrated audiovisual system for remote videoconferencing.

Completed at a cost of \$4.6 million, the Bio Skills SA facility, together with a refurbished Surgical Skills Laboratory and an upgraded dissection room, provides students with access to clinical skills simulation and interaction with live patients, modern anatomy and pathology resources and surgical scenarios. ▶



ENTRANCE TO THE MEDICAL SCHOOL ON FROME ROAD, ADELAIDE. BIOSKILLS LABORATORY IS LOCATED IN THE LOWER GROUND LEVEL OF THIS BUILDING.

SURGICAL SKILLS LABORATORY ALLOWS STUDENTS TO PRACTISE UNDER REAL CONDITIONS WITH FULL AUDIO-VISUAL MONITORING ALLOWING STUDENTS TO REVIEW THEIR PROCEDURES LIVE ON SCREEN.

▷ It is the first medical teaching facility of its kind in Australia to have areas that are interchangeable to meet the different and evolving needs of staff, students and professionals. Bio Skills SA can accommodate undergraduate and postgraduate students from health science disciplines including medicine, nursing and physiotherapy. New technology in the facility will enable students to experience clinical situations more realistically, enhancing their skill development.

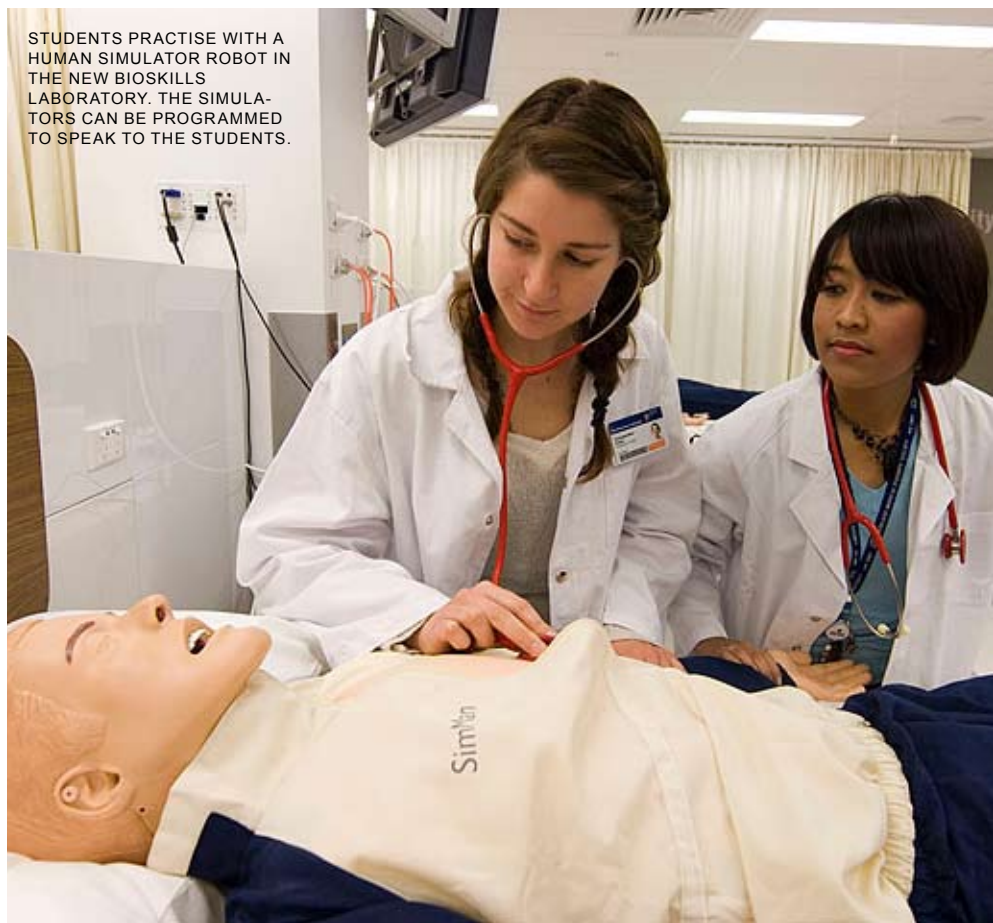
Key features of the facility include: the Bio Skills Laboratory, the Surgical Skills Laboratory, the fully integrated IT and AV system, and benefits for rural teaching and professional development.

The Bio Skills Laboratory will house robots – human simulators – that can be programmed to speak to students during clinical skills classes, much like actual patients would speak to their doctor. This will help students learn how to treat and deal with patients when diagnosing them. They will have the ability to make errors without causing harm and observing the outcomes of different actions. These sophisticated human simulators

reproduce clinical settings in great detail and are increasingly important educational tools. They produce lung, heart and bowel sounds, have anatomically correct pulses and respond to

medical and pharmacological interventions appropriately.

The Surgical Skills Laboratory replicates theatre conditions, allowing students to practise under real conditions. With 12 surgical ▷



STUDENTS PRACTISE WITH A HUMAN SIMULATOR ROBOT IN THE NEW BIOSKILLS LABORATORY. THE SIMULATORS CAN BE PROGRAMMED TO SPEAK TO THE STUDENTS.



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▷ stations and full AV monitoring, students will be able to review their procedures live on screen to ensure their technique is the best possible under theatre conditions.

The fully integrated IT and AV system enables videoconferencing with existing campus facilities, students at remote campuses and rural and regional hospitals, and externally to teaching hospitals and other national and international institutions.

The facility has particular benefits for rural teaching and professional development. Students on placements in rural South Australia can attend classes remotely via videoconference

and medical practitioners working interstate or overseas can access conferences, workshops and information sessions being held at Bio Skills SA.

The Medical School is always teaching at capacity and health sciences courses are rapidly increasing in popularity and student numbers. This new space responds to this demand and will provide an excellent work and study environment.

The principal consultant and architect for the project was DesignInc, overseeing engineer was Bestec and overseeing the project for the University of Adelaide were Dan Champness, Steve Busted, Harald Baulis. ●



## temc – 2009

[www.temc.org.au/2009/index.php](http://www.temc.org.au/2009/index.php)

**the real education revolution  
sustainability in tertiary education**

**2009 Tertiary Education Management Conference  
13–16 September 2009, Darwin Convention Centre**

The 2009 Tertiary Education Management Conference, to be held in Darwin, will bring together tertiary administrators and facilities managers from across Australia, New Zealand and the Asia-Pacific region to discuss how the challenges of how the future can best be met.

The conference will have the broad theme of 'sustainability', which in this context will include not only environmental issues, but also strategic planning, financial management, facilities management and technology shift, community and regional engagement, student services, commercial partnering and staff management.

The real education revolution will be building an approach to managing tertiary institutions, which ensures they are

sustainable into the future. The tertiary sector has become more complex and diversified in a changing world, one where the community is seeking accountability and leadership in managing the various challenges of economic and social equity, technological growth, and environmental sustainability, regional and global collaboration. The tertiary education sector needs to develop new approaches to meet the expectations of the community and this will include enhancing professional practice and institutional management.

The 2009 TEM Conference is an opportunity for tertiary institutions to showcase innovative approaches as well as engage in conversations with colleagues about the strategies for dealing with the future.



## 2009 Tertiary Education Management Conference

13 - 16 September 2009 • Darwin Convention Centre

[www.temc.org.au/2009/index.php](http://www.temc.org.au/2009/index.php)

Given its location in Darwin, the conference will have a focus on regional collaborations with the Asia-Pacific.

Past TEM Conferences have invariably been successful not only in covering a broad range of facilities management-related issues with topical presentations and discussions but also in providing great opportunities for networking and enjoying the related social events and local attractions in wonderful locations.

We look forward to welcoming you to Darwin in 2009.



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## article submissions

We welcome submissions from TEFMA members for *insidenewsletter*.

Articles should be accompanied by a short biography (40–70 words, including institution and title) and a head-and-shoulders photograph of the author; please include any relevant pictures or graphs, which must be accompanied by appropriate captions. Articles may be edited for layout purposes.

Please send your submissions to Bart Meehan  
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