

The Compass

New directions in
Queensland industry



Queensland Government
Environmental Protection Agency

March 2003

Smart and green: developers respond to sustainability challenge

A new Sustainable Urban Development Program is encouraging smart developers to meet the challenge of accommodating Queensland's booming population while reducing the impact of urban sprawl on the environment.

The program was established through a partnership between the EPA and the Urban Development Institute of Australia (UDIA). Executive Director of Sustainable Industries Dr John Cole said the EPA was working with leaders in the development sector to encourage innovative practices based on sustainability and eco-efficiency principles.

Launched in July 2002, the program invited Queensland developers to submit project proposals which included sustainable design features and technologies, and addressed environmental, social and economic issues.

Twenty-five projects with a combined value of more than \$2.7 billion were submitted. Projects ranged from extensive residential developments to industrial premises, and even a carwash.

Of the twenty-five high quality submissions, the four projects chosen as champions incorporated a diverse range of initiatives to deliver triple bottom line outcomes.

The Rockcote Design Centre at Nerang (story below), QM Properties' Pacific Harbour Golf Course Precinct at Bribie Island, and Austcorp's Coomera Waters on the Gold Coast each qualified for \$35,000.

These companies will also benefit from the ongoing support of the EPA and UDIA in developing their projects as examples of best-practice.

The Kelvin Grove Urban Village (a major government project) will also receive in-kind support from the EPA and UDIA.

Continued overleaf... ▶

Rockcote wins with sustainable solutions

Minimising their ecological footprint both during construction and throughout the life of the building is Rockcote's focus in developing their new sales centre at Nerang, on Queensland's Gold Coast.

The Rockcote Design Centre will be self-sufficient for energy and water. It will also be an example of best-practice sustainable development that does not stop at the fence-line.

As well as integrating commercial development with the natural environment, Rockcote has agreed to take stewardship of adjacent public land, and will replant the area with native vegetation.

The proposed development was recently named one of Queensland's champions in the UDIA-EPA Sustainable Urban Development Program.

Sustainable features of the project will include:

- Natural ventilation systems for cooling and heating
- Natural lighting



Photo: Rockcote

- Photovoltaic cells integrated into the building to produce most of the site's energy requirements, with excess power sold back to the grid
- Water self-sufficiency and reuse of wastewater
- Recycled construction materials with low embodied energy (energy used to create or manufacture materials)
- Plantation timber instead of steel used for roof construction
- Straw panels used for internal walls
- Rockcote EcoStyle environmentally-friendly paints and coatings used throughout
- Energy efficient furniture, fixtures and equipment with zero emissions
- Landscaping for visual impact, dust filtration, shade and cooling of the building
- People-friendly design, including carpark able to be converted after hours to a tennis court and sports arena with energy efficient lighting
- Excavated materials used on site
- Showroom made available for public meetings
- Extensive library with environmental design literature and product guidelines
- Detailed manual outlining design philosophy and maintenance of features

The design of the centre has the potential to reduce traditional energy costs by an estimated 80 percent. The Rockcote centre will showcase sustainable design options other developers can incorporate to help minimise the impact of urban sprawl.

Continued from previous page

UDIA president, Mr Grant Dennis said this landmark contribution by the EPA showed its faith in the commitment of Queensland's developers to setting new benchmarks for sustainable development practices.

"The strong partnership between the EPA and UDIA will benefit the environment and our often-criticised industry, which deserves recognition for an ever increasing commitment to sustainable development," Mr Dennis said.

"Developers undertaking sustainable development list faster sales, higher market prices, successful marketing campaigns and positive public response as some of the tangible economic benefits of sustainable development."

UDIA and EPA have established the Sustainable Urban Development Program as a three-year initiative, to assist Queensland's development industry in becoming world leaders in sustainable development.

Your feedback on *The Compass*

In our last edition, we included an evaluation card so you could let us know what you thought about *The Compass*. We'd like to thank those of you who responded – your feedback is invaluable as it helps us make future editions of *The Compass* more relevant to you.

Our evaluation of *The Compass* is a continual process, and you are welcome to provide us with feedback at any time. So far we have received more than 150 evaluation cards, but if you still have the card and would like to send it back to us, please do so.

Around 40 percent of respondents said the information in *The Compass* has positively influenced their business. We will try to increase this percentage as we share more innovative eco solutions with you.

Most readers said they found articles in *The Compass* both useful and interesting. Over half said case studies were the most useful part of *The Compass*, and we will ensure more of these are included in future editions. We will also continue to include useful website references and tools, which many readers appreciated.

Water was the favourite topic, followed in order of preference by energy, waste, agribusiness, manufacturing, tourism and food processing. These preferences will be reflected in our newsletter content in the future.

We were pleased to find that almost 70 percent of *The Compass* recipients share the newsletter with their colleagues.

We look forward to receiving more of your feedback so we can continue to meet your needs.

Do you have a story that may interest our readers?
Please email us at sustainable.industries@epa.qld.gov.au

Dear Reader,

Welcome to the first edition of *The Compass* for 2003. This edition highlights our core theme of sustainability for business and government in the Smart State, with stories demonstrating that all Queenslanders can make a difference.

Major companies are picking up on eco-efficiency opportunities, but many small to medium enterprises (SMEs) are also sustainability innovators. SMEs seeking to make a difference include Thomas Borthwick and Sons meat processing facility in Mackay and the Manly Hotel in Brisbane. With 98 percent of Queensland businesses categorised as SMEs, even small actions can make a big difference to our consumption of resources and treatment of waste.

Sustainable development is not just for business and government. It is also about Queensland mums and dads taking action in their homes and daily lives. This is a key factor behind the EPA's new Sustainable Parks program.

More people visit Queensland's National Parks each year than attend sporting matches. This provides us with a great opportunity to showcase sustainable, alternative technologies such as water efficient showers and the use of solar

energy systems. The Queensland Parks and Wildlife Service is 'walking the talk' by demonstrating what can be done to achieve sustainability in the built as well as natural environment.

Back in the city, where urban sprawl is a major environmental risk facing south-east Queensland, our partnership with the Urban Development Institute of Australia (UDIA) is showcasing projects that prove it is possible to be cost-competitive and sustainable while delivering a better quality of life and urban amenity.

As we experience one of the worst droughts on record, we are reminded that water is a major issue in both our urban and regional environments. Water recycling is an idea whose time has come! The EPA is working with industry and local government to promote water conservation through efficiency and re-use. Much more can be done by getting on the front foot in the way we use this essential natural resource.

The chicken industry is a good example of industry taking the initiative, as it seeks to improve its environmental performance and social relationship with encroaching urban communities. Chicken growers are developing an environmental management system (EMS) that deals with many aspects

of the industry, including resource consumption and odour management.

While some solutions to our environmental problems rely on sophisticated science and innovation, others are common sense and simple. If you have applied or developed a solution to an environmental problem in your business or work, we would like to hear from you.

Please email us at sustainable.industries@epa.qld.gov.au so we can share your ideas and solutions with other readers of *The Compass*.

It's about helping everyone go in the same direction.



John R Cole PhD
Executive Director
Sustainable Industries Division



Getting wise with waste

Queensland businesses are leading the way with new initiatives designed to both reduce waste and improve profit margins.

Launched by Environment Minister Dean Wells at Doomben Racecourse late last year, the EPA's new WasteWise program helps Queensland businesses to cut waste, reduce costs and increase recycling.

An early success story is Northstate Carpet Mills, located on the Gold Coast (see box). According to company inventory controller Mike Davis, focusing on waste gets results.

"With the support of the EPA WasteWise team, Northstate Carpet Mills is demonstrating that waste reduction and recycling improve the environment and the bottom line," he said.

Since becoming WasteWise, Northstate Carpet Mills has reduced costs of packaging and waste disposal by 75 percent a year.

Jupiters Casino, at Broadbeach on the Gold Coast, is another WasteWise winner. Two tonnes of food preparation scraps

now go to a worm farm in the Gold Coast area each week instead of to the tip.

"We work with interested businesses to help them solve their waste problems," EPA's WasteWise coordinator, Ariane Milinovich said.

"We assist a business to work out the most useful waste reduction goals for their business and then look for cost effective solutions."

WasteWise is a free and voluntary program open to all businesses in Queensland. WasteWise aims to assist businesses to achieve:

- material input cost savings
- waste disposal cost savings
- improved productivity
- improved staff morale
- an opportunity to demonstrate leadership

Your organisation can become a WasteWise partner by completing a registration form, conducting a waste assessment, developing and implementing an action plan and reporting on your achievements. The EPA's WasteWise team is available to assist with all these steps.



Photo: Mick Richards

Racegoers at the WasteWise launch show that while recycling might begin at home, it can also be done at public events.

For more information, including a fact sheet and registration form, email WasteWise@epa.qld.gov.au or call (07) 3227 6142.



Photo: Sarah Heenan

Mike Davis inspects offcuts now sold for weed matting and carpet underlay with WasteWise project officer James Vuong (left)

Saving 740 trees and generating new income

As a WasteWise partner, Northstate Carpet Mills on the Gold Coast has saved 37,000 kg of cardboard, or 740 trees, each year.

The company reduced imported packaging cardboard by 60 percent a year by tackling the problem at its source. Although the company recycled much of the 63,000 kg of cardboard it collected each year from packaging of imported carpet yarns, it decided to try to reduce the amount of packaging cardboard it received in the first place.

"Yarn is now delivered in a recyclable plastic pallet wrap with stabilising cardboard dividers," inventory controller, Mike Davis said.

"While staff were initially concerned they wouldn't have any cardboard boxes to store unused yarn, Visy Recycling was able to provide us with three 15 cubic metre cages for storage."

The company also produced 2200 kg of waste carpet backing a year and had 80,000 kg of discontinued yarn stocks.

After an extensive search for new business opportunities, carpet backing is now sold for weed matting and carpet underlay and 60,000 kg of waste yarn has also been turned into saleable products.

Summary of savings and additional earnings

Savings on packaging a year	\$82,450
Sale of carpet backing	\$ 1,800
Disposal cost savings	\$ 4,576
Total	\$88,826

Northstate Carpet Mills is planning future savings by:

- selling cardboard yarn tubes back to manufacturers
- purchasing machinery that can rip waste carpets and yarn materials to produce fibres that can be used for high-value products such as bedding and carpet underlay
- increasing reuse and recycling of materials to reduce waste disposal costs to \$3000 a year.



Photo: Paul Edwards

Moreton Bay District ranger Justin Kreis installs solar panels to power a water pump at The Wrecks campground Moreton Island.

National parks show the sustainable way

Queensland's national parks will become even 'greener' now that the Sustainable Parks initiative is underway. Sustainable waste, energy and water systems and technologies will be installed to help reduce the impacts of the rangers that live and work in Queensland's national parks and the 13 million people that visit each year.

Sustainable Industries EnergyWise manager Des Jones said the initiative will increase efficiencies in waste management and the supply and use of water and power, as well as reducing equipment maintenance time and operating costs for parks.

"National parks are perfect places to showcase environmental sustainability," Des said.

"Advisors from Sustainable Industries EnergyWise, WaterWise and WasteWise programs are working with Queensland Parks and Wildlife (QPWS) officers to install systems appropriate for individual park conditions. Use of sustainable technologies will be written into park management plans.

"Park visitors will experience sustainability in operation and hopefully think about how they might reduce waste, water and energy impacts in their daily lives," Des said.

Moreton Island National Park is building on the success of the renewable energy system, installed in 2000, that powers the ranger station. Solar panels backed up by gas and diesel generators produce enough power to operate four staff houses, the ranger base, workshops and machinery sheds.

"Park visitors will experience sustainability in operation and hopefully think about how they might reduce waste, water and energy impacts in their daily lives."

In December 2002, The Wrecks campground at Tangalooma was upgraded to incorporate sustainable features. Dedicated recycling bins were placed alongside conventional waste bins. Energy efficient LEDs (light emitting diodes) were installed in amenities buildings and a solar pump now transfers bore water to an overhead tank for showers and toilets. Existing taps were also replaced with spring-loaded taps that turn themselves off to reduce water wastage.

QPWS ranger Chris Artiemiew said the Sustainable Parks initiative will be beneficial.

"This gives island visitors and residents a clear message that QPWS is committed to sustainable management and that we are exploring alternative ways to manage waste, water and energy.

"Many island residents are already using renewable energy systems and there is a lot of interest in our generating systems at the ranger station and in the new stand-alone generating system planned for Cape Moreton," Chris said.

The two houses and the visitor centre at the cape are currently powered for only part of the day by an old diesel generator. As the visitor centre will soon become the main parks administration office a better system is needed.

Paul Edwards, Sustainable Industries senior technical advisor for renewable energy, is working with QPWS on options for the new system.

Although Bureau of Meteorology records show consistently strong winds at Cape Moreton, solar power is being considered as the most appropriate option. A ten kilowatt hybrid configuration, with batteries and inverters, backed up by a diesel generator is planned.

"Currently the site has a high power demand, but with demand-side management this can be reduced by replacing lights, old fridges and appliances," Paul said.

QPWS will start the tender process soon after the location for the photovoltaic array is selected and hopes to have the system operating at Cape Moreton in the later half of 2003.

Efficiency tips

Efficiency gains need not require huge system outlays. Small investments can make a big difference.

Cut water use by installing:

- Water conserving shower roses (note: good water pressure is essential)
- Spring loaded taps

Cut power use by:

- Replacing faulty refrigerator seals
- Installing energy efficient globes and timed light switches
- Using energy efficient appliances

Cut waste by:

- Encouraging people to minimise packaging
- Providing recycling bins



Photo: Mark Granlich, Courier Mail

Working together to solve eco-dilemmas

EPA negotiations with a Mackay abattoir to upgrade wastewater management practices have brought significant social, economic and environmental gains for the region.

Current jobs have been retained and new jobs created. New partnerships between industry, business and local government have also been forged, and nutrient run-off to the Great Barrier Reef is being reduced.

When the EPA required Thomas Borthwick and Sons' meat processing facility to upgrade its effluent process as part of its licensing agreement, the company thought it may have to shut down, with the loss of about 450 jobs.

However, negotiations over the past 18 months have resulted in Borthwick improving its environmental performance, reducing nutrient discharge by 10 percent each year and maximising effluent reuse.

The abattoir has been upgraded with a new value-adding plant to create even more jobs. Noise and odour emissions are also being considered. Most importantly the level of contaminants discharged to marine waters and the Great Barrier Reef are being significantly reduced.

Under the new license agreement, other businesses could use Borthwick's effluent providing they implement a sustainable effluent management plan.



Photo: EPA

Borthwick's General Manager Roy Van Nesch and EPA Senior Environment Officer Phil Jenson discuss ways to improve effluent treatment.

Such plans would protect groundwater by preventing wastewater infiltration, control sodium levels and degradation of soil structure, and prevent effluent run-off. The health and safety of those handling and irrigating with the effluent is also ensured.

The abattoir now supplies local turf farmers Mackay Turfgrass with a guaranteed water supply, even during the dry season. This was the catalyst for the turf farm's new environmental management plan which includes improved drainage, use of tail water dams, and ongoing soil monitoring.

In a parallel project, Mackay City Council was investigating its wastewater treatment and considered how it might be able to accept treated effluent from the abattoir. Further EPA negotiations have resulted in the Borthwicks and Mackay City Council projects working in tandem.

Council proposes to build a new wastewater treatment plant that can process abattoir effluent. The plant will eventually supply treated water to canefields currently affected by salt extrusion in the underground aquifers.

EPA district manager Lawrie Wade said that the projects were excellent models of government, industry and community working together to deliver social, economic and environmental benefits.

"The EPA took some risks in relaxing the licensing requirements during the negotiations, but those have more than paid off. We wanted to focus on the desired outcomes, rather than regulations to achieve them. What we found was that people saw an opportunity and worked out how they could achieve these outcomes," Lawrie said.

Fresh breath for old buses

New technology that reduces air pollution from diesel engines while improving power and fuel economy has been developed by Brisbane-based company Rotec Design.

Rotec Design was awarded a \$166,100 grant under the EPA's Queensland Sustainable Energy Innovation Fund (QSEIF) to develop a clean diesel engine for retrofitting buses.

This innovative project was one of four to share in more than \$500,000 in State Government funding announced in the fourth round of QSEIF.

"The projects were selected on the basis of their potential to create business opportunities and employment in

Rotec's FreedomAir System can reduce air emissions by up to 80 percent

Queensland's sustainable energy industry," Environment Minister Dean Wells said.

"Through the QSEIF program, more than \$2.8 million has been committed to assist Queensland companies to develop innovative technologies and make Queensland a smart and sustainable state."

More power, better fuel economy, cleaner air

Rotec Design's FreedomAir System can be installed on new diesel vehicles or retrofitted to older vehicles to significantly improve their environmental performance.

In-house trials have demonstrated that Rotec's system can reduce air emissions by up to 80 percent and improve power output and fuel economy at a fraction of the cost of other currently available systems.

The FreedomAir System turns the four stroke cycle of a diesel engine into a

two stroke cycle through the addition of a scavenge pump which extracts exhaust fumes and pumps in clean air.

The system will be welcome in Australia, where more than 6500 buses are over 15 years old and replacement costs would reach more than \$2 billion.

Extending the life of older diesel vehicles will also save on the steel and energy needed to produce new bus chassis.

Rotec's FreedomAir System is currently being trialed in Ontario Canada with Transit Windsor's ageing bus fleet.

The trial is being monitored by the United States (US) Environmental Protection Agency and if successful will receive certification for use in the US. Rotec Design is also negotiating with Brisbane City Council to trial the technology in their bus fleet.

news

Eco-solutions for the chicken run

Improving the environmental performance on chicken farms can save growers money, according to the Queensland Chicken Growers Association's eco-efficiency assessments.

The average Australian consumes around 33 kg of chicken every year. Queensland produces over 2050 tonnes of chicken meat each week, about 16 percent of the nation's total production.

With millions of chickens producing huge quantities of effluent each week and neighbours not keen on living close to chicken farms, chicken growers can find themselves facing some difficult environmental and social issues. The answer could lie in increasing the eco-efficiency of their farms.

Eco-efficiency is a business-oriented approach focussing on reducing resource inputs and avoiding the generation of wastes and pollutants. Simple solutions such as energy efficient lighting and ongoing maintenance of sheds and equipment can yield the greatest savings.

Eco-efficiency assessments of four south-east Queensland chicken farms found the following:

- Triphosphor lights are the most efficient form of **lighting** for poultry sheds. They use 50 percent less energy than standard incandescent lights and last longer.

- Improved maintenance can reduce **ventilation costs** by up to 20 percent. Increased efficiency can be achieved by using automatic controls, minimising air leaks to reduce load on fans, using energy efficient fans, and carrying out regular maintenance and servicing.

Other eco efficiency measures include composting chicken carcasses, collecting roof water, re-circulating heated air from the brooding area, and ensuring thermostats are accurate.

For more information on agribusiness or for a Chicken Meat Industry fact sheet visit http://www.epa.qld.gov.au/sustainable_industries



Photo: Queensland Chicken Growers



Photo: Queensland Chicken Growers

Leading environmental thinker visits Brisbane

World-renowned author and futurist Amory Lovins recently visited Brisbane to share his ideas on reducing costs and improving profits while conserving resources and increasing energy efficiency.

Known for his remarkable intellect and unique problem-solving approach, Mr Lovins has made breakthroughs in fields ranging from automobiles to energy. Newsweek described him as "one of the world's most influential energy thinkers".

Mr Lovins is the co-author of *Natural Capitalism: creating the next industrial revolution* – a best selling book presenting a business strategy that reduces reliance on natural resources such as land, water and raw materials while maintaining profitability.

Mr Lovins explained the principles behind natural capitalism, and the opportunities available to Queensland businesses to save money and resources through the ingenious application of novel technologies and business best practice.

For more information on Natural Capitalism visit <http://www.natcap.org> or www.rmi.org

The average Australian consumes around 33 kg of chicken every year. Queensland produces over 2050 tonnes of chicken meat each week, about 16 percent of the nation's total production.

in brief

Beyond the Triple Bottom Line

Strategic actions to build Triple Bottom Line priorities into boards, brands and business models will be the focus of the 2003 sustainability seminar in Brisbane on Wednesday April 2.

SustainAbility chair John Elkington, who developed the concept of the 'Triple Bottom Line' eight years ago, will be a key speaker at the conference. He will be joined by incoming chairman of Anglo American plc Sir Mark Moody, Dragon Brand Consulting Limited director Dorothy McKenzie, and director of corporate governance for Ford Motor Company Deborah Zemke.

Presenters at *Boards, Brands and Business Models* will give Queensland businesses an insight into the lessons learned as key international businesses move towards sustainability.

For more information or to register visit <http://www.edmondsmgt.com.au> or call (08) 9246 0811.

SMEs guide to eco efficiency

Small to medium sized enterprises (SMEs) can discover the benefits of eco-efficiency in *Eco-Efficiency for Queensland Business: A guide for reducing costs and impacts*, a new handbook released by Queensland Commerce.

SMEs make up 98 percent of Queensland businesses and can make a big difference to our consumption of resources and treatment of waste. SMEs choosing to move beyond compliance towards best practice environmental management can achieve improved bottom line performance and market place advantage.

Eco-Efficiency for Queensland Business was developed with the assistance of the EPA and Environment Australia. It incorporates an easy to use CD-ROM to assess current environment performance and to develop action plans to implement eco efficiency measures.

For information or to order the guide, call Commerce Queensland on (07) 3842 2248.

Be involved in shaping the cities of the future

The 2003 Asia Pacific Cities Summit returns to Brisbane from April 13-16 to challenge Queensland businesses to be a part of shaping the future of our cities.

Interactive workshops, panel discussions and networking forums will provide Queensland businesses with plenty of opportunities to make connections, share ideas and identify business opportunities.

The theme of the 2003 Summit is "Emerging Futures of the City". The region's brightest minds will exchange information, ideas and success stories on transforming urban sprawl, greening our cities, creating healthy communities, global/local governance, and alternative futures.

With delegations expected from countries such as Korea, China, Japan, Taiwan, Indonesia and the United States, the Summit has the potential to improve the image of Queensland companies, increase awareness of Queensland's trade and investment opportunities, and raise Queensland's profile in the Asia Pacific region.

The summit is a Brisbane City Council initiative, sponsored by the Queensland Government.

For more information or to register visit <http://www.apcsummit.org>

2003 Summit

Community awareness seminars

Following the release of the 2001/2002 National Pollutant Inventory (NPI) data, officers from the Environmental Protection Agency and Queensland Health will be conducting community information seminars between 17 March and 1 April throughout the state.

These seminars are designed to help Queenslanders understand the NPI data, including how to best use the data available, where to access it and how to analyse specific pollutants in their area.

Seminar dates

Brisbane: 17 and 18 March
Gladstone: 20 March
Mount Isa: 20 March
Rockhampton: 21 March
Townsville: 25 March

Emerald: 25 March
Sunshine Coast: 28 March
Gold Coast: 28 March
Toowoomba: 31 March
Cairns: 1 April

For more information on times and venues or to reserve a place, visit www.epa.qld.gov.au/npi or phone Lisa Mee on (07) 3225 1060.

GET SMART

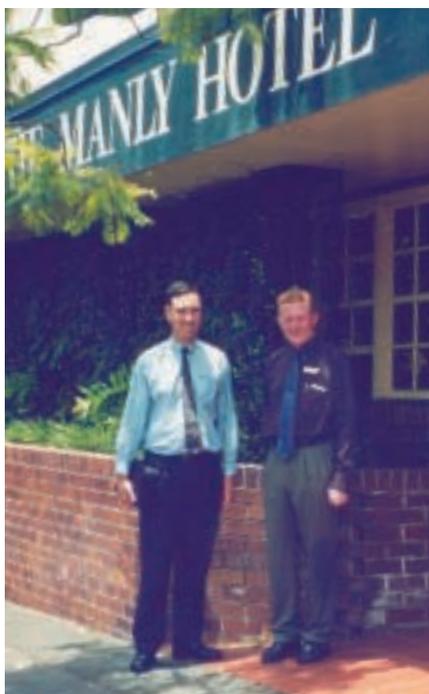
A column for people and businesses making a difference

Some solutions to our problems rely on sophisticated science and innovation. Others are common sense and simple. Have you implemented an eco-solution in your business or at work? We'd like to hear from you – please email us at sustainable.industries@epa.qld.gov.au so we can share your initiative with our readers.

Taking the heat off Manly Hotel – naturally

Hotelier Sandy McDonald has used some eco-efficient lateral thinking to solve a heat problem in The Manly Hotel, saving many thousands of dollars and pleasing staff and customers.

Sun on the brick wall at the end of the hotel's PubTAB area made it very hot in summer. Air conditioning was a quick-fix solution, but along with modifications to louvres and ceiling to make it work



Mark Thomson (left), and Sandy McDonald outside The Manly Hotel.

Photo: Belinda Lee

efficiently, the total cost would have been around \$35,000. Ongoing operating costs, increased noise and more greenhouse gases generated from increased electricity use, made this option even less attractive.

Environmental impacts and financial issues, as well as the goodwill of the local community, were all important considerations in developing a solution for The Manly Hotel. Mark Thomson, from The TVS Partnership, worked with Sandy to come up with a way to safeguard the hotel's long-term sustainability.

Mark said passive cooling strategies were a viable alternative for the hotel. "The design solution provided seems really simple, but it's not a conventional approach for a commercial venture," he said.



Plants: a naturally cool solution

Photo: Belinda Lee

"We were fortunate to have a client like Sandy who was willing to give it a go. Sandy's lateral approach enabled us to address the problem in stages, achieving improvements at each step."

For an outlay of only \$12,000, shade cloth screens and planter boxes filled with climbing plants were installed in front of the wall. An automatic sprinkler system waters the plants in the morning and evening, wetting the shade cloth and cooling the sea breezes that come in through the louvres. Maintenance is minimal with insignificant ongoing operating costs.

For an outlay of \$13,000, a vented ceiling was installed in the PubTAB, further contributing to the passive design strategy.

Sandy is proud of the outcomes. Temperatures are cooler and the pub still has an open feel with sea breezes. The plants and screens improve the look of the pub, adding privacy while still allowing a view to the street. Customers say they like the plants and staff enjoy an improved work environment.

"Our 'Cool Pub' solution has achieved fantastic results with simple changes," Sandy said.

"The obvious answer was to put in air conditioning. But as we have a climate that's moderated by the sea with good prevailing breezes, why not make that work for us? Working with The TVS Partnership we've used similar measures in our Liquor Barn and had quite an impact there as well.

"We're all facing great environmental challenges in the future, but in this case we've reduced the energy costs, reduced the noise and everyone wins."

The next eco-improvement being considered for The Manly Hotel is a rainwater tank to collect roof run-off for watering plants. As well as reducing water bills, this would reduce the load on stormwater drains – a problem for the hotel which has been flooded twice in the past when heavy rain and a high tide have caused stormwater to back up.

For more information contact:

Environmental Protection Agency
Sustainable Industries Division
PO Box 155
Brisbane Albert St Qld 4002
Phone: (07) 3225 1999 Fax: (07) 3227 8341

Sustainable Industries advisory service:
1300 369 388

E-mail:
sustainable.industries@epa.qld.gov.au

Website:
www.epa.qld.gov.au/sustainable_industries

Printed on 100% recycled paper

The *Compass* will be published every two months in hard copy and at: www.epa.qld.gov.au/sustainable_industries

If you would like to receive *The Compass* bi-monthly please e-mail: sustainable.industries@epa.qld.gov.au

Your feedback is welcome. Contact: The Editor – *The Compass* Sustainable Industries Division