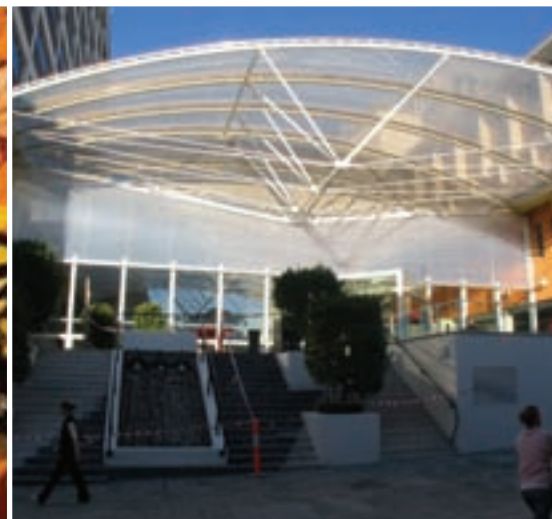


insideneWSletter



featuring

batman

waikato

sinai

weight for it

ho chi minh city

tempus fugit

tasmania fumes

walking in windsor

hbo + emtb

spring/summer 2005–06

president's message

Robert Kelly President TEFMA

Welcome to the Spring/Summer 2005–06 TEFMA *insideneutral*. I encourage you to take the time to read through the many excellent articles in this issue, and to follow up with the authors in any area where you may have a personal or professional interest.

It was a pleasure to catch up with many of you at the TEM conference in Perth. Again, all of those involved in organising the conference are to be congratulated, and I would single out Darren McKee, the TEFMA representative on the organising committee, for special thanks. It was particularly pleasing to welcome representatives from our Strategic Partners from APPA, AUDE and HEFMA to the conference. It is important we continue to build on these links.

As some of you would be aware, this is my second stint as President, although technically my first term was under the former AAPPA banner. As such, I took the opportunity to pull out the first President's Message I wrote way back in March 2001. A couple of things struck me immediately. First, the quality of this publication has improved almost beyond recognition. Some of this can probably be put down to the improvement in presentation and print technology, but I would argue the improved quality reflects the higher level of input from members, and the increasing professionalism of those involved with the publication. On this point, I would also suggest this increased professionalism is repeated across the broad spectrum of the services offered by TEFMA. You need only log on to



the TEFMA web page to witness a number of these improvements.

In my 2001 message, I also spoke of the increasing financial pressures being faced by the sector. Four years down the track, these pressures have intensified, and I doubt if there is a facilities department within the sector not faced with the challenge of meeting increased growth and demand within a static or reduced resource base. These challenges can be all the more difficult if faced in isolation. I strongly believe a major benefit of being involved with TEFMA is the free and open exchange of ideas, information and solutions that can be generated through the networks our Association provides, whether through the list-serve, education programs, workshops or scholarships.

So, what is planned over the coming year? After eight years at the Australian Graduate School of Management's Little Bay site, which has closed, the Management Development program has relocated to Mt Eliza to be delivered by the Melbourne Business School. The revamped program was held

recently, and I await with interest the feedback from those who participated.

We shall be running a two-day workshop in Adelaide on 20–21 March, the theme being 'The Working Environment'. This seemed a logical next step following the successful 'Teaching Environment' workshop held in Brisbane this year. The high quality content of the Brisbane workshop is being edited into an online publication, and will soon be available on the TEFMA website. A second workshop is to be held in Auckland around mid June. This workshop will have double-header topics of Space Management, and IT in FM.

The 2006 TEM conference will take place in Sydney on 27–30 August. The Organising Committee, chaired by Alan Egan, is confident of delivering an event that will both inform and entertain, so make sure you get there.

Finally, as we head into the summer holiday period, I wish all of you, and those dear to you, a relaxing and enjoyable break. ●

the art in the covenant



Beth McLachlan is currently employed in the role of Workplace Environment Officer, in the Facilities and Capital

Development Department at Kangan Batman TAFE, Victoria. Her primary focus in this role is administering the projects developed through the Kangan Batman TAFE/EPA Sustainability Covenant.

In December 2004, Kangan Batman TAFE (KBT) and Environment Protection Authority (EPA) Victoria entered into a voluntary Sustainability Covenant with the objective of promoting sustainability within the Vocational Education and Training (VET) sector of Victoria. KBT was identified by the EPA as an institute that has shown a strong commitment to addressing their environmental impacts. The covenant allowed for the development of a framework under which EPA and Kangan Batman TAFE are working together to develop strategies and procedures to create KBT into a more sustainable organisation.

The aim of the covenant is for: 'Kangan Batman TAFE to increase the efficiency with which it uses resources to produce its products and services and to deliver products and services that contribute to the reduction of the ecological impact of its clients and stakeholders'. The EPA currently provides KBT with assistance and advice on projects developed under the covenant.

In conjunction with the EPA, KBT has identified 22 projects, which will be carried out over the three years of the agreement. This list includes the development of an Ecological Footprint Calculator. This project is currently under way and will provide the Institute with a communicable measure of their environmental impacts. It will also allow for identification of the areas where the Institute is having the greatest environmental impacts. The measurement, which will be recalculated on an annual basis, will provide a benchmark for the Institute's environmental performance.

The covenant has also seen KBT begin to address their energy usage throughout the Institute. A project currently under development will see one of the Institute's six campuses' energy infrastructure completely refitted with more energy efficient equipment. In addition, a new Docklands building is currently being constructed using state-of-the-art ecologically sustainable development (ESD) design techniques, the first stage of which will open in 2006.

In conjunction with these projects, KBT is also interested in developing strategies for tracking energy usage to identify buildings, departments and campuses that use a significant amount of energy. This will allow for the Institute to focus on the areas that use an unusually high amount of energy, and to develop infrastructure and educational strategies to address the usage level. Therefore KBT is currently undertaking an Energy Management Review to determine the optimum

strategy for implementation of such a system.

Numerous other projects and activities are taking place at KBT under the framework of the covenant. KBT is currently a member of the Greenhouse Challenge Plus program and has subscribed all their fleet vehicles to Greenfleet (an offset program that plants trees in order to absorb the greenhouse gases emitted by the cars). The Institute is also committed to, and in the process of, joining the Community Waste-Wise program, to assess its current waste management system and develop programs for the installation of a more efficient system. The Institute is also in the process of joining the Eco-Buy program, to address its current purchasing practices and develop strategies for ensuring environmentally friendly alternatives are considered in the purchasing process. A travel education program in conjunction with the Travelsmart program is also currently being developed. 🚫

If you wish to find out more about the Kangan Batman TAFE/EPA Sustainability Covenant you can visit the EPA website at http://www.epa.vic.gov.au/Sustainability_Covenants/kangan.asp or alternatively contact Beth McLachlan, Workplace Environment Officer, Kangan Batman TAFE, on bmclachlan@kangan.edu.au

keeping control of energy costs

Smart strategies at the University of Waikato are producing a 'revenue stream' of energy savings year after year. This article was written by Cathy Sheehan, editor, EnergyWise News magazine, Energy Efficiency and Conservation Authority, New Zealand.

How did a university save \$173,000 in energy costs in a year, using other people's money to fund energy management improvements?

The University of Waikato, sited among lush dairy farming fields in the heartland of New Zealand's North Island, used a three-way partnership to make it happen. A Crown Energy Efficiency Loan from NZ government agency the Energy Efficiency and Conservation Authority (EECA) funded the upfront capital cost of an energy performance contract with international building services and controls supplier Honeywell. In return, Honeywell guaranteed savings of \$96,000 a year for six years. If the savings fell short, Honeywell would make up the difference.

In the first year of the contract the University exceeded expectations and saved \$173,000 on energy costs.

EECA makes loans to government-funded bodies such as hospitals and schools for energy efficiency projects, so they can get access to capital they would be unable to borrow from banks. The loans are repaid out of energy savings.

Alongside the contract, a steady chipping away at energy savings opportunities is producing encouraging results. Porsche enthusiast Robin Dunmall is the University of Waikato's Energy Manager, among his other Technical Services Manager duties. He has worked at the University for 12 years after earlier roles at hospitals.

A plain-spoken Englishman, he has made energy management a priority at the University through his cheerful persistence. Any time he sees an opportunity, say when a building is being refurbished, he makes sure energy efficiency improvements are part of the upgrade. In a recent

revamp of a 1960s administration block he pushed for energy efficient lighting and airconditioning, sun-shading, improved insulation and, unusually for New Zealand, solar water heating.



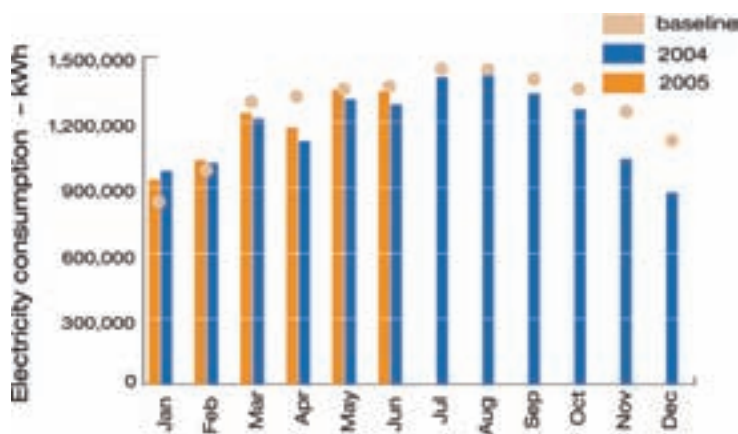
UNIVERSITY OF WAIKATO
TECHNICAL SERVICES MANAGER
ROBIN DUNMALL.

He hired experts in low-energy buildings to write an energy efficiency design brief for facilities on campus, to ensure environmental considerations are high on the agenda. The document is a model that has since been adopted by others.

The contract with Honeywell has set the University on the right course for ongoing energy efficiency improvements.

It came from an idea Dunmall had long before the right people came together to make it happen. Before installing any new equipment, Honeywell conducted a thorough energy audit to establish an agreed baseline against which to measure the changes in energy consumption and to work out which measures would make the most impact. Honeywell then fitted selected facilities with sophisticated controls and communications. They are all connected through an upgraded building management system that enables closer monitoring of energy use.

The system allows for the heating system to learn and adapt from experience. It optimises the timing for the airconditioning plant and adjusts the temperature settings of thermostats depending on the temperatures outside, because people's expectation of comfort is relative to the season.



THE GRAPH SHOWS ELECTRICITY CONSUMPTION IN 2004 AND 2005 AGAINST A BASELINE FROM PREVIOUS YEARS.



A large component of the energy savings comes from the way the control system limits the campus's overall maximum demand for electricity. This avoids tough charges imposed by the local electricity network company at periods of peak electrical demand.

Facilities upgraded in Honeywell's performance contract include the Academy of Performing Arts, College Hall accommodation, the Waikato Management School, Computing and Mathematical Sciences, Information Technology Services, the Chapel and Student Services. Measures included occupancy and daylight sensors to control lighting, better boiler controls, improved cafeteria ventilation and better control of heating and airconditioning.

The Facilities Management Department promotes energy efficiency with extensive information available on its website, right down to instructions on how to operate the heating in lecturers' offices. It makes extensive use of EECA's posters and 'Switch off' stickers.

Dunmall considers his peers to be other large energy-using facilities in

the district, such as the hospital, a prison and provincial capital Hamilton's city council. But he gets excellent value from contact with his TEFMA colleagues at their regular get-togethers for workshops and conferences. He and the University's Facilities Manager John Cameron pay close attention to TEFMA's tables of figures that rank the University among its peers in energy and water consumption and other important indicators.

Waikato is in the lower half of TEFMA's league tables for energy consumption per square meter of floor space and per full-time-equivalent student, but the trend is heading in the right direction.

From 2002 to 2004 energy consumption fell from 208 to 200 kilowatt-hours per square metre, in spite of cooler temperatures that increased the need for heating and an 11 per cent increase in campus building area, to 137,400 square metres. The University has 1788 full-time-equivalent staff and 14,405 students.

Dunmall has recently overseen the upgrading of the library's lighting, which will reduce power consumption

THE UNIVERSITY OF WAIKATO'S LAKESIDE ACADEMY OF PERFORMING ARTS. OCCUPANCY SENSORS WERE INSTALLED IN THE CONCERT, DANCE AND PLAYHOUSE AREAS TO ENABLE BETTER CONTROL OF AIRCONDITIONING AND LIGHTING. DAYLIGHT SENSORS DETECT HOW MUCH NATURAL LIGHT IS ENTERING AND ADJUST ELECTRICAL LIGHTING LEVELS ACCORDINGLY.

by 570,000 kilowatt-hours a year and cut maximum power demand by 67 kW, both through the efficiency of the lighting itself and by reducing the amount of wasted heat the air-conditioning system must deal with. Maintenance will be easier too, because the energy-efficient T5 lamps last around seven-and-a-half years.

On the drawing board is a new school of management, which is designed to be an environmental showcase that will influence the attitudes of its graduates when they move through their careers.

Dunmall hopes to adjust the campus's financial management so individual departments and facilities can be accountable for their energy use. He aims to appoint an energy 'champion' to each school to take a personal interest in promoting good energy practices. ●

a peace of management



Major Tom Williams is a Project Manager with the New Zealand Army's Directorate of Property Management (DPM). He is currently working in the Sinai Peninsula with the

Multinational Force and Observers (MFO) as the Force Engineer (North), where he is ultimately responsible for maintenance of the MFO North Camp, 17 Remote Sites, and the Supply Sector Routes. This article attempts to identify some of the obstacles that arise during provision of FM services in this unique environment.

As a result of the successful Camp David Accord, signed in 1979 between Israel and Egypt, it was agreed that a peace-keeping force would be established to monitor the Sinai Peninsula to ensure compliance of the Treaty of Peace. In 1982 the

Multinational Force and Observers (MFO) was established to report violations of the treaty through the operation of checkpoints, reconnaissance patrols and observation posts along the international boundary and within designated parts of the Sinai.

The MFO is made up of 11 troop contributing nations (Australia, Canada, Columbia, Fiji, France, Hungary, Italy, New Zealand, Norway, the US and Uruguay). New Zealand's current contribution is 26 personnel in operations, staff, liaison, training and transport and facilities management. The main issues associated with FM Service delivery in this environment are listed below.

Planning horizons

The facilities management industry, within New Zealand, has seen an increased onus placed on the capture, collation and analysis of information relating to maintenance/

asset performance. Through Life Cycle Costing (LCC), Life of Type (LOT) analysis and cluster failure studies, the property professional seeks to ensure that elements within their asset base are maximised and achieve longevity of life cycle. The MFO operation is a temporary operation and planning horizons have a more short-term outlook than normally utilised in home nation infrastructure. This is not only reflected in type of quantitative asset data captured but also the maintenance options selected through optionised decision making.

Industry maturity

The MFO has an incumbent service provider, Homes & Narver Services Inc (HNSI), that performs the majority of the scheduled and unscheduled maintenance activities. In the context of new construction work or maintenance work that HNSI is unable to facilitate, the MFO solicits proposals



LARGE PREFABRICATED TEXAS BARRIERS ARE USED TO SET UP TEMPORARY OBSERVATION POINTS QUICKLY AND EFFECTIVELY AS THE OPERATIONAL TEMPO DICTATES.



TEMPORARY MOVABLE STRUCTURES ARE USED THROUGHOUT THE SINAI IN RELATION TO CHANGES IN MISSION.

from local Egyptian vendors. Due to the locality of the work force, the associated skill set and the maturity of the construction industry generally, there is a tendency to make Statements of Work very process-specific. Advanced tendering methods such as design-build are generally unused in the region. This obviously goes against the widespread industry practice within NZ, which has reduced many contract documents into a series of outcome statements, thereby encouraging the contractor to take ownership of an element of the risk.

Governance issues

Any property management professional working within the public sector will have seen their project timeline extended by laborious tender procedures that have to be adhered to, to ensure probity and impartiality. The MFO has to function in an environment where the tender process

will come under considerable scrutiny from the funding parties providing financial support (primarily Egypt, Israel and the US). MFO procurement standards require fair competition for all major expenditures, and in the multinational context of the organisation, competing efforts across international boundaries brings many challenges to executing work in a timely manner. Failure to adhere to correct protocols while attempting to perform work outside the established perimeter boundaries of MFO facilities or in restricted geographical areas, may result in the FM activity to be cancelled indefinitely.

Lack of common FM policy

Egyptian regulations that govern facilities maintenance and construction are dictated by documents collectively named the Egyptian Code of Practice. This code is only available in Arabic, making adoption

difficult as the MFO's operational language is English. As a result of the nationalities of both the designers that were integral in originally providing MFO infrastructure and the engineers who have provided ongoing maintenance/new infrastructure since the MFO's inception, the standards of professional practice adhered to have been a fusion of adopted legislative standards from the UK, the US, Israel and several European institutions. The adoption of another country's statute building regulations such as the US's, the UK's or New Zealand's, has been explored on a number of occasions, but has always been found to be unviable.

Components within the MFO property portfolio currently conform to a myriad of different adopted legislative standards. The espousal of a singular country's construction code (such as the US Corps of Engineers Standards) would cause many existing elements to be immediately ▶

THE MFO'S HORIZONTAL CONSTRUCTION CAPABILITY IS UTILISED TO DEVELOP UNSEALED ROADS IN NORTHERN SINAI.



MFO ENGINEERS ADD ADDITIONAL PHYSICAL PROTECTION TO AN MFO REMOTE SITE OVERLOOKING THE GAZA STRIP.



▷ non-compliant and subsequently generate the large unnecessary costs associated with rectification. For example, the Israeli electrical junction boxes that are currently in situ within the camps are compliant with Israeli Electrical Codes, but would be deemed non-compliant when measured against National Electrical Code (NEC), as they have non-conforming clear plastic covers and lack the required mechanical interlocks.

Isolated location

The Sinai is a very expansive area, which is largely uninhabited. Some of the more isolated MFO remote sites are seven to eight hours' drive from the nearest populated node, with an insufficient critical mass to generate construction tradesmen and a

competitive market. Many of the reactive maintenance tasks require minimal but essential tradesman's input, which is ultimately cost-inflated through the long travelling times. In order to overcome this, the MFO has provided training to the end users in ground level maintenance and troubleshooting on key pieces of plant, such as generators. In addition the MFO utilises a *self-help* program, which seeks to motivate the end users into taking ownership of their specific remote site offering them access to materials, tools and technical advice for project work and site improvement.

Lack of a common language

Like many large-scale multi-site organisations, the MFO operates an FM helpdesk so that end users can

report/track their requests for maintenance. Due to the many different nationalities, the contingent-specific chains of command and the communication systems, the FM requests can arrive at the helpdesk third hand, having been translated from Fijian to Spanish to English. This process can cause the message to become distorted and convoluted. Additionally, as the end users are from many different countries, there is a great disparity in what is considered to be an acceptable standard of facilities conditions. The MFO has sought to establish a robust system of maintenance request call diagnosis at the helpdesk interface with the end user, which enables the Engineering staff to be furnished with the requisite level of detail. ●



A SEPTIC TANK IS INSTALLED AT A NEWLY ESTABLISHED REMOTE SITE.

UNIQUE LIGHTING SYSTEM
USED TO GREAT EFFECT IN
THE SWINBURNE ATRIUM.



redefining space – between a cold and a hot place

Swinburne University of Technology, Atrium Project, was a project of the University Major Projects Team – Geoff Joy, Director, Vince Persi and Kathie Crellin.

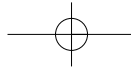
Swinburne University of Technology has just completed a project to create an atrium of 1025 sq metres in space that was previously a windy, wet, hot or cold – depending on the time of year – unusable space between two high-rise buildings. The idea to create the atrium was borne from a problem to cover a leaking underground car park. It was either spend significant funds on replacing a membrane under a

paved space between two buildings with no actual change to the waste space above or put a cover over the top of the paved area, fixing the leaking car park and at the same time create a social gathering space for the University community.

The structure is the first in Australia to use a material called ethylene tetra-fluoro ethylene (ETFE). The material has been used extensively overseas in high profile projects such as the Eden Project in Cornwall, National Gallery in London, media centre for the Athens Olympics, Beijing

Olympic Swimming Complex and many others. The ETFE is made from, and is itself, a fully recyclable product. A major environmentally sustainable element of the project was achieved through the lightweight steel structure, made possible because of the lightness of the ETFE.

The atrium has a unique lighting system using reflective plates set to a level of 9.5 metres with actual lights set off the building walls at an accessible level for maintenance. The new atrium has wireless technology, is fitted with data and power points, and furnished ▶



THE REDEFINED SPACE WAS AN INSTANT HIT FOR ALL USERS.

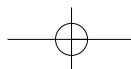
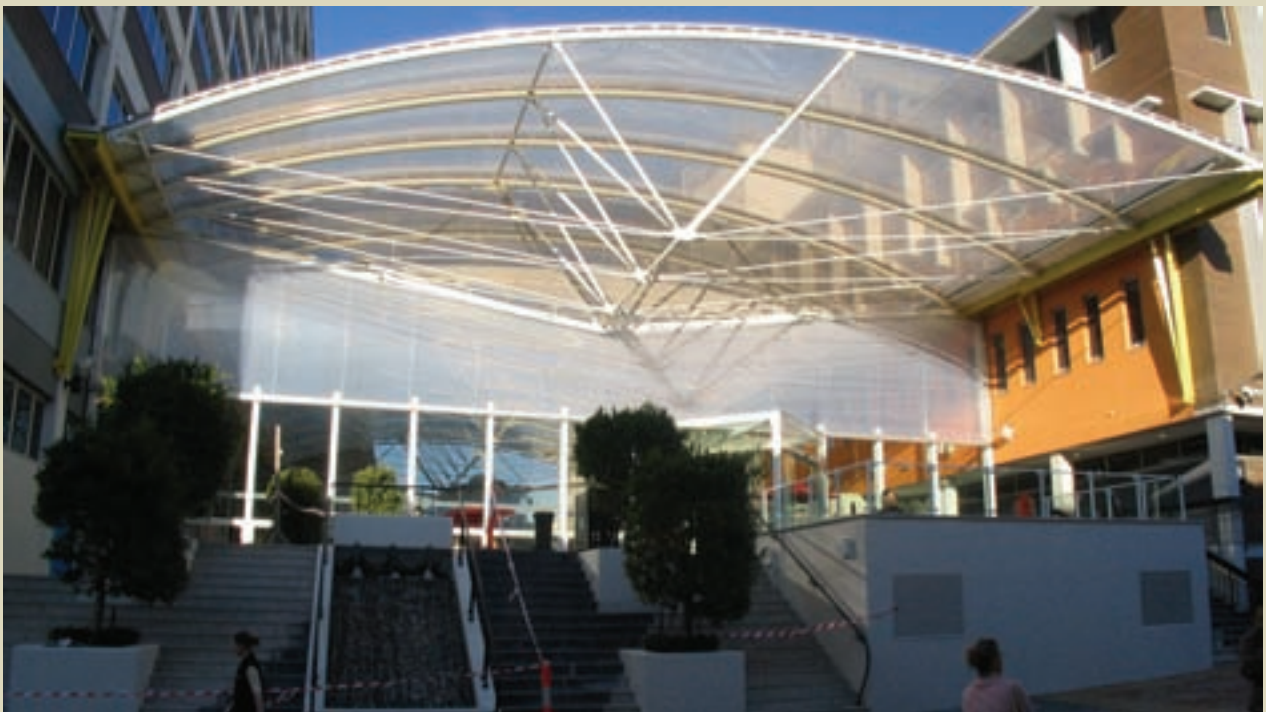


▷ with casual outdoor settings to create a relaxing ambience. The paved area is broken up with grass infills and plantings that will grow under the ETFE.

The main entrance to the Library opens into the atrium on one side with entrance into the Business Arts building other the other side. Each end of the atrium is enclosed with glass walls, not attached to

the overhead steel structure, and include offset automatic airlock doors. Swipe card access has also been included for after hours access. The space is ventilated at the top with steel mesh and temperature controlled louvres below the glass panels. There is a disabled access ramp into the atrium and another inside for access from the top to the lower level.

The atrium was instantly adopted by the students and staff alike and apart from all day use is already in demand for functions and activities into 2006. ●



weight for it



Paul Osmond has been Manager of the UNSW Environment Unit since 1999, responsible for implementation of the University's Environmental

Management Plan. His background includes urban design and environmental management in local government, forestry and freelance technical journalism. Paul has qualifications in science, environmental management and landscape design, and is a registered environmental auditor and Certified Environmental Practitioner. He is currently studying for his PhD in the UNSW Faculty of the Built Environment. Paul is also a member of the Green Building Council technical working group, which recently began work on a Green Star rating tool for educational buildings.

According to Canadian environmental planner William Rees, buildings account for 40 per cent of the materials used worldwide and about a third of the energy consumed by the world economy. Buildings impact the environment throughout their life cycle – procurement of raw materials, construction, use, refurbishment and demolition.

This process can be understood in terms of *flows* of materials and energy – for example the flow of concrete and steel used in constructing a building, and the flow of these same materials out of the building when it is demolished, to end up either on the tip, or (preferably) recycled into new buildings. Kensington

Campus, as a self-contained 'mini-city', offers a useful case study in construction material flows.

Nobody who works or studies here needs reminding that UNSW is heavily built-up. In fact, the gross floor area of the campus buildings is 28 per cent greater than the area of the campus ground plane as a whole. Moreover, impervious surfaces (roofs, roads and pedestrian paths) cover 71 per cent of the campus. But on the positive side, the tree canopy cover is nearly 19 per cent.

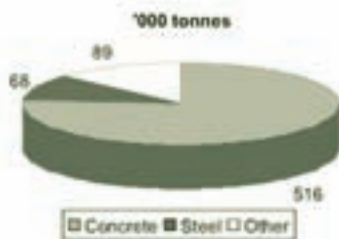
The number and scale of campus buildings has grown steadily since UNSW was founded, with particularly

rapid growth in the 1970s and 1990s. The total stock of building materials accumulated since 1950 and projected to 2007 – or the 'weight' of Kensington Campus – is estimated at 673 thousand tonnes (kt). This can be broken down into 516 kt concrete, 68 kt steel and 89 kt 'other' (bricks, glass, plaster and so on).

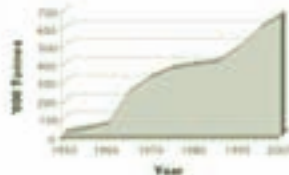
Between 1980 and 2004 student enrolments more than doubled from 18,360 to 40,000, while the stock of materials embodied in campus buildings increased by only 64 per cent. So over the past 25 years the weight of the University divided by the number of students actually fell by 25 per cent. Less concrete and steel per student could be one way of describing overcrowding!

From 1980 to 2004 nearly 270 kt of building materials were added to existing building stocks. Some 12 kt of demolition waste and 5 kt of construction waste left the campus, of which 60 per cent is estimated to have been sent to landfill.

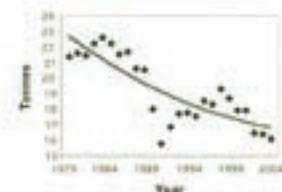
The annual production of construction and demolition waste from the major works transforming part of Kensington Campus at the moment – the North Mall Development Zone (NMDZ) – is three times the 1980–2004 campus-wide annual average. However, 90 per cent of this waste is recycled, so the amount disposed of to landfill is less than half the average annual amount of landfill between 1980 and 2005. Additionally, about 8000 tonnes of sand excavated from the NMDZ was recycled off-site in 2005. Well done Bovis Lend Lease and the NMDZ team! 🍷



BUILDING MATERIALS STOCKS, KENSINGTON CAMPUS, PROJECTED TO 2007.



CUMULATIVE STOCKS OF BUILDINGS, 1950-2004.



STOCKS PER ENROLLED STUDENT, 1980-2004.

rmit in vietnam



Norman Day worked with the late Robin Boyd and Professor Frederick Romberg before starting his own practice in 1971, with offices located in Melbourne, Hanoi,

Ho Chi Minh City and Dili. He is an Adjunct Professor of Architecture at RMIT University, which has also awarded him an honorary Doctorate of Architecture. He is a broadcaster, author and newspaper architecture critic. His many books on architecture include Federation Square (2003) and Heroic Melbourne (1995). He was awarded the RAIA-Bates Smart Award for Architecture in the Media in 2004.

Norman Day has received seven RAIA Awards for building design, several 'House of the Year' awards and the MBA award for Excellence in Building (2003 and 2004). Recent projects in Australia include the International Headquarters for the Australian and New Zealand College of Anaesthetists (Melbourne),

Mowbray College (Melton), and the Embassy for Timor Leste (Canberra). He has also completed recent projects in Timor Leste and Vietnam, including RMIT International University Vietnam South Saigon Campus (Ho Chi Minh City) and Cantho University LRC.

The first part of this article was written by Norman Day earlier in the year; the second part of this article is an excerpt from a July press release that acknowledged the official opening of the campus.

The creation of a new campus

Our intention has been to create a campus that arises from a considered creative process, seeking to show cultural differences and thereby locate the building in its context, but also placing the building in the matrix of world architectural culture. It is inherently an investigation of cultures, a research exercise exploring how two diverse societies meet at a unique place, in a particular building, to create a special place of learning.

By applying this design strategy, we have scrutinised the context and history of the Vietnamese built environment, and we have listened and learnt. Our mapping of this locale and its architecture has given me confidence that the chronicle of this region has much of quality and significance, yet little by way of architectural exposure (apart from French memoirs).

This building represents an evaluation of Vietnamese architecture and planning – against which we have placed our understanding of contemporary architectural philosophies. As Leon van Schaik elegantly states the case for Melbourne, “[in the future] ... when the world wants to know what the architecture of this city is about, it is able to look to a group of architects and buildings who have grown into the international discourse through their work on our [RMIT] campus”. This attitude has been carried over to RMIT Vietnam.

The building is intended to become a reference point in the Vietnamese

RMIT VIETNAM CAMPUS AT NIGHT.





encyclopaedia of architecture – to become part of, and help define, Vietnam's constructed history. That history is already imbedded with fine places – like the Cham tombs around central Vietnam, the Nguyen Dynasty tombs of Hue's Perfume River, Dalat's modern royal villas of the 1930s, Hanoi's 1000-year-old Temple of Literature and Ho Chi Minh City's Reunification Palace. Many Russian-influenced (and designed) buildings from the post-WWII period are fine examples of that architecture.

This design is about the future, learned from the past, and humbly promoted as an outsider's vision. The relationship between the two cultures is one of constructive linkages, connecting two diverse cultures that share many values, ideas, education and humour – and which share also a less constructive shared history.

RMIT Vietnam is part of a process to provide a world class, international learning environment by adopting appropriate educational strategies and opportunities – and its architecture is intended to contribute to that condition.

VICE-CHANCELLOR
PROFESSOR MARGARET
GARDNER, FAR LEFT,
WITH DIGNITARIES AT
THE OPENING OF THE
CAMPUS.



The opening of the new campus – 25 July 2005

The unveiling of the new state-of-the-art campus is the culmination of a vision and strategy of internationalising RMIT University, which commenced in Vietnam in 2001. The first campus, situated in downtown Ho Chi Minh City, began with 30 students, and responding to growth, two more teaching locations were established downtown. The University currently has more than 1500 effective full-time students and the new campus at Saigon South, located 7 km from the city centre, will bring all the students to one location and be able to accommodate approximately 3000 students.

The new campus is located on 12.4 hectares. The main building is more than 100 metres long with four levels. Within the main teaching space, there are more than 35 study areas, including classrooms, wireless private work areas, access labs, project rooms, seminar rooms, a 160-seat theatre, a medical centre, cafes and a library. Throughout the building, more than 400 computers give students easy access to the electronic blackboard

and the research databases through RMIT's extensive library resources.

The connection to Melbourne is reflected throughout the campus. For example, the theatre has been named the Melbourne Theatre and seminar and meeting rooms reflect places and personalities of Melbourne and RMIT University. Seminar rooms have been named after famous explorers, such as (Matthew) Flinders or after geographical locations, such as the Yarra and Dandenong Rooms. The Ormond Room acknowledges the founder of RMIT in 1887 – Sir Francis Ormond.

For the first time, RMIT Vietnam students will be able to play on a full-size football field, which is located at the southern part of the campus grounds. Other sporting facilities will include an indoor sports stadium and a swimming pool in Stage Two of the campus development.

Chair of RMIT Vietnam, Professor Margaret Gardner, acknowledged at the opening of the campus that RMIT was extremely proud of the campus, which can be compared favourably to any campus in the region. "As a contemporary learning environment, it has combined the best of Australian design with Vietnamese workmanship," she said.

RMIT Vietnam is providing world-class, international education and training in Vietnam and the new campus at Saigon South will enhance this capacity to deliver even more to the economic and social development of Vietnam. ●

managing a change process – or complaints from a grumpy old manager!



Joan Rodrigues joined the University of Tasmania from the University of Western Australia in September 2002. She is currently the Manager of Capital Planning and

Management and the University Space Planner. During 2004 the Asset Management Services section was restructured and combined with the Design and Acquisitions section. This has led to a review of the processes and procedures in use in the new section, including processes and procedures associated with capital works procurement. As this article indicates, the introduction of change, especially when it requires external parties to change, is not always easy.

We have all seen the grumpy old men and grumpy old women on television. Here are my thoughts as a grumpy (not so old) manager.

The thing that really drives me mad at the moment is trying to deal with architects and other consultants who seem to be incapable of taking any notice of specific requests and requirements about the paperwork that should be submitted to secure commissions.

Over the past two years the University of Tasmania called for a number of Expressions of Interest (EOIs) from architects and other consultants to take the lead role in major capital works projects. During that time we became increasingly concerned with the amount of paper that was being used up in the preparation of the Expressions of Interest as ever larger and glossier documents made their way into our tender box.

The cost to the prospective consultants in terms of time, paper, printing and postage was one concern. The cost to the University in terms of the time of staff trying to plough through these documents to assess them was another. The cost to the environment in terms of trees was a third. But most important of all was the fact that all this paperwork often failed to provide the basic information that we actually needed to assess the EOIs properly.

We therefore reviewed our processes and decided to provide very specific guidance as to what we required.

We had been providing information about the assessment criteria and the weightings to be applied but decided that we might have been too 'low key' about them. To counter this we developed a new information package to send to prospective consultants and in that document stated: *"Consultants wishing to be*



considered for inclusion in the short list are required to submit a Capability Statement that addresses the criteria outlined below." We also put a limit on the length of the document of eight or 10 pages of information, depending on the value and complexity of the project. CVs for identified project staff could be provided in addition to the eight- to

10-page submission but were limited to a maximum of one page per person.

What was the outcome?

Well, not what we expected. We were warned that we should have specified a font type and size as some consultants might try to cram more into the document by using a small font type in a small size, which would be almost unreadable. We were also warned that we should have specified whether they could print on both sides of the page or only one. However, neither of these problems arose.

So what did we find?

Some 80 per cent of consultants ignored the page length altogether and continued to produce huge documents with lots of glossy pictures and masses of details we had not asked for. Some did try to include reference to the selection criteria somewhere in the document, with about half in the first 10 pages, but the information provided was often inadequate.

The remaining 20 per cent rang up to double, triple and quadruple check that, "We only have to address the selection criteria?" and ask incredulously, "Are you sure that's all you want?". However, despite suitable assurances a number still chose to play it safe and go back to the tried and true method of a huge glossy.

One poor secretary rang up to ask if the title page and table of contents would be counted in the required 8 pages. I think my exasperated response to that (it was about her fifth call) put her firm off all together because we did not receive an EOI from them!

How have we assessed the EOIs?

When it comes to assessing the documents we have not, so far, been able to completely disregard the ones that are too long or stop reading at page eight or page 10. This is because we have not yet received a suitable number of conforming Expressions of Interest for any one project. However, we do mark down the non-conforming ones on the basis that consultants who cannot take any notice of our requests with respect to paperwork might be equally unresponsive to our requests during the design process. In providing feedback to unsuccessful consultants we point out that the excessively long glossy, that did not address the selection criteria, had gone against them.

How have the consultants reacted?

They have reacted reasonably well, considering that they may have lost a large project. One firm acknowledged that they had been aware that the document was too long but had felt that "as it wasn't particularly dense, it wouldn't matter". They then agreed that next time they will need to take more notice of specifications in the documentation provided.

What does the future hold?

Hopefully this will prove to be a short educative process and we will soon receive documentation of an appropriate length that addresses the selection criteria in suitable detail. This will make short-listing much easier and I will be able to move on to my next grumpy complaint – when I have decided what it is! ☹

tempus fugit

Alan Egan
Ex-President
TEFMA 2005



The title says it all: tempus fugit – *time flies*. Where did the year go? How many presidents have lamented the

speed at which a year in the TEFMA chair disappears? I would guess that whilst most ex-presidents would be happy to see their time at the helm come to a peaceful and practical conclusion, there is always that slight feeling of emptiness that comes at the end of a job. Six years on the Board will do that to you – every time.

My time as the President has been immensely rewarding both professionally and personally. From a somewhat selfish perspective I've certainly learned lots. Just mixing with FM professionals at all levels from carpenters to contractors and plumbers to managers: it's impossible not to glean little gems of information that help in the daily FM slog. Operating with the TEFMA Board is also a rewarding experience in itself – a keenly balanced jury of 12 peers providing an insight into the dynamics of other FM departments around Australia and New Zealand. Every director of the Board brings special skills and views that are readily translated into that most valuable TEFMA currency: ideas!

Ideas are what TEFMA is all about. Every achievement, every initiative for the past year began its journey as a simple idea – discussed and analysed,

tested and eventually implemented. A glance backwards on the past 12 months tells the story: workshops, new image, new branding, business partners, a burgeoning membership, new scholarships, engagement with industry, new directions in benchmarking, strategic partnerships, profit growth, new Board structures. The list goes on. Every item in this list began as an untested idea from either your Board or from the membership at large.

Finally, this column is probably not the best place to trot out facts and figures of the year past other than to say simply, that TEFMA is in great shape. Perhaps the greatest endorsement of the work of your Board is both the steady growth in membership and the jump in Business Partnerships. This simple measure is a vote of confidence from the membership that our Association is going in the right direction. Thanks for allowing me to preside for a brief 12 months over an exciting and dynamic association that is TEFMA. It's been a great ride. ☹

lab safety – fume cupboard maintenance and upgrades



Barry Russell, Manager of the Facilities Management Unit at the University of Tasmania, has responsibility for fume cupboard maintenance as

part of his portfolio. He joined the University in 1991 and has since gained broad experience in all areas of facilities management through undertaking positions such as Clerk of Works, Capital Works Project Manager and Maintenance & Operations Manager.

The University of Tasmania is continually striving to improve Occupational Health and Safety on campus. One of the ways this is being achieved is via the current Laboratory Fume Cupboard maintenance and upgrade program. This program, which has been ongoing since the year 2000, strives to continually improve the safety-related aspects of the fume cupboards and associated ventilation systems in the hundreds of graduate and undergraduate laboratories at each of the University of Tasmania campuses in the state.

The University was conscious of the fact that it had acquired more than 200 fume cupboards since its inception and a large number of them were up to 40 years old. The old technology fume cupboards and ventilation systems were showing their age and it was suspected that they did not comply with current health and safety standards. The University's then Property Services Branch (now Asset Management Services) therefore decided to assess the problem,

identify the risks, and develop a strategy to take any necessary corrective action required.

In early 2000, the University contracted Conditionaire International, a company that specialises in the manufacture and testing of fume cupboards, to test all fume cupboards in accordance with the then anticipated Australian Standard AS 2243.8: 2001. At this time, the University's Property Services Branch had just been allocated the responsibility for fume cupboard maintenance. The tests indicated that most fume cupboards at the University failed the most critical safety requirements of the Standard – i.e. the airflow pattern (smoke) tests and air velocity tests. All of the 212 fume cupboards were tested and all of them failed to completely comply with the requirements of AS 2243.8 – 2001.



(FROM LEFT): DR GREG DICINOSKI (LABORATORY MANAGER AND EMPLOYEE SAFETY REPRESENTATIVE), BARRY RUSSELL (FACILITIES MANAGER) AND KAM SHAFEI (SHAFEI & ASSOCIATES) INSPECT A NEWLY INSTALLED REPLACEMENT FUME CUPBOARD.

In mid 2000, all of the University's fume cupboards and laboratory ventilation systems were audited by consulting engineers Shafei & Associates on the University's behalf. The purpose of the audit was to review the health and safety aspects of each

fume cupboard and its associated ventilation system, list the areas where it failed to meet current regulatory and code requirements and propose a program of works that would allow compliance to be achieved in the most cost-effective manner.

A database listing the relevant properties of each fume cupboard and its associated ventilation system was developed. It was soon discovered that a large amount of work would be required to bring the fume cupboards and ventilation systems up to a standard that the University would be happy with and one that would comply with current codes. There had been many changes and upgrades to building codes, laboratory construction codes and fume cupboard codes since most of the University's inventory of fume cupboards had been installed.

Not only did a large number of fume cupboards require upgrading, but major areas of the ventilation systems that serve the fume cupboards with make-up and exhaust air also required upgrading and modification in order to comply with current standards. In addition to the health and safety aspects, energy consumption issues were identified by the consultant as being high on the list of priorities if a cost-effective program was to be achieved.

The initial cost estimate for the extensive upgrading and/or replacement of all 212 fume cupboards to comply with the Australian Standard in the year 2000 was more than \$5 million. That figure included a substantial amount of necessary associated building works and changes to the heating and

ventilation systems throughout the various University of Tasmania sites.

In order to achieve the large upgrade program required within achievable annual budgets and without extensive disruption to the operation of the various teaching areas of the University, it was determined that a multi-year upgrade program was required.

In addition to engineering considerations such as obtaining proper airflows, pressures, stack discharges, flows and control systems and so on, the program involved consideration of the most basic issues involved, such as:

- Was each fume cupboard being used properly (or only as a chemical store)?
- Do we need each fume cupboard?
- Could the fume cupboard be decommissioned?
- Was the location acceptable?

Basic laboratory operations and procedures were reviewed via a consultative process amongst the various University departments and it was decided that although most fume cupboards required upgrading to varying degrees, many fume cupboards should be decommissioned.

Asset Services Management officers and the fume cupboard consultant, Shafei & Associates, were able to successfully develop and negotiate a decommissioning program that resulted in reducing the total number of fume cupboards by 42. This has not only saved significant amounts of heating energy, but it has also greatly reduced the overall cost of the upgrade program from the initial estimate of \$5 million and made the staging of the upgrade program financially achievable.

The main requirement of the Australian Standard is that the whole

fume cupboard system, from fume cupboard to discharge stack, must be subject to regular periodic inspection, maintenance and performance testing. Records of maintenance and tests must be kept in a prescribed manner. An important addition to the standard in recent times has been the requirement that a risk assessment must be carried out for each activity performed in each fume cupboard. This risk assessment must be carried out by the user departments as only they have an intimate, day-to-day knowledge of this work.

In early 2001, it was decided that two programs – a comprehensive maintenance and testing program and an upgrade program – should run concurrently.

Statistics for the upgrade program to date are as follows:

- eight new fume cupboards have recently been installed and are fully compliant with AS 2243.8:2001
- 15 existing fume cupboards are fully compliant with AS 2243.8:2001
- 65 existing fume cupboards are generally compliant with AS 2243.8:2001
- 90 existing fume cupboards satisfy the essential requirements of AS 2243.8:2001
- 42 fume cupboards have been decommissioned
- upgrade period remaining – 2005 to 2008.

A program of removing 90 older-style fume cupboards that are not fully compliant and replacing them with 45 to 50 new, fully compliant fume cupboards over the next five to eight years is being considered. Negotiations will start as soon as

possible with heads of departments to determine their minimum fume cupboard requirements, with the objective of trading off two older-style fume cupboards for one new fume cupboard. We believe this objective is not only sensible but also achievable, since it has been observed that some fume cupboards at some University sites are still used for the storage of chemicals. Special purpose chemical storage cabinets should be provided for this use.

New fume cupboards are not only safer, they are easier to use and will improve conditions and space utilisation in each laboratory.

Ongoing implementation of the fume cupboard upgrade program, involving the replacement of the 90 older-style fume cupboards with 45 to 50 new ones, is estimated to cost \$250,000 per annum over an eight-year program, or \$400,000 per annum over a five-year program, including consultant's fees.

Notwithstanding the ongoing upgrade program, University staff need to maintain their usual high level of vigilance and ensure that risk assessments are carried out for each fume cupboard, and that if the work carried out in a particular fume cupboard changes, a new risk assessment is performed for that task.

Summary

The University is now in a better position to demonstrate that is executing its duty of care in relation to this important Health and Safety issue. What this also means for staff, students and visitors is that they can breathe a little easier in the various laboratories around each campus and be assured that the University gives their health and safety the highest possible priority. ☺

planning for new facilities – applying sustainability and collaboration



Jan Achurch was awarded the 2005 TEFMA/Currie and Brown Conference Scholarship to attend the 2005

TEM Conference in Perth, WA, and visit institutions in the vicinity. She is an interior designer with the Planning, Design and Construction Section of the Office of Facilities Management, Griffith University, Brisbane.

Jan resumed full-time work in 2000 after taking some time out for parenting. She previously worked in the human resource management field before becoming qualified in design. She also has qualifications in environmental studies.

Introduction

I found the recent TEM Conference in Perth to be a stimulating, thought-provoking experience, and would highly recommend the scholarship to others who are contemplating applying. During my stay in Perth, I visited the University of Western Australia, Crawley Campus; Edith Cowan University, Joondalup Campus; and the University of Notre Dame. I would like to thank staff that were able to spare time to talk to me. This article reports on information obtained, and how it can be applied to planning and evaluating new facilities. The processes and practices used for planning new facilities are analysed in light of two major issues continually raised during the conference – *sustainability* and *collaboration*.

The message from the conference, 'Tertiary Education: Surviving or Thriving – Forging the Way in a New Landscape', was clear. It will indeed be a new landscape in which facilities are managed. Government funding to universities will continue to decline, forcing universities to become independent and entrepreneurial. Competition for students is increasingly fierce. Talented students are searching worldwide to select the university they will attend. After assessing the world ranking, students look further into the university's facilities and social milieu.

Conference presenters repeatedly advised courage when considering how best to adapt the way we go about our business. New corporate strategies to 'capture the market' are quickly evolving in a dynamic tertiary environment. Funds will be allocated from a reducing pool to those facilities that are in line with emerging corporate strategies. The economic imperative of getting as much value as possible, for as long as possible, for the dollars spent, is fundamental to the driving imperative of sustainable practices. As in all other areas of administration, the processes and practices used to determine how scarce funds are spent are under a spotlight called 'Streamlining'. This article looks at how existing processes can evolve to produce sustainable facilities.

Sustainability

Facilities organisations incorporate differing degrees of environmental sustainability into building operations and design guidelines.

Examples of strategies include: more attention to shading and natural light; energy efficient light fittings and equipment; efficient zoning and control of airconditioning; specifying 'green' building products and materials; low VOC emission finishes, adhesives and cleaning products; water conserving devices; building products that can be disassembled and collected to reuse or recycle; products and materials evaluated by independent organisations such as Ecospecifier; maintenance planning systems, et cetera. These strategies are valuable, but are just retuning existing practices and procedures. They are relatively easy to implement; however, persistent leadership is required at all levels of management.

Resistance to change can be formidable. Continuous education is essential to slowly change established practices. Most organisations are still struggling with this education process. However, this is only the first stage towards achieving fully sustainable facilities.

Sustainability incorporates not only environmental and economic perspectives, but also a social perspective. The complex interactions involved can be compared to those in a natural ecosystem (see Svoboda and Whalen). The social perspective includes issues such as: the impact of rapidly evolving information technologies; changes in education delivery and learning environments; flexible floor plans required for future reconfiguration; connections with surrounding facilities and services; user orientation; historical and cultural values connected to the site; corporate image; social atmosphere; a



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pleasant environment for staff and clients; multicultural requirements; access, equity, health and safety. Design solutions that also respond to these issues will promote acceptance of the completed facility, and the facility operated in ways the design intended.

The next stage in sustainable design involves taking a step back from our normal procedures and practices to investigate a more integrated approach to planning new facilities. Innovative solutions require significant changes in thinking, proactive information gathering and a much more structured collaboration process with multiple parties. This stage is the major roadblock for most facilities organisations as it requires significantly more funds to be invested up front in design development. This is equivalent to the concept of life cycle costing for physical assets.

Not investing resources is a false economy. Structured collaboration with stakeholders to accept the vision and goals for the facility will

prevent costly changes once the building is completed. Innovative facilities strategies have variable first and operating costs, depending on the degree of complexity, technology incorporated and novelty to building approach. Leadership in sustainable design requires an approach that is flexible, adaptable and inclusive (Svoboda and Whalen), and the courage to take informed risks. This message needs to be persistently pushed out to managers.

The Vice-Chancellor of Edith Cowan University, Professor Millicent Poole, has shown how visionary strategic planning dramatically transformed that institution's fortunes. With determination and single-mindedness, core values were devised and acted on to achieve a strongly differentiated identity. Everything was done to raise the profile of the institution. A new brand emerged to project an image of flexibility, friendliness, practicality and alignment with people's needs. The campuses were consolidated and the University undertook a dramatic building and refurbishment program. New buildings on the

Joondalup Campus such as the Education Building, Chancellery and the proposed new library complex, reflect these core values and include a range of sustainable features. The core values have been successfully incorporated into the Visitor's Centre, well sited in the Chancellery.

The University of Western Australia will establish a new Business School next year on a prime site next to the Swan River, on the southern end of Crawley Campus. The intent of the building design is to reflect the future direction of tertiary institutions and to provide a new, contemporary identity to that end of the campus, already well known for classical heritage architecture. The building will feature open plan and clustered academic offices, spaces for socialising and flexible learning environments designed for collaboration. It is also expected to gain a top Green Star rating under the Green Building Council of Australia guidelines. There will be much interest in the new chilled beam technology, used instead of normal airconditioning. ▸

▶ Collaboration

The perspective and skills required for an integrated approach to sustainable design can only be learned through experience gained by collaborating with those skilled in fields outside our own. The collaboration process has to bridge the conflicts and differences in expertise, professional languages and cultures by reflecting and drawing on each individual's accumulated knowledge (Svoboda and Whalen). Working on solutions together illustrates how an issue can cut across all functions.

However, facilities managers are traditionally results-oriented people – under pressure to achieve quick design solutions and driven to meet imposed deadlines and tight budgets. Facilities staff are highly skilled professionals and operators, but are often criticised on communication and collaboration. Few actively pursue training in this area, but communication and collaboration are the skills critical to achieving the next stage. It is difficult to integrate complex social processes and dynamic natural processes into management systems that are control-orientated (Svoboda and Whalen). The TEM Conference provided the opportunity to pursue collaboration skills and to keep in touch with how the landscape is changing for our clients in university administration. For this reason alone, it is a very beneficial arrangement for TEFMA to co-host the TEM Conference with the Association for Tertiary Education Management (ATEM).

Planning for sustainable facilities

Facilities organisations undertake systematic planning to maintain a competitive edge. Campus master

plans provide flexible guidance on locating new facilities. The university landscape is changing so rapidly that reviews are needed regularly. In order to connect proposed new facilities with emerging university corporate strategies, a smaller, more focused level of planning is required. A focus plan will provide guidance on how to best site a nominated facility so that it meets specified social, environmental and economic goals. There is also an opportunity to rethink the management and infrastructure of water, waste, energy and transport.

A presentation on student service delivery, by administration staff from the University of South Australia, indicated a number of universities are taking up the concept of student-focused customer service. The model for a 'one-stop shop' service delivery is taking various forms. Griffith University produced a focus plan to locate proposed new Student Centre and Administration buildings on the Gold Coast Campus. It was recognised that to cater for the rapidly growing number of students wanting to study on that campus, a quality customer service must be provided. Students are after a seamless, single point of contact with administration, and a much more vibrant campus atmosphere. A new student-centred facility will provide an integrated service including student administration, student services, graduate and international services and cashiering. The focus plan pinpointed a highly visible site, adjacent to a large and well-known gathering space that is important in student culture and campus history.

Vision statement

The 'strategic brief' is the vision statement for a new facility. It is

produced for and approved by a committee of senior University executives and user representatives (User Committee). This important document directs the whole project. It should be articulated in a way that ensures an integrated, sustainable design approach and assessable outcomes. Writing the statement in collaboration with a sustainability expert will be of great advantage. A short document with a clear vision, succinct value statements and concise goals will guide all stakeholders through the design process, keeping it on track. It can be used to influence the way user representatives think about and present their requirements for the building.

Each new project is an educational opportunity. The building outcomes need to be evaluated to ensure that valuable experience is not lost. This will only happen if formal procedures are put in place, first, to carry out a structured post-occupancy evaluation (POE), and second, to close the loop by feeding proven design strategies back into strategic briefs for future buildings. If goals are clearly stated on the originating strategic brief, the criteria are provided for a post-occupancy evaluation. This evaluation process has not yet been taken advantage of by many facilities organisations. Proven outcomes can be used to justify further funding. The sustainable message can ring hollow if it lacks substance and action to back it up.

User coordinator

At Griffith University, one person – a coordinator – is appointed from one of the users to be responsible for coordinating all the requirements of each user representative, to present



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AND ORAL HEALTH.

the information to consultants appointed for the project. This is done in conjunction with a project manager from facilities management. Both roles are pivotal in the design development process. If ownership is taken of the stated goals, they will facilitate sustainable design initiatives while discussing and gathering requirements for the building. The user coordinator will educate building users. The role of user coordinator is time consuming, demanding and complex. Resources should be invested up front to support it. A user coordinator will have expertise in user requirements but may have little knowledge of the building process. First, they need to be seconded to work full time on the project. Then, in order to make the coordinator more capable of encouraging users to rethink their approach to building requirements, provide training on role responsibilities, integrated sustainability possibilities and cutting-edge user practices.

Information collection and education

Once appointed, the project architect will meet with all stakeholders to collect information and further develop the building design brief.

They will work closely with the user coordinator and project manager. Prior to the architect being appointed, a lot of work is put into gathering information and compiling requirements for the building. This research process should be enhanced. Griffith University's Centre for Medicine and Oral Health was completed this year in record time, and has been received enthusiastically. Much of the building's success can be attributed to the effort put into collecting good quality information prior to doing detail design.

Representatives visited similar facilities locally and around the country to study successes and failures, cutting-edge technologies and practices. The information collected allowed users to fully develop their requirements before presenting them, saving on architectural fees and producing a very usable facility. This practice is being further enhanced in the current planning exercise for Griffith's proposed new Student Centre building.

An effective way of teaching sustainability to stakeholders is

simulation training (Svoboda and Whalen). A training exercise called Transformation has been developed in the US by Susan Svoboda, the managing director of a strategy training group, and John Whalen, a partner with a consulting firm in sustainability education. It helps participants to translate the concepts of sustainability into tangible action. They are assigned roles, different from their own, and work in teams to produce a set product or service. Time pressures, budgetary constraints and unpredictable interventions are thrown in. Success is measured by the service profitability, and how well social and environmental issues are dealt with. If similar training was provided to project stakeholders, before participating in the design process, they would be more capable of coming up with sustainable solutions. It is much more powerful than a one-off explanation on the need for sustainable design options.

Detail design development

Once a strategic brief is established, the complex detailed planning process begins. The project ▶

▶ architect meets with multiple stakeholders to further develop the design brief. This process would be more structured if the project architect was engaged to facilitate a number of collaborative workshops.

Around four workshops would be held: to cover all objectives of the project; to understand key values and user culture, and produce a business delivery model; to evaluate options for design concepts (include senior staff); and to enhance the preferred option (Appleton). Participation should be sought from all those who have a stake in the new facility, for example users including students, sustainability experts, facilities project staff, facilities maintenance and security staff, and staff responsible for health and safety. To emphasise the nature of interconnected relationships, the participants would work in groups (Appleton). The participants should be included in the post-occupancy evaluation. Pursue recognition for the new facility.

To build truly sustainable solutions, participants need to engage in meaningful cross-group collaboration. Facilities staff may come up with innovative solutions, but the solutions will not be effective unless support is built to implement them. Listening to clients avoids the trap of telling them what they should be wanting (Svoboda and Whalen). Collaborating also helps users gain some understanding of the complexities involved in a project, particularly at the funding level.

On completion of the project, information should be provided to

primary users and building visitors on the design intent and on how to use the green devices in the building. The information should be provided in a format that can be retained. This will head off future alterations that interfere with the operation of green devices.

Consultants

Griffith University has an initial meeting with the appointed team of consultants. At the meeting attention is drawn to the University Design Guidelines and Procedures. Sustainable guidelines are provided, as well as the requirement to report on how different building items will be handled. The document is continually reviewed. The practice of meeting with consultants provides an opportunity to impress on them the requirement to seek greener materials and construction techniques.

The number of consultants experienced in sustainable design is steadily increasing. Rather than relying on existing consultants who may find it difficult to adapt the design process they are accustomed to, take advantage of experienced consultants.

Maintenance feedback

Over the time facilities services decentralised, few facilities organisations have left formal procedures in place to channel information between maintenance sections and the section that plans new facilities. Feedback relies on chance communications. Formal procedures need to be re-established to take advantage of valuable experience and feedback on building products and systems that are installed in buildings.

Facilities organisations are in the process of updating their electronic maintenance tracking systems to include life cycle reporting. To gain the life cycle expected, maintenance staff should participate in the commissioning of all new facilities. Experienced staff will be able to check whether systems installed into new buildings are fully operational, saving on future maintenance costs. Maintenance staff can also familiarise themselves with new equipment and the design intent. This is another educational opportunity. Information needs to be shared in order to understand, identify and manage risks on new technology.

To sum up, innovative solutions to achieve fully integrated sustainable designs will require significant changes in thinking. This process needs to start sooner rather than later. We risk losing the competitive edge for our university. Our current procedures and practices need to be restructured to adapt. 🚫

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tales of a tefma adventure



Cheryl Hutchinson is the University Physical Resources Manager at Massey University, New Zealand. She is responsible for managing University

land, planning and environmental matters, and provides support to the regions in the management of the University's physical resources. This includes coordinating energy management for Massey's three campuses. Cheryl has been working on programmed implementation of the principles espoused in the Massey University Environmental Policy Statement via an Environmental Management System.

As recipient of the TEFMA Maurie Pawsey/TAC Pacific Travel

Scholarship, Cheryl attended the Association of University Directors of Estates (AUDE) Conference, followed by a tour of universities within the UK. As a result of the tour she has identified the necessary management structures required for successful integration of environmental management on a university campus. Her report will be available on the TEFMA website in the near future.

All readers who are involved in environmental management on their campuses, particularly in how to structure environmental management into their university system or who have an interest in using sustainable building materials and non-carbon technologies in their campus buildings, should refer to the TEFMA website for a full report of the 2005 Maurie Pawsey/TAC Pacific Travel

Scholarship Study Tour. This article is for general interest and is a traveller's tale.

The Maurie Pawsey/TAC Pacific Travel Scholarship is an invitation for personal and professional growth – an 'open sesame' experience – where doors spring open and people stand before you willing to share their knowledge and experience. From the Association of University of Directors of Estates (AUDE) Conference held earlier this year at the University of Surrey at Guildford near London, I worked my way up the UK map to finish at the University of Strathclyde in Glasgow. Whenever I think of the campuses I visited, the memory of the facilities is always intertwined with the faces and voices of the colleagues I met and the generosity of their time and knowledge. ▶

THE LONG WALK.



- ▶ The report on the web is a précis of some of the campus experiences but for me as a first time visitor to the UK there was so much more and I am going to write about where I slept (the ubiquitous bed and breakfast), the food, the countryside and travelling by train.

A few weeks into the tour I woke up one morning squashed into my little shoebox of a room and it occurred to me that *Alice in Wonderland* was really written about the ordinary, everyday life of an English person. You see, I often felt as if I should be drinking little bottles of potion to make me smaller as I squeezed up the narrow stairways and peeped through the doorway where I would have to stop and make the decision as to whether or not my backpack would fit inside the room with me, and if so, perhaps I should back in because then I could drop it onto the bed and still fit into the room. And when I went into the wonderful historic buildings, the old campus hearts, the cathedrals, I would feel very small and really in need of a potion to make me tall enough to examine the intricate detail of the stained glass windows and the stonemasons' work.

I did learn to think of scale as I travelled around but in the early stages I needed a few lessons, such as when I was staying at Royal Holloway, part of the University of London network and the first university for women in the UK. The main buildings of this historic campus are set up on a knoll and there is a beautiful woodland walk from the student accommodation to the main campus. The campus is next door to the Great Park that houses Windsor Castle. So on the Saturday morning, a beautiful bright spring day, I thought I would take a stroll through the park to the castle. I set out just before 10.30am and

finally dragged myself up the last few yards to the castle gates at 4.45pm.

I learned to always look upon the word 'great' in front of 'park' with respect. Even with map in hand I did manage to go in the wrong direction a few times, which added maybe a few hours to the trip. However, one of the wrong directions resulted in my arriving at an entrance gate that housed a pub and a few restaurants so I was able to sustain myself. It was a different view to London than I had anticipated – many people walking their well-behaved dogs, families on bicycles, riders on horseback and many walkers enjoying the spring feast of verdant lawns, daffodils, magnolias, cherry blossoms and beautifully scented rhododendrons.

On arrival at new accommodation I was always keen to check out the attached bathrooms – the most fascinating were the 'bathroom pods' attached to the student rooms when I stayed overnight on campus. They are delivered to the site completely fitted and finished and dropped into place – and somehow you have a toilet, hand wash basin and shower in the space we would manage one average sized bath, and it feels as if you are on a spaceship to the moon.

The average bathroom at a B&B was nowhere near as exciting as those found in the student halls but the breakfast experience was another matter. Yes, it is true, the 'full English breakfast' is a gastronomic delight. I was captivated by the heated trays holding glistening rashers of the pinkest bacon wafting glorious grilled bacon smells, alongside golden kippers, fried bread, fried mushrooms, baked beans, tomatoes, potatoes, scrambled eggs, poached eggs ... and the sausages.

Now over the years I have heard many an Englishman lament the New Zealand sausage. "Oh," they say in unison, "if only we could get a real sausage in New Zealand. Everything else is great but I miss a real pork sausage." So here was my chance to try one for myself. I selected a slim sausage, specked with some herb or spice and nicely browned. I cut into it. It was nice and firm and cut cleanly, the inside was a nice pinkish colour with the texture of a pork pie. I tasted it – the flavour or pork popped into my mouth – delicious. I was sold.

I was determined to taste as many of the different types of English sausages that were offered. The sausage described above was a Cumberland sausage and shortly afterwards at a Brighton B&B I tried a tarragon pork sausage and a honey and lemon pork sausage (tasted like a cough drop) and later at a barbecue I tasted a Lancashire sausage. When visiting Oxford University I took a break at lunchtime and went down to the farmer's market and found a shop that sold only sausages of many different varieties, even venison sausages. If I had access to a stove and pan this story would have been longer. However, you may be interested to know that the winner of the B&B breakfast stakes was the Victoria House Hotel in Glasgow. There, a chef would carefully prepare that other English breakfast specialty – the kipper – with infinite care – delicious!

I wrote at the beginning that I would talk about where I slept, the food, the countryside and travelling by train. I can talk more about the food, and introduce the fascination of travelling by commuter train through the English countryside in the next newsletter ... but only if you want to read it. Readers' choice! Feedback to Chris White: chris.white@rmit.edu.au 📧

TEFMA BUSINESS PARTNER ADVERTORIAL

HBO + EMTB

ARCHITECTURE | INTERIOR DESIGN | URBAN DESIGN | CONSULTING SERVICES | PROJECT COORDINATION

How did the company begin?

HBO + EMTB, one of Australasia's leading multi-disciplinary architectural design practices, was created by the merger of two long-standing, respected architectural practices – Hoadley Budge Olphert in New Zealand and Edwards Madigan Torzillo Briggs in Australia. We have cemented our outstanding reputation throughout the Australia and the Asia-Pacific region, contributing to the built environment of some of the world's most dynamic cities.

**What are the company's unique services/products – for the tertiary education/facilities management sectors?**

The HBO + EMTB team has significant experience working with educational institutions across Australia and New Zealand, with clients including Monash University, the Australian National University, the University of Melbourne and Macquarie University. We offer expertise in architecture, interior design, urban and landscape design, heritage conservation and project coordination.

Why has it formed a partnership with TEFMA?

HBO + EMTB has formed a business partnership with TEFMA as we believe our experience in the tertiary

sector has placed us well to assist facilities in all facets of educational infrastructure, including facilities planning, campus masterplanning, research and development laboratories, and student accommodation.

**What is a recent success for the company?**

HBO + EMTB has recently provided interior design services for the fitout of the new Academic Building at Monash University, Caulfield, Victoria.

The new 20,000m, multi-purpose facility incorporates lecture theatres, teaching spaces, conference centre, administration offices, academic rooms, postgraduate study areas and retail space, and also houses the Faculty of Business and Economics.

The design concept signals a shift away from the traditional institutional environment. HBO + EMTB's extensive understanding of workplace design has resulted in a modern, corporate image. Flexibility in the design has allowed meeting spaces to be adapted to a number of uses, including teaching space, informal breakout areas and study areas.

Throughout the design process, HBO + EMTB worked closely with Monash University and



facilitated regular briefing sessions to ensure all stakeholder requirements were met.

The facility is scheduled to open at the beginning of the new academic year.

Why should TEFMA institutions seek out HBO + EMTB in the next 12 months?

With extensive experience across a wide range of sectors, HBO + EMTB has the ability to draw on diverse skills ranging from heritage consulting to urban planning, as well as specialist design skills such as laboratory and research and development facilities.

Through our substantial experience in the tertiary education sector, HBO + EMTB recognises that educational facilities need a mix of spaces that take into account the requirements of diverse users. A flexible design that will easily adapt to accommodate growth and integrate future technology is important. Facilities need to be economical, durable and environmentally responsible. Our approach to each project involves extensive client and user consultation, to ensure a successful design solution. Projects such as the Australian National University's Innovations Building, and Monash University's new academic building, are evidence of our ability to deliver flexible, ecologically sustainable and affordable design.

FOR MORE INFORMATION ABOUT HBO + EMTB PLEASE CONTACT Roger Teale – Associate Director EMAIL rteale@hboemtb.com

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tefma learning environment seminars 2005



Dr Kenn Fisher, Director, Learning Futures, Rubida Research Trust and Research Fellow, Faculty of Education, University of South Australia. Kenn has

specialised in the design of the physical learning environment since working with the then Australian Universities Commission in Canberra in the mid 1970s. For the past 30 years he has practised as a teacher and lecturer, facilities and project manager, briefing and design consultant and campus masterplanner in all educational sectors and more recently for private and public universities in Asia and the Middle East. Kenn's primary consulting focus is acting as the interface between campus 'users' and professional designers in campus masterplanning, developing strategic briefs and in a design review role. He consults with the OECD Program on Educational Building (he was head in 1997–98 based in Paris) and travels widely, having worked with over 35 universities on four continents.

As global society moves from the information age into the knowledge age, vestiges of past epochs – the industrial revolution and the technological revolution – are still apparent to a greater or lesser degree on university campuses. The classroom was invented during the industrial revolution to accommodate the burgeoning number of city dwellers who needed skills development to meet the labour needs of the manufacturing industries of that age. This 'innovation' is still with us some 200 years on despite there being three subsequent epochs with associated innovations and transformations.

Following the industrial revolution, subsequent technological developments progressively included the telephone, television, the fax and the punch card computer, with many of these innovations still going strong. These developments culminated in the technological revolution of the 1970s to today, where desktop computers, the internet, and data projection have all evolved to the increasingly converged wireless and mobile communications environment of the present. These are all vital to the information age and its requirements, and are also critical to learning in the knowledge age.

Yet teaching and learning traditions remain ever robust, with the teacher-centred explicit approach still dominating in many learning contexts. Of course, the physical learning environment has continued to support this approach with the traditional classroom/lecture room being the prime vehicle for face-to-face communication. However, the teacher at the centre of learning and imparting knowledge is no longer the principal methodology in today's pedagogical environment. Clearly, students can gain data and information from the web, each other and texts. In this context, the teacher takes a role rather more related to that of a mentor or facilitator.

Furthermore assessments are moving away from examining memorised/rote learnt content to testing problem-solving abilities and collaborative and critical thinking skills. The traditional classroom no longer meets the face-to-face needs of this form of pedagogy, and spaces and places need to respond to a new learning paradigm, which optimises the use of existing and emerging technologies.

Noting that these concepts and ideas are being adapted and implemented in a variety of ways, TEFMA organised two seminars in 2005 – Brisbane in March and Christchurch in July – with participants at both seminars having the opportunity to see and hear about a range of developments in tertiary education, explore case studies on site and through presentations and through discussion with peers. The two seminars took a holistic view of learning environments – they considered the virtual and physical as being integrated learning environments – and scoped out the terrain of a range of factors impacting on the infrastructure requirements for learning.

A report summarising the presentations and the key points raised by the presenters is under way.

The report covers these issues thematically, with key factors including trends in the science of teaching and learning (pedagogy), the continuing evolution of technology through wireless communications and the world wide web plus mobile technologies, the rapid advent of e-learning, the changing nature of student profiles and needs, how pedagogy and space are integrating in formal and informal learning environments, the use of collaborative design processes, case studies of recent innovations and finally resources and references.

TEFMA believes the two events are likely to be a benchmark in the development of the Association, and commends the report. It is hoped that the report will be available as a .pdf towards the end of the year. 🍎

it's all greek to me

Alan Egan

Ex President TEFMA 2005

To the outsider, Facilities Management probably appears obscure and at times utterly unfathomable. It's as though we speak a different language. Clients complain they don't understand why we do things the way we do, why we do things in seemingly bizarre sequences, and most annoyingly, how we speak in FM tongues: in fact most things FM does must drive the clients to exasperation. But are the clients wrong? Do we do things with irritation in mind or it just a case of FM not being understood?

In many cases FM may as well be communicating in hieroglyphs (small signs or symbols). It is perhaps the most prevailing comment from university clients that insist FM speaks a language not readily accessible to those outside the FM fellowship. Our clients virtually need an *FM Rosetta Stone* to help them understand our business.

The Rosetta Stone (carved in Egypt around 200BC) led to the modern understanding of hieroglyphs. The most well known script used for writing the Egyptian language was in the form of a series of hieroglyphs. Each of these began as a picture of a real-world object, animal or person, or as the representation of a spoken sound. If you look at FM through a client's eyes we really do talk in modern day hieroglyphs: *plans and drawings, endless acronyms, perspectives, tables, graphs and cash flow predictions*. And like all hard-driving 'time and money' obsessed FM professionals, do we ever really care whether the client has grasped the meaning? Do we too readily misinterpret that glassy-eyed 1000-metre stare from the client as understanding and agreement? Of course we do.

Sadly (and quite understandably) no recent building excavations have revealed anything remotely resembling an FM Rosetta Stone, so we need to be our own translators. We need to find a way to temper our

business language so that our clients can at least grasp the meaning behind our intentions. Simple and plain language is always the best practice. So when next you deal with a client and feel that overpowering primordial Facilities urge to retreat behind a curtain of FM gobbledegook, remember to just keep it simple. Jargon may give you confidence but normally the only person likely to be impressed is you.

As a mental check always remember how you felt last time you walked into a computer shop and innocently asked the salesperson for information on a piece that took your eye. Lock in that feeling and you know what your university clients feel like from time to time.

Consider the words of the French mathematician Blaise Pascal ...
"I have made this letter longer than usual, only because I have not had the time to make it shorter".

In the business of FM language, less, most certainly, is always more. ☹

Attention TEFMA members – we need you! . . .

. . . or rather, your magazine needs you.

TEFMA is a strong and growing Association, reflected in the pages of your magazine *insideneutralletter*.

Your magazine relies on the input from you – the members of TEFMA. It has been reassuring and indeed gratifying to note the increasing input from members in these pages in the past couple of years, as noted by new TEFMA President, Robert Kelly, in his President's Message.



So please keep your informative and interesting 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 in the past. Now sit back and enjoy reading the current issue of your magazine.

Please send your submissions to Chris White: chris.white@rmit.edu.au



invitation to tefma business partners

The TEFMA Board recently decided to promote TEFMA Business Partners through the placement of 'advertorial' pages in the *inside-newsletter* TEFMA magazine.

As TEFMA immediate past President Alan Egan notes in these pages, TEFMA is a strong and growing Association, which is reflected in both the steady growth in membership and the jump in Business Partnerships. TEFMA is pleased and proud to offer Business Partners an opportunity to increase their profile in the facilities management and broader arena.

The purpose of the advertorial is to promote TEFMA Business

Partners, and to introduce the company to readers of the magazine and to other TEFMA Business Partners. The charge for a page of advertorial is \$500 per issue. This charge is to partly offset the cost of preparing the advertorial, and printing and distributing the magazine. The advertorial pages will be clearly labelled 'TEFMA Business Partner advertorial'.

To simplify the process and to give the advertorial pages an ongoing consistent and recognisable appearance, Business Partners are asked to supply answers to a short list of questions. This will be the basis of the advertorial – it is in essence a profile of the Business

Partners' company and/or CEO and/or its products and services. Graphics for the advertorial should also be supplied.

TEFMA is delighted to acknowledge HBO + EMTB as the first Business Partner to place an advertorial page. TEFMA looks forward to strengthening its relationships with Business Partners through this medium in future issues of the *insidenewsletter* TEFMA magazine.

Contact for your advertorial

In the first instance and for more information, please contact Chris Box on (03) 9925 2797 or chris.box@rmit.edu.au

tefma scholarships

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 will have read some of their reports in *insidenewsletter*.

The TEFMA Scholarships are listed below. For more details on each scholarship, please check out the TEFMA website: www.tefma.com/education/scholarships/index.jsp

MAURIE PAWSEY/TAC SCHOLARSHIP

TEFMA's premier scholarship provides a large financial contribution for a member to attend the annual conference of APPA (US), AUDE (UK) or HEFMA (RSA) and to visit various institutions.

TEFMA/OPUS MANAGEMENT DEVELOPMENT SCHOLARSHIP

This scholarship provides financial assistance for members to attend an intensive short course for middle managers in the facilities management field.

ZAUNER CONSTRUCTION TRAVEL SCHOLARSHIP

The scholarship assists members who are middle managers to undertake a study tour of selected Australasian universities to improve their knowledge of contemporary facilities management practices.

TEFMA/CURRIE AND BROWN CONFERENCE SCHOLARSHIP

This scholarship is aimed at members who are in line management positions up to the equivalent of Australian HEW6 level to assist them attending the annual TEFMA/ATEM conference in Australasia and to tour local institutions.

NCRB/TEFMA RESEARCH SCHOLARSHIP

This is a new scholarship that provides support to members undertaking post-graduate study or research in facilities management.

TEFMA/PROSYS SECURITY SCHOLARSHIP

This scholarship is aimed at members who are first line security supervisors (HEW6 and below in Australia and equivalent in other countries) to assist them to visit other Australasian institutions to improve their knowledge of contemporary security management and associated practices.

SCHOLARSHIP APPLICATION CLOSING DATES

Details of scholarship application closing dates can be accessed via the TEFMA website, What's New, Events Calendar: www.tefma.com/whatsnew/EventsCalendar.jsp

upcoming events

The following functions are planned for next year.

Adelaide Workshop 20-21 March 2006

Brian Phillips has kindly offered to host the 2006 Australian Workshop in Adelaide, with the topic 'The Working Environment'. The venue is confirmed as the Mawson Centre, the Mawson Lakes Campus of the University of South Australia.

Security and Emergency Management 29-30 May 2006

The University of New South Wales in Kensington, Sydney, will host the 2006 Security and Emergency Management Workshop on 29-30 May 2006. The venue is yet to be confirmed.



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

New Zealand Workshop 6-7 July 2006 (provisional)

Provisional dates for the 2006 New Zealand Workshop are 6-7 July and the location should be Auckland, with a venue to be confirmed. The 'double-header' topics will be 'Space Management' and 'IT in FM'. There is some doubt as to whether the Auckland institutions can muster sufficient interest to run it due primarily to changes of personnel and workload.

TEM Conference 27-30 August 2006

The 2006 TEM Conference will take place in Sydney on 27-30 August. The venue is yet to be confirmed. The Organising Committee, chaired by Alan Egan, is confident of delivering an event that will both inform and entertain, so make sure you get there. ●

strategic plan: the road ahead

TEFMA Strategic Plan 2003-2008

The members of TEFMA provide vital infrastructure and service in support of the effective operation of higher education in the Australasian region. This strategic plan clearly articulates our **vision**, **mission** and **values**. It also sets out our **goals** grouped under the themes of competency, collaboration and credibility.

Through participation in activities of the Association and guided by the principles of this Strategic Plan, our members will add real value to their institutions and in turn will enhance teaching and research outcomes. As individuals, our members will experience professional growth and develop strong working relationships with their peers across the sector.

Members of TEFMA manage facility assets valued in excess of \$22 billion and annually spend more than \$500 million on maintaining and operating those assets. TEFMA's support of the effective management of these resources is vital to a healthy higher education system in the Australasian region.



Readers and members please note:

A leaflet setting out the Strategic Plan in full is being distributed with this issue of *insideneutral*. Please set aside some time to read it. The Strategic Plan can also be viewed on the TEFMA website at: www.tefma.com

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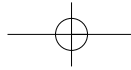
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article submissions

We welcome submissions from TEFMA members for *insideneWSletter*. Articles should be accompanied by a short biography (40–70 words, including institution and title, is fine) and a head and shoulders photograph. Articles may be edited for layout purposes.

Please send your submissions to Chris White: chris.white@rmit.edu.au



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