

CANBERRA AIRPORT



CHINESE PROVERB:

**ONE
GENERATION
PLANTS
THE TREES &
ANOTHER GETS
THE SHADE**





**"I GUESS LOOKING BACK, WHEN WE
PURCHASED THIS LAND, ALL WE WERE FACED
WITH WAS ACRES OF BARREN SHEEP PADDOCKS;
BUT WE SAW BEYOND THAT. WE TOLD PEOPLE
ABOUT OUR VISION TO BUILD THE GREENEST
BUSINESS PARK IN AUSTRALIA AND SET TO WORK
TO DO JUST THAT. AND BY RAISING THE BAR WITH
EVERY BUILDING WE'VE PULLED IT OFF."**

**STEPHEN BYRON
MANAGING DIRECTOR**

**LEADING
THE WAY**



IT'S BEEN A LONG JOURNEY TO GET TO WHERE WE ARE TODAY. WHEN WE PURCHASED CANBERRA AIRPORT BACK IN 1998 A LOT OF WORK NEEDED TO BE DONE. THE TERMINAL FACILITIES WERE RUN DOWN, THE APRONS AND THE CAR PARKING WERE INADEQUATE AND SO TOO WERE THE ACCESS ROADS.

There was no energy, no plan, no vim or vigour about the place. To be honest, many terminals in country NSW were in far better condition.

We needed to turn the sheep paddocks we had inherited into an income stream; we needed to drought proof the airport by developing our non-aeronautical business. Because only when that was done could we build a terminal that we would all be proud of, one that would generate jobs and enhance Canberra's reputation as a tourist and business destination.

When the time came to develop the land we had a long term vision in place. Our vision included two things; to build a vibrant transport hub worthy of the National Capital and to create Australia's most sustainable business park to support it.

Brindabella Business Park was the first development in Australia to use recycled concrete and steel on a commercial scale and Majura Park houses one of the first large-scale tri-generation plants of its kind in Australia.

"THE FIRST 5 GREEN STAR BUILDING IN AUSTRALIA, AUSTRALIA'S LARGEST ON-SITE GAS TRI-GENERATION PLANT, THE FIRST COMMERCIAL LARGE SCALE WATER RECYCLING SYSTEM IN THE ACT AND CLOSE TO ZERO RELIANCE ON THE ACT'S POTABLE WATER SUPPLY FOR OUR EXTERNAL ENVIRONMENT."



We are leaders in our industry and can claim many firsts to that end; the first 5 Green Star building in Australia, Australia's largest on-site gas tri-generation plant, the first commercial large scale water recycling system in the ACT and close to zero reliance on the ACT's potable water supply for our external environment.



We like to challenge the status quo; so with every project we are committed to two fundamentals, a passion and commitment for quality and a constant culture of change and innovation – we have the desire for every project to be better than the last, to try something new, especially if it hasn't been done before.

"WE ARE STRIVING FOR BEST PRACTICE IN EVERYTHING THAT WE DO. WE ARE LEADING THE WAY."



“OUR TRI-GENERATION PLANT WILL REDUCE CO₂ EMISSIONS BY MORE THAN 1,100,000KG PER YEAR, EQUIVALENT TO REMOVING 360 CARS FROM THE ROAD; WE ARE ALL PRETTY IMPRESSED BY THAT!”

**KAREN EMMS
PROJECT MANAGER**

**INVESTING
IN GREEN**



LET'S BE HONEST, BUILDING GREEN IS THE ONLY WAY FORWARD. CONVENTIONAL BUILDINGS USE TOO MUCH OF THE WORLD'S PRECIOUS RESOURCES, COST TOO MUCH TO RUN AND WILL NOT MEET THE GREEN NEEDS OF TOMORROW'S TENANTS.

Our team is in it for the long term so we have invested in sound environmental technologies that make good economic sense. Take for example our tri-generation plant; this mighty piece of machinery outshines the efficiency of your standard utility power plant by almost 300%!

SO WHAT DOES THIS TRI-GENERATION THINGY ACTUALLY DO?

Using gas as its single source of fuel, our tri-generation plant produces three different forms of energy:

- > Electricity to operate the base building;
- > Hot water for heating; and
- > Chilled water for air conditioning.

Not only does tri-generation produce three forms of energy but it also provides efficiencies of 90%! To understand just how efficient tri-generation is we could compare it to a typical coal fired power plant which only utilises approximately 33% of its input source of fuel to generate electricity.



"TRI-GENERATION TECHNOLOGY WILL SEE ALL OF OUR LATEST GENERATION BUILDINGS EMITTING ABOUT 32KG OF CARBON DIOXIDE PER SQUARE METRE, PER YEAR."

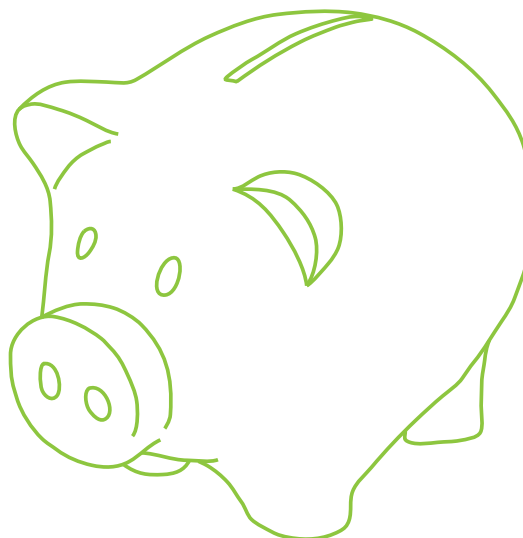


Tri-generation technology will see all of our latest generation buildings emitting about 32kg of carbon dioxide per square metre, per year.

This far surpasses the Commonwealth Green Lease Requirement of 4.5 Star NABERS (The National Australian Building Environment Rating System) and also impressively equates to:

- > Less than half the carbon dioxide emissions of a 5 Star NABERS building; and
- > A quarter of the carbon dioxide emissions of the Building Code of Australia (BCA) requirement.

We're a big fan of tri-generation technology so we've installed a plant at Majura Park and are installing the technology at Brindabella Business Park and in our new terminal building. Installing such technology will see us cut our CO₂ emissions by 75% making Canberra Airport one of the greenest airports in Australia.







**"WE TRY TO REUSE, RECYCLE AND REDUCE
WHEREVER POSSIBLE. THERE IS A GREAT
SENSE OF SATISFACTION WHEN YOU CAN FIND
A SUITABLE HOME FOR SOMETHING THAT
WOULD OTHERWISE BE TAKEN TO THE TIP."**

**GORDANA JOSIPOVIC
ENVIRONMENT AND
SUSTAINABILITY OFFICER**

REDUCING OUR FOOTPRINT



BUILDINGS OF YESTERDAY WERE DESIGNED TO MAKE THE MOST OF THEIR PASSIVE STATE, MEANING THEY TOOK ADVANTAGE OF THEIR SOLAR ORIENTATION, WIND AND NATURAL VENTILATION.

So, where possible, instead of bulldozing sound structures and sending the waste to landfill we have applied the principle of adaptive reuse. Adaptive reuse sees the modification of existing buildings for new uses whilst still retaining the historic features of that building.

So far we have successfully transformed 11 buildings, in varying states of disrepair, using existing façades and structures. Compared to a standard demolition process, adaptive reuse greatly reduces the amount of waste sent to landfill and reduces our carbon footprint.

We've even won awards for our approach to waste minimisation. In 2004 and 2005 the ACT Government presented us with silver and gold, respectively, at the No Waste Awards.

This is proof we aren't just blowing our own trumpet; others are recognising our environmental achievements too.

Our commercial buildings are designed for 'long life and loose fit'. This is a snazzy term architects often use to describe a building that is adaptable and will stand the test of time.



HOW, YOU ASK?

Our buildings are fitted with large floor plates that are free of intensive building services allowing them to be easily pulled apart and rearranged. These floor plates have the flexibility to accommodate many different fit out designs and can adjust easily to large degrees of change throughout the building's life.

WHAT DOES THIS TRANSLATE TO?

- > Internal spaces can be easily adapted to meet the changing needs of our tenants;
- > New technologies can be integrated with little disruption; and
- > Building material waste is significantly reduced.

"WE'VE EVEN WON AWARDS FOR OUR APPROACH TO WASTE MINIMISATION. IN 2004 AND 2005 THE ACT GOVERNMENT PRESENTED US WITH SILVER AND GOLD, RESPECTIVELY, AT THE NO WASTE AWARDS."



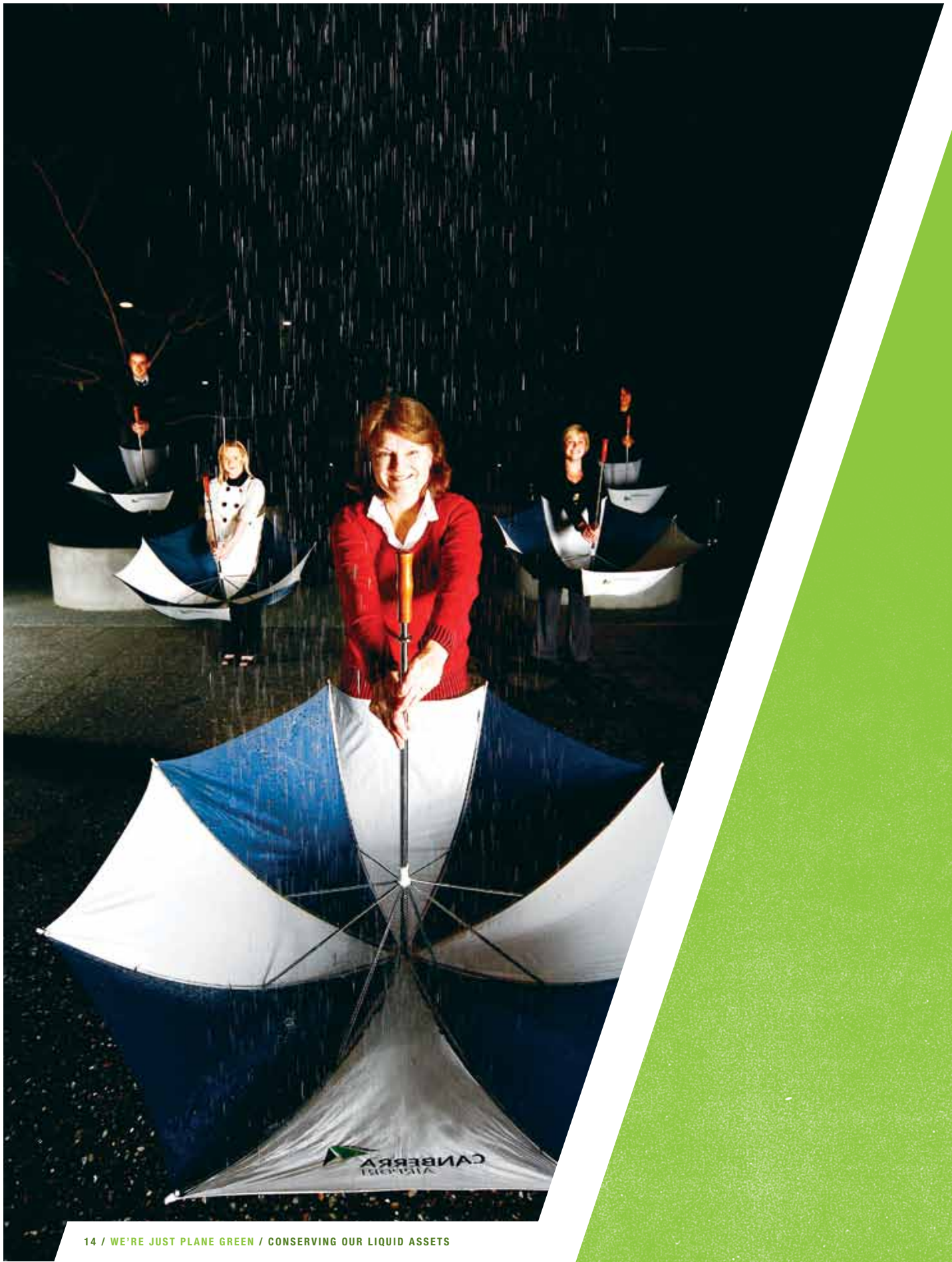
In the construction of our impressive 5 Green Star office building (did you know it was the first of its kind in Australia?) we recycled or reused more than 80% of construction waste, including more than 90% of steel and 100% of timber. Adopting many unique design features to achieve best practice, 8 Brindabella Circuit saves 450,000kg of carbon dioxide emissions per annum – the equivalent of taking 113 cars off the road each year.

To achieve a 5 Green Star rating 8 Brindabella Circuit needed to demonstrate a few things which included the following main points:

- > A 50% reduction in potable water usage;
- > 100% of water used for irrigation is recycled or non-potable groundwater;
- > 100% outside air ventilation rates; and
- > Over 45% reduction in CO₂ emissions and energy consumption.

450,000kg

THE AMOUNT OF CARBON DIOXIDE EMISSIONS
8 BRINDABELLA CIRCUIT IS DESIGNED TO SAVE PER ANNUM –
EQUIVALENT TO TAKING 113 CARS OFF THE ROAD EACH YEAR.



**“TO MAKE THE MOST OF OUR NATURAL RESOURCES WE HAVE
DESIGNED OUR PATHWAYS TO CAPTURE RAINWATER RUN OFF AND
DIRECT IT INTO GARDEN BEDS AND GRASSED AREAS.”**

**VIRGINIA DOBOS
MANAGER**

COMMERCIAL PROPERTY OPERATIONS

CONSERVING OUR LIQUID ASSETS



WITH THE WORD DROUGHT BEING NO STRANGER TO OUR VOCABULARY AND WATER RESTRICTIONS NOW A PART OF EVERYDAY LIFE, INDIVIDUALS AND BUSINESSES FACE PAYING CONSIDERABLY MORE MONEY FOR WATER INTO THE FUTURE.

In the ACT alone a target reduction of 35% water savings has been set, forcing individuals and businesses to change their approach to water use.

We're chipping in to save water with the installation of the ACT's largest non-potable water storage unit. Our on-site water tanks capture up to 1.38 million litres of water from building roofs and stores it for irrigation, use in toilets and fire fighting purposes. We're also installing two 650,000 litre water tanks in our new terminal building, doubling our current water storage capacity.

In May 2007 we launched our first Blackwater Recycling Treatment Plant; the first commercial large scale water recycling system in the ACT and the first for an Australian airport.

We don't mind admitting to the fact that the word 'blackwater' leaves a bad impression on some but here at Canberra Airport we think the good far outweighs the bad.

Our Blackwater system takes sewerage water from the buildings and treats it to a drinkable level using a self cleaning system and UV safety filters. After treatment, the water, along with rainwater captured off roofs, is used in toilets and externally for irrigation.



"A TYPICAL SHOWERHEAD USES APPROXIMATELY 19 LITRES OF WATER PER MINUTE? OUR REDUCED FLOW SHOWERHEADS USE AROUND 9.5 LITRES PER MINUTE."



DID YOU KNOW...

- > That a typical showerhead uses approximately 19 litres of water per minute? Our reduced flow showerheads use around 9.5 litres per minute.
- > Urinals are one of the largest consumptions of water inside most buildings? A typical modern trough system with automatic sensors uses approximately 100,000 litres per year! We are determined to get our consumption down to zero so we've installed waterless urinals in our newer buildings and were the first in Canberra to convert our conventional urinals to waterless systems.
- > That switching to water efficient devices is another way we are doing our bit for the environment? Our infrared taps provide up to 65% water savings and our dual flush toilets provide a saving of up to 8 litres per flush.
- > That our team have worked hard to get our gardens in tip top shape? To keep it this way methods such as re-mulching, weeding and aerating of lawns on a regular basis ensure we make the most of the water we use.

2.68
MILLION LITRES
OF ON-SITE WATER TANK CAPACITY





**“LARGE OPEN SPACES AND GREEN
GARDENS MAKE BRINDABELLA BUSINESS
PARK A PREMIER PLACE TO WORK AND PLAY.
IN THIS SETTING, WORK-LIFE BALANCE
FORMS A NATURAL PART OF THE PARK’S
CIVIC CULTURE WHILE THE GREEN ATMOSPHERE
CULTIVATES A GROWING SENSE OF COMMUNITY.”**

**MICHAEL
BRINDABELLA BUSINESS PARK EMPLOYEE**

BREATHING SPACE



**WE SPEND 90% OF OUR LIVES
INSIDE BUILDINGS SO WE WANT TO
MAKE SURE THAT THE AIR WE ARE
BREATHING IS GOOD QUALITY.**

Most people mistakenly think that the air inside their building is cleaner than the air outside, this is rarely the case. Dizziness, fatigue and nausea can all be caused by a sick building.

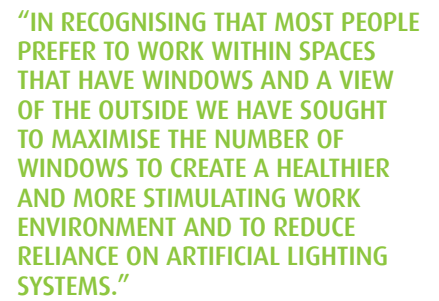
A sick building, commonly referred to as Sick Building Syndrome (SBS), is caused by an unpleasant indoor environment that poses a health risk to occupants.

We want to reduce the amount of sick days taken by workers so we've created buildings that are full of natural light, have large windows and a passive solar orientation. We've strived for higher ceiling spaces, flexible floor plates and minimal reliance on potable water sources. All of these things attribute to a healthy building and healthy employees.

Since 2001 we have modelled all of our buildings to ensure that comfortable, healthy conditions can be created and maintained. That is why the floor finishes, paints, ceiling heights, furniture and partitions have all been considered in reference to their effect on workers.

All of our buildings are certified by an acoustics consultant to ensure that precautions have been introduced to prevent ambient noise. These precautions include measures such as double glazing and sound insulation.

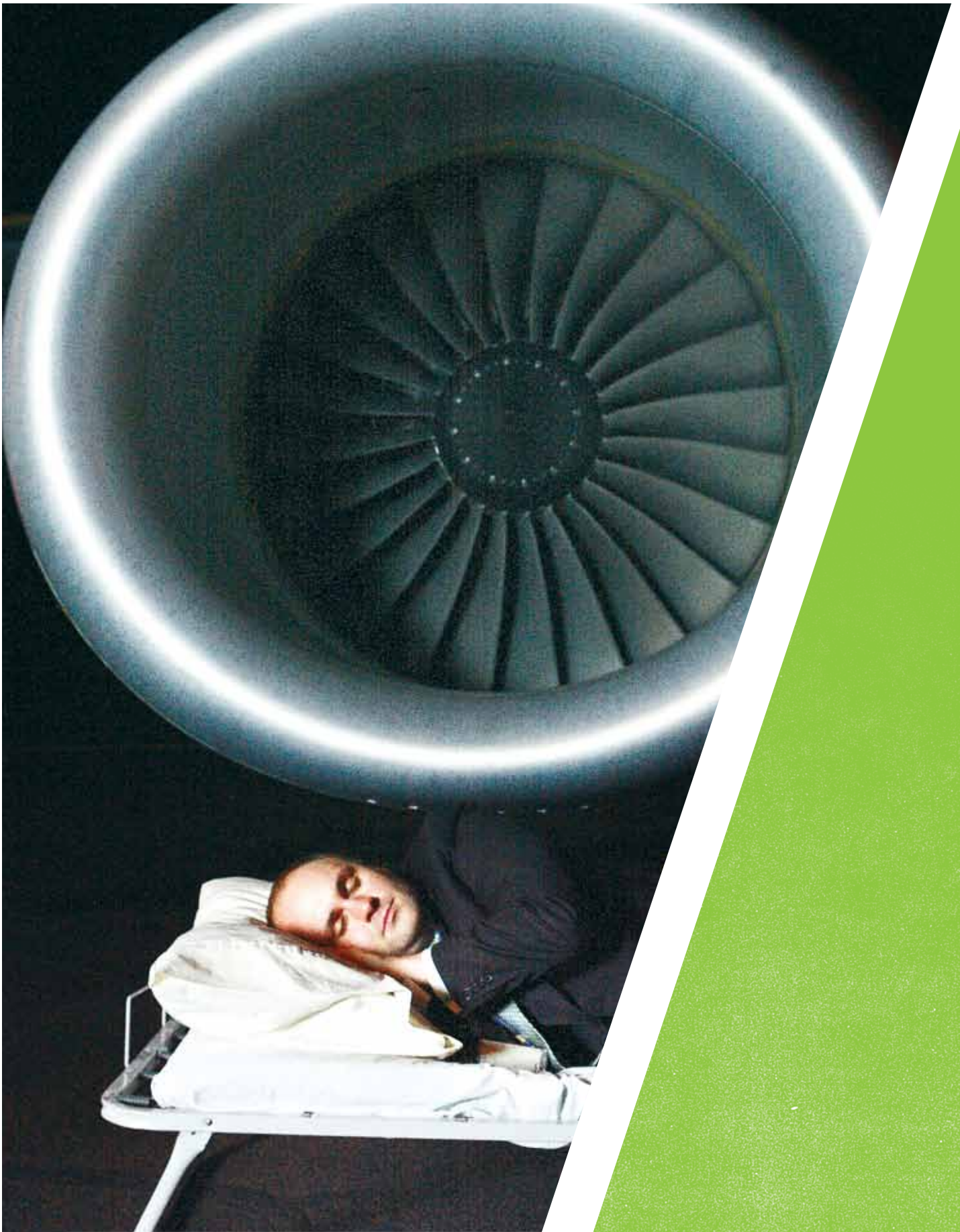




air conditioning contributing significantly to energy savings and occupant wellbeing.

The physical layout of the airport precincts have been designed to reduce the inter-relationship between vehicles and people and provide a safe pedestrian environment. Brindabella Business Park for example incorporates a spine design. This design features 500m of continuous walkways that incorporate an oval, cafés and a hairdresser without the need to cross a road.

Taking advantage of natural ventilation, our very first 5 Green Star Building, 8 Brindabella Circuit, uses far less artificial



“I AM PASSIONATE ABOUT EVERYTHING AVIATION. IT’S LUCKY TOO, BECAUSE MY JOB REQUIRES ME TO LIVE AND BREATHE IT EVERYDAY. AN IMPORTANT PART OF MY ROLE SEES ME BALANCING THE CONCERNS OF THE COMMUNITY ON THE ISSUE OF AIRCRAFT NOISE WHILST STILL DELIVERING THE RANGE OF FLIGHTS THAT THE COMMUNITY DEMANDS.”

**ALEX ANANIAN-COOPER
MANAGER
AVIATION PLANNING
AND OPERATIONS**

A SOUND POLICY



BEING A YOUNG CITY, WE'VE HAD THE LUXURY OF GROWING AROUND OUR AVIATION INFRASTRUCTURE UNLIKE OLDER MORE ESTABLISHED CITIES THAT HAVE HAD TO FORCE AN EXPANDING AVIATION INDUSTRY IN AMONGST EXISTING SUBURBS, FURTHER BLURRING THE LINE BETWEEN AIRPORT AND RESIDENTIAL LAND.

The ill effect aircraft noise has had on residents in established cities has been enormous. Just recently, the Federal Government forked out over \$470 million to insulate 4,731 homes and 104 public buildings surrounding Sydney and Adelaide airports because they were effected by aircraft noise. Lucky for us, Canberra is relatively shielded from the effects of aircraft noise thanks to some brainy city planners who have worked hard to maintain a rural corridor to the north and south of Canberra.

The history of aircraft noise in Canberra has been short yet volatile. Up until the late 1980s the rural corridor, which protects residents from aircraft noise, was uninterrupted by development. However, when the NSW suburb of Jerrabomberra was established all of this changed and we saw 9000 residents set up home under flight paths.

At the time, this development was strongly opposed by airport management with strong warnings given from the Commonwealth Government and Minister for Transport. Nevertheless, the development went ahead and since then, aircraft noise has become a concern for the people of Canberra and Queanbeyan.

This community concern triggered Airservices Australia to act and in 1995 the majority (99.5% to be exact) of Canberra and Queanbeyan was made into a 'Noise Abatement Area'. This means that aircraft are restricted from flying over the abated suburbs at a level less than 7000 feet for jet aircraft.





"THE FIRST PLAN FOR THE HIGH NOISE CORRIDOR (HNC) WAS DEVELOPED IN 1999 AND IDENTIFIES AREAS WHICH ARE SUBJECT TO UNACCEPTABLE LEVELS OF AIRCRAFT NOISE AND THEREFORE DEEMED UNACCEPTABLE FOR RESIDENTIAL DEVELOPMENT."



Our common sense approach to aircraft noise fuelled the conception of a measure called the High Noise Corridor (HNC).

The first plan for the HNC was developed in 1999 and identifies areas which are subject to unacceptable levels of aircraft noise and therefore deemed unacceptable for residential development.

This High Noise Corridor is the product of broad consultation with the community, the aviation industry, the private sector and all tiers of Government.

The airport team work very hard to maintain the protection of the community from aircraft noise. There have been many reduction measures initiated by us however all these measures sing to the one tune. It's a song we've been singing at the top of our lungs since the airport's purchase in 1998 and one we think just makes plain sense, *don't build homes under flight paths.*

WHAT WILL THE FUTURE BRING?

The airport team are currently busy investigating the following options to further reduce the impact of aircraft noise on the people of our region:

- > Increased use of curved or offset arrival procedures;
- > Reducing arrivals over Jerrabomberra by increasing arrivals from the north;
- > Expansion of the Noise Abatement Areas, to include new residential areas of Gungahlin; and
- > Strengthening of Noise Abatement Areas at night.

You see, we want it to be known that Canberra Airport is a locally owned and run family business. Our team live and work in Canberra and its surrounding regions, our team go home at night and they want to sleep easy just like everyone else. The issue of aircraft noise is important to us and the community and it's an issue we won't stop working on.





**"I CAN HONESTLY SAY THAT WE HAVE A TEAM
THAT IS 100% COMMITTED TO DELIVERING THE
AIRPORT'S VISION TO CREATE AUSTRALIA'S
MOST SUSTAINABLE BUSINESS PARK AND I CAN'T
BEGIN TO STRESS JUST HOW IMPORTANT THAT
IS TO THE SUCCESS OF THIS FAMILY BUSINESS."**

**LEESA BAKER
HUMAN RESOURCE MANAGER**

CULTURE WITH A TWIST OF GREEN



**WITH THE AVERAGE WORKER
EMITTING 2 TONNES OF CARBON
DIOXIDE PER YEAR SIMPLY THROUGH
TRAVEL TO AND FROM WORK WE'VE
MADE IT PART OF OUR DUTY TO
CREATE AN ENVIRONMENT THAT
ENCOURAGES WORKERS TO WALK
MORE AND DRIVE LESS.**

Providing a balanced synergy of work, health and lifestyle is important to us that is why our most recent service additions have included a bulk buy supermarket, Supabarn Warehouse, and Australia Post. We also have a hairdresser, childcare facilities, a dentist, bank, cafés, convenience store and chemist on site.

Bike storage units and easily accessible bus stops encourage a greener means of transport to and from work whilst sporting facilities such as volleyball, tennis and boccé courts, a gym as well as golf driving nets provide workers with a physical outlet in which to unwind.

We admit that we might sound like a bunch of tree huggers who sit around making daisy chains all day but we have and continue to implement some simple methods that reduce the impact individuals have on the environment.

It starts with the simple things, like our two-bin recycling system which encourages recycling with separation on-site, including at our work stations. We also ensure signage and information is provided to explain and encourage energy and waste minimisation practices around the office.

We also have an informal staff wellness program, incorporating annual staff health and fitness checks, encouragement of blood donation, free annual flu immunisations, staff workstation ergonomic assessments and staff discount on airport gym fees.





"A GREEN CULTURE BEGINS WITH A PERSONAL COMMITMENT FROM EACH MEMBER OF OUR STAFF. WITHOUT INDIVIDUALS DOING THE RIGHT THING, AS A COLLECTIVE, WE WOULDN'T BE THE KIND OF GREEN BUSINESS THAT WE ARE TODAY."



We do some heavy stuff too, like running Australia's first Green Star Accredited Professionals course for our key staff and consultants. Sound intense?

Well we went a step further by hosting the first of a series of 13 nationwide environmental seminars run by the Green Building Council of Australia... we even trained our management staff in Eco Business Management. I guess you could call us a bunch of Sensitive New Aged Greenie's (SNAG's – note: the use of acronyms is vital in these kinds of technical environmental documents).

Our attitude towards green business is supported by our tenants; it is what sets us apart from our competitors and is often what attracts an organisation to occupy one of our buildings in the first place.

From large government departments fulfilling Environmental Management Plans to our cafés working towards the introduction of recyclable serving containers - living green is important to our tenants too.

Sharing what we have learnt with other businesses is important to us too; through tours of our various green buildings we like to show our support and encourage other businesses to undertake greener building practices.

A green culture begins with a personal commitment from each member of our staff. Without individuals doing the right thing we wouldn't be the kind of green business that we are today.

WE HAVE RECEIVED A NUMBER OF AWARDS REFLECTING OUR EXCELLENCE IN SERVICE, SUPERIOR FACILITIES AND DILIGENCE IN ENVIRONMENTAL ACHIEVEMENTS. A SAMPLING OF THESE AWARDS RECOGNISING OUR ENVIRONMENTAL EXCELLENCE IS SHOWN BELOW:

ACT Government No Waste Award

- > 2004 Silver Award Winner.
- > 2005 Gold Award Winner.
- > 2005 Property Owners/Managers Award Canberra Airport.

Australian Airports Association

- > 2001 Aviation Personality of the Year - Terry Snow, Executive Chairman.
- > 2002 Major Australian Airport of the Year.
- > 2007 Capital City Airport of the Year.

Australian Business Limited Annual Awards

- > 2005 Finalist - Innovation Category Brindabella Business Park.

Department of Environment, Heritage & The Arts

- > ESD Design Guide for Australian Government Buildings Edits 1 (June 2005) and 2 (February 2006) Brindabella Business Park.

Australian Institute of Landscape Architects

- > 2006 AILA ACT Merit Award - Design in Landscape Architecture, Brindabella Business Park Town Square.

Banksia Awards

- > 2005 Finalist - Category 9 Leadership in Sustainable Buildings, Canberra Airport.

Canberra Business Council

- > 2002 December - Business Success Series Winner, Capital Airport Group.

Chartered Institute of Logistics and Transport

- > 2002 Young Transport Professional of the Year, Stephen Byron, Managing Director.

Engineers Australia

- > 2005 Engineering Excellence Awards (Australian), Winner ACT Sustainable Buildings, Brindabella Business Park.
- > 2007 Engineering Excellence Awards, Canberra Division Highly Commended, Canberra Airport Extension and Overlay.

Green Building Council of Australia

- > 2004 First 5 Green Star Rating, 8 Brindabella Circuit, Brindabella Business Park.
- > 2006 Case Study of Green Buildings, Brindabella Business Park.

Keep Australia Beautiful Sustainable Cities Awards

- > 2005 Sustainable Building Award Winner, Brindabella Business Park
- > 2009 ACT Sustainable Cities Award. For Excellence in Water Conservation, Majura Office Park's Central Blackwater and Tri-generation plant. Highly Commended.

Master Builder's Association Awards

- > 2002 Environmental Best Practice, Commercial Division Airport Service Centre, Caltex at the Airport.
- > 2002 Civil Works - More Than \$2 Million, Woden Contractors Pty Ltd, 'RPT' Apron Project.
- > 2003 Excellence in Building Award, Brindabella Business Park.
- > 2005 National Commercial Building of the Year Award, 14 and 16 Brindabella Circuit, Brindabella Business Park.
- > 2007 Winner, Civil Project of the Year, Runway & Taxiway Extension.
- > 2009 Winner, Commercial Building, Environmental Best Practice Award (ACT).

Property Council of Australia, ACT

- > 2003 Rider Hunt ACTM Awards Winner, Brindabella Commercial and Aerospace Centre.
- > 2003 Rider Hunt National Awards, Certificate of Merit Brindabella Commercial and Aerospace Centre.
- > 2005 Rider Hunt ACT, Finalist Brindabella Business Park.
- > 2007 Rider Hunt Innovation and Excellence Awards, Finalist, Award for Office Developments, Brindabella Business Park.
- > 2008 Rider Hunt Innovation and Excellence Awards, Highly Commended, Business or Industrial Park Developments, Brindabella Business Park.
- > 2008 Rider Hunt Innovation and Excellence Awards, Finalist ISIS Future Leader, Tom Snow, Executive Director.

Royal Australian Institute of Architects, ACT Chapter Architecture Awards

- > 2003 Commercial Building Category Colorbond Steel Award Qantas Hangar, Brindabella Business Park.
- > 2009 Winner, Sir John Overall Urban Design Award, Brindabella Business Park.

Telstra & ACT Government Small Business Awards

- > 2004 Finalist, Category: 50-100 Employees Canberra Airport.

United Nations Association of Australia World Environment Day

- > 2005 Winner, Green Building Award.

Year of the Built Environment

- > 2004 Exemplars Program National Awards Excellence in Building, Brindabella Business Park.

Stormwater Industry Association (NSW)

- > 2008 Award for Excellence in Stormwater Management Merit For Canberra Airport Stormwater Drainage Review.

TAKING HOME THE PRIZE

