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MARCH 2010 www.australianconstruction.com.au

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ACTIONS SPEAK
LOUDER THAN
WORDS
MAKING
THE WORLD
GREEN**



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AUSTRALIAN CONSTRUCTION

AUSTRALIA'S DIGITAL REFERENCE FOR CONSTRUCTION EXECUTIVES

When construction leaders need to learn about opportunities in their industry and how to stay abreast of what's current there's only one place to turn: Australian Construction. With important articles on energy efficiency, water solutions, the reintroduction of biodiversity, greenhouse gas emission reductions and how to reduce the growing paper trail—industry leaders now have a trade publication that can spearhead the topics that are important to them and deliver relevant content that they want to read. Every issue will be packed with information from the industry for the industry. As readers: Construction leaders and executives at major contractors, engineering and design firms, equipment manufacturers, and suppliers of construction materials and building products, as well as public and private project owners and regulators, your input is important and will remain crux in the decision of what we publish.



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Off the Paper Trail

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Welcome to our first **online** issue of Australian Construction. We've taken this magazine to the Web to give our audience more information in both a more timely and easier to access manner. We've also made it possible for our readers to achieve a higher level of success with their searches by creating the most powerful database filled with the most important data and then making it free, just for being a reader. Please browse this issue and back issues at your convenience and immerse yourself in all that we have to offer, I'm sure you'll find it immensely useful and a resource that you will use again and again. If you have any suggestions of any kind, please forward them right to me, I am always open to new ideas and ways to make our great product even better. If we use your idea, we'll mention you in an upcoming issue and send you \$500 for your contribution. Thank you for reading.

Robert Deutsch
Editor-in-Chief
robert.deutsch@jagpublishing.com

Staff

Senior Creative Director

David Deutsch
david.deutsch@jagpublishing.com

Associate Editor

Susan Tarmy
susan.tarmy@jagpublishing.com

Writers

Derek Gerry
derek.gerry@jagpublishing.com

Marnie Selznick
marnie.selznick@jagpublishing.com

Internet+Web Technologies

Tim Blacquier
tim.blacquier@jagpublishing.com

EVP Sales+Media

Peter Richards
peter.richards@jagpublishing.com

Editor-in-Chief

Robert Deutsch
robert.deutsch@jagpublishing.com

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Changing the Game

7 Steps to help reduce energy consumption without the need for significant and costly updates to your business.

In a little over six months the Federal Government's proposed legislation for "Mandatory Disclosure of Commercial Office Building Energy Efficiency" is introduced, there's growing pressure on owners and operators of commercial properties to assess and improve the environmental performance of their facilities.

As the world becomes increasingly committed to energy efficiency, this "disclosure obligations" mean that corporate building owners will now need to report on the energy efficiency of their building. This move demonstrates Australia's determination to ensure energy efficiency becomes a deciding factor around commercial sales and leasing.

"Up until now, there's been little incentive for landlords to improve energy efficiency of their buildings," says Andrew Permezel, CEO of AE Smith, one of the country's leading HVAC, mechanical services, energy efficiency and building technologies companies.



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"We're applauding this proposed legislation as a real step towards calling to task the built environment's impact on carbon emissions," adds Permezel, whose company is investing heavily in services to design, construct, manage and maintain energy efficient buildings.

This new legislation, set to take effect from mid 2010, is based around a cost effective abatement of emissions opportunity that will help reduce the impact of carbon emissions from commercial office buildings. Currently, commercial buildings account for approximately 10% of Australia's carbon emissions.

Location, Location and NABERS Rating

The Federal Government plans to use the National Australian Built Environment Rating System (NABERS) as the standard to guide new disclosure obligations.

The disclosure obligations will see NABERS ratings included in any advertisement for sale or lease of applicable buildings; the lodging of a valid Building Energy Efficiency Certificate, and as soon as possible during enquiries the supply to prospective buyers or tenants a copy of the certificate, free of charge,



*Andrew Permezel,
Chief Executive Officer of
AE Smith - Australia's
largest privately owned
mechanical services contractor.*





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whether requested or not. The certificate will generally detail the base building NABERS rating, tenancy lighting details and guidance on improving energy efficiency.

Peter Kinsella, the Australia and New Zealand Regional Chairman of the Chartered Institution of Building Services Engineers (CIBSE) welcomes these proposals and believes that this will provide a valuable learning experience for designers and facility managers as well as those involved in carrying out the NABERS assessments:

"Over the last few years there has been greater attention placed on developing new buildings to perform to high energy efficiency standards, however, there is a huge stock of existing buildings which will be there for many years to come. Mandatory Disclosure will bring existing buildings into the spotlight and will lead to significant improvements in their energy efficiency.

"Some of the gains in efficiency can be achieved purely through better management of the existing services, but substantial gains can be achieved by reviewing the suitability of the original design to the current building usage, and may



Peter Kinsella is the Australia and New Zealand Regional Chairman of the Chartered Institution of Building Services Engineers (CIBSE).

Peter is also the Engineering Manager for AE Smith Construction in Melbourne.





result in a mixture of retrofitting, recommissioning/fine tuning, control modifications, servicing of plant and improving maintenance regimes. The catch phrase for buildings attractiveness to potential buyers or tenants may yet become location, location and NABERS rating," says Kinsella.

The Race to Update is On

But this growing pressure on building owners and landlords is not necessarily translating into action says AE Smith's Andrew Permezel, who believes many building owners are unprepared for the introduction of this new legislation:

"We're urging building owners to start preparing their building now, rather than waiting for when they place their asset on the market," comments Permezel, who cautions building owners that it takes time to get the various legislative requirements in place.

With the vast majority of existing commercial buildings around Australia not NABERS rated, AE Smith predicts a "rush" on assessment, certification and the putting into place appropriate retrofit actions to help make commercial buildings more energy efficient and more commercially attractive.

"For very practical reasons, it's important to allow enough time to collate base building data to assess the performance of your building," adds Permezel, who cites that NABERS ratings require 12 months of continuous data as part of the strict validation and verification protocols.



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Importantly, beginning the assessment process helps identify opportunities to improve a building's energy efficiencies and what building owners can do to close the gap—to improve efficiencies, save costs and also make their building more commercially competitive.

"The introduction of Mandatory Disclosure will also see energy efficiency become the norm in Australia," says Doug Binns, General Manager of AE Smith's newly launched business division.

Benefits to your buildings

While many owners and asset managers are looking to achieve their NABERS rating or to increase energy efficiencies to prepare for Mandatory Disclosure legislation, much concern has been voiced around the cost of making such changes actually happen.

"We're hearing from buildings owners concerns over the cost of becoming more energy efficient, but there are simple and cost effective steps that can be put into place to improve a NABERS rating or increase the efficiency of energy use," says Doug Binns.

In response to these concerns, AE Smith launched Emerald Sustainable Performance – a dedicated energy services business that's aimed at helping building owners and property managers improve the environmental and energy performance of buildings. With increasing pressure on owners and operators, Binns believes the time is right to set in place long term strategies for reducing energy use and developing better efficiencies for their building assets:

"Very soon, key decision influencers typically associated with a building sale or lease will also include energy efficiency," comments Binns. "To simply remain competitive with your building asset in the future, energy efficiency measures will need to be put into place," adds Binns.



*Doug Binns,
General Manager,
AE Smith Emerald
Sustainable Performance*

There are quantitative benefits to all these energy upgrades, such as energy efficient buildings will attract a premium in the market place. A recent study conducted for the Property Council of Australia shows that there will be a split in the market with buildings that are above NABERS average rating (3 Stars or better) being valued at a premium compared to buildings that are rated below NABERS average (2.5 Stars or below). Building owners will have to factor the desired NABERS Rating into the long term asset plan for the building.

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7 Steps to Sustainability without Costing a Fortune

A seven step program designed by AE Smith's Emerald Sustainable Performance team of energy and environmental management specialists' work with customers to help reduce energy consumption without the need for significant and costly upgrades to plant and equipment.

Emerald's seven step "Environmental Sustainability Program" identifies good housekeeping practices that have already delivered energy savings of up to 25% for some buildings.

"The effective implementation of our seven step program doesn't focus on large capital expenditures to reduce energy consumption, rather fine tuning existing plant and equipment so it works more effectively," adds Binns, who along with the AE Smith's Emerald team is helping customers around the country meet their NABERS Star rating and legislative obligations by implementing the program.

"In these tough economic times when capital and operating funds are tightly controlled, we're keen to help manage and improve a building's environmental and energy performance with simple and cost effective measures," adds Binns.

Additionally, AE Smith also has a growing team of in house NABERS Accredited Assessors around the country that can also provide assessment and certification as part of the seven step process.

7 Steps to Reduce Energy Consumption without costing a fortune

- **Create an Energy Profile** – Audit the building to help inform an effective energy management strategy. It also provides benchmarks to measure future improvements, highlights consumption anomalies and is an important part of creating a NABERS rating.

"Conducting the profile often reveals some costly issues with existing systems that can be simply fixed," adds Doug Binns, who recently undertook an energy profile that uncovered an incorrect control strategy in newly installed drives on cooling tower fans. This oversight meant excessive use of energy to continuously modulate fan motors, impacting negatively on the effective use of the chillers.

- **Energy Opportunity Review** – identify where energy efficiencies could be implemented to reduce costs as well as greenhouse gas emissions – an enormous step to improving a NABERS rating.



“This step means we can present to our customers opportunities and initiatives for energy reduction and have them weigh up their costs before proceeding with any further engineering works,” says Binns.

“In some cases we’ve identified that certain initiatives could reduce a projected 12,000 tonnes of CO2 or improve a NABERS rating of a building to 4 stars – an opportunity too good to overlook.”

- **NABERS Assessment** – with AE Smith’s stable of qualified in-house NABERS Accredited Assessors, the program can also conduct a NABERS assessment of buildings and work on issuing energy efficiency certificates to help comply with upcoming Mandatory Disclosure legislation
- **Fine Tuning & Commissioning** – “It never ceases to amaze us how many commercial buildings have not had their HVAC equipment commissioned properly,” says Binns. “Either original commissioning no longer meets the needs of the building or as tenants move in and out different refits occur, affecting equipment and creating a lot of wasted energy.”

This step recommends annual re-commissioning to fine tune a building’s systems, helping improve efficiency by maximizing current plant and equipment.



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AE SMITH—Continued



- **Building Management System (BMS) Controls Audit** – by reviewing control strategies for all components, plant and equipment can be better aligned to the operational needs of the building. This one step has recently seen an AE Smith customer - managers of a large shopping complex in Perth – reduce energy consumption by 15% after detecting control system errors.
- **Chiller Monitoring** – “Chillers can account for up to 35% of electrical power use in a building and waste incredibly large amounts of energy through inefficiency,” says Binns. This step looks at how new chiller monitoring technology could be deployed to vastly improve chiller performance to cool the facility with minimum running hours and an increased level of savings.
- **Energy Monitoring & Reporting** – “Reducing energy consumption is a lot like losing weight and keeping that weight off!” comments Binns, who likens lifestyle changes to achieve long term weight loss to ongoing energy efficiency.

Part of the Environmental Sustainability Program is to ensure ongoing monitoring and measurement – comparing and projecting energy use with current results so areas of concern can be fixed before target energy consumption is at risk. “If it’s not measured it’s not achieved,” adds Binns, who notes that the monitoring and reporting step is vital to achieving NABERS star ratings.

AE Smith

Eureka Tower, Melbourne
New Melbourne Royal Children's Hospital
Australian Stockman's Hall of Fame, Longreach
Ecoscience Precinct at Boggo Road Urban Village, Brisbane
Melbourne Cricket Ground



AE Smith is an industry leading building and mechanical services company delivering commercial and industrial solutions across Australia for:

- Heating, Ventilation, Air Conditioning (HVAC)
- Mechanical Services
- Energy Efficiency
- Building Technologies

Established in 1898, today AE Smith is the largest privately owned mechanical service contractor in Australia and a "BRW Top 500 Private Company" that has become an intrinsic component of the country's built environment.

Working with Australian and international partners, AE Smith collaborates on multi-million dollar projects, new developments and landmark buildings including: The Ecoscience Precinct at Boggo Road Urban Village in Brisbane; Melbourne's new \$1 billion Royal Children's



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AE SMITH—Continued

Hospital (in a mechanical services joint venture); the tallest residential building in the world - the 92-storey Eureka Tower; the Australian Stockman's Hall of Fame in Longreach; as well as the 100,000 seat iconic Melbourne Cricket Ground. It's these large scale projects played out on a world stage combined with a host of highly technical projects such as hospitals, the Australian Synchrotron, national archives, pharmaceutical and manufacturing companies that have set AE Smith apart from competitors.



Its team of 650+ professionals is organised into four separate but complimentary business units; each focused on its core competency – together delivering a Single Source Solution:

- AE Smith Construction
- AE Smith Service
- AE Smith Building Technologies
- AE Smith Emerald Sustainable Performance

With the vision of being 'partner of first choice' for Australian building owners and property professionals:

Recognised by IBIS World as 'major player in the Australian air conditioning and heating services industry', AE Smith remains Australian owned and proud of both the technical achievement and employer of choice reputation it has earned amongst partner clients, industry professionals and AE Smith team members alike. More at www.aesmith.com.au

CIBSE

The Chartered Institution of Building Services Engineers (CIBSE) is the learned and professional body for building services engineers, with a global membership of almost 20,000. The institution exists to support the Science, Art and Practice of building services engineering, by providing our members and the public with first class information and education services and promoting the spirit of fellowship which guides our work. CIBSE is the standard setter and authority on building services engineering and publishes the CIBSE Guides, Codes, Technical Memorandum and other guidance material, setting the criteria for best practice in the industry.

CIBSE members work in all facets of building services, some members are designers of services that consume energy, other members are Facility Managers responsible for the daily building operations, and each has an active part in seeking better conditions for the occupants and in improving a building's energy performance.

The Chartered Institution of Building Services Engineers actively supports initiatives to improve energy efficiency and strongly supports the principals behind these proposals for mandatory disclosure of commercial building energy efficiency. Whilst there may be a few contentious aspects of the finer detail of the proposals we look forward to continuing to provide constructive feedback and to work through these with the Department of the Environment, Water, Heritage and the Arts.

For more information about CIBSE visit www.cibse.org.au



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TREATMENT

DESALINATION

PRETREATMENT
& FILTRATION

WASTE WATER

General Data

Type	Skid, Reverse Osmosis
Power Supply	3 Phase 415V – Supply
Nominal Product Flow Rate	Depending upon the salinity – Up to 220 K/ltr per day for standard brackish water based on 2,000 mg/ltr at 25° C
Feed Water Supply Required	66 Ltr/Min at a supply of over 150 kPa
System Pressure	Between 1,000 & 1,800 kPa depending upon salinity of the water
HP Pump	3 Phase/50Hz WG 7.5 kW 2 Pole 304 or 316SS dependent on water quality
LP Pump – Feed	316SSEbara 3LS 4kW
Pressure Shut Down	Low 35kPa (set minimum) High 2000 Kpa (set maximum)
Control Valves	Actuated ball Valves
Membranes	Brackish water
Membrane Modules	Spiral Wound Fiberglass 300ps
Primary Filter	Media Filter /Carbon – 30x72” 20 Micron Rating
Secondary Filters	20” Poly type 5 & 1 Micron
Instrumentation	Feed & System Pressure Gauges, Area Principal Flow Meters, Conductivity Meter, Hour Meter, Tank Indication & Dosing
Safety Devices	Low & High Pressure shut downs, Motor Overload Protection,
Antiscalant dosing	Alldos or Advantage membrane scaling protection with dosing failure protection
HP Piping	316SS
LP Piping	ABS
Controls	Standard micro processor
CIP System	Integrated membrane cleaning system
OPTIONS	
Remote monitoring	Monitoring via web access via GRSM network
VSD	Pump control systems
Permeate flush	For high biological potential fouling water feeds
Flow Meters	Magflow or Paddle wheel
Storage Tanks	On Request
PLC Control	Optional PLC
Distribution pumps	DOL or Pressure systems



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- ✓ Timer or water meter regeneration
- ✓ Fleck or Autotrol or custom valving selection



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- ✓ Sizing from 8" to 48" flow rates to 30m³/hr single system
- ✓ Single units through to multiple systems
- ✓ Timer or water meter regeneration
- ✓ Fleck or Autotrol or custom valving selection

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"we provide unparalleled levels of service from metropolitan areas through to the most remote corners of each state"

INTEGRA

Delivering Water Treatment Solutions of Integrity



Solutions of Integrity

Delivering Water Treatment Solutions of Integrity

Integra Water Treatment Solutions (formerly Chemical Water Treatment Services CWTS), trades, as integra is the largest Australian owned and operated water treatment provider. The name integra reflects our dedication to “delivering water treatment solutions of integrity.”

Integra has served the industrial and high rise sectors since 1990. Recent acquisitions within Australia have enabled us to expand our wastewater and water treatment services further to better serve our customers across Australia.

Our vision for water treatment services is the synergy between product and service in the provision of unequalled value for our customers, employees and community.

All systems are integrated to provide the best possible economic and environmental outcome for our client. Adherence to local regulatory requirements is foremost in our applications ensuring that our customers are complying with the states specific regulations.



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Our personnel have been specially recruited and trained to provide the necessary expertise to fulfil customer requirements and our company goals and vision. We are now in a position to provide coverage for your water treatment requirements Australia wide with our current 80 plus staff.

Products are manufactured locally to meet local and customer site specific conditions. A "Total Package" approach combines programmed servicing, field testing, laboratory analysis, chemical supply and delivery, dosing equipment, and filtration to ensure our customers derive the maximum benefit from unparalleled service, costs and plant performance.

integra is committed to working with our customers to ensure the best possible Health and Safety practices in all areas and will adhere by all company guidelines and regulations.

integra is committed to producing environmentally friendly chemicals to ensure long term environmental stability. Waste minimisation is a priority and is promoted vigorously.

integra has a proven track record in the provision of water treatment services reaffirming our success and desire in adopting the service first approach.

Water treatment is engineered and provided for cooling towers, closed loop condenser, heating and chilled water systems, process cooling, steam generating boilers and industrial wastewater.

Integra Aim to provide:

- Competitive pricing/savings
- Site expertise
- Superior service and site back-up
- Ensure no plant down time due to treatment practices
- Maximum protection to equipment

Integra will service the plant with experienced staff and provide assistance to the staff on site, based on plant knowledge and experience over the years. This will assist in trouble shooting and minimising chemical usage. A guaranteed level of service and commitment will meet your company's expectation.

Integra - Serving Australia

Integra now has local offices in Adelaide, Melbourne, Canberra, Sydney, Newcastle and Brisbane, Tasmania & Perth. We provide unparalleled levels of service from these metropolitan areas through to the most remote corners of each state.



Integra - Experience

Integra has provided water treatment products and services for over fifteen years serving the following markets. Our technical staff alone have over 100 years combined water treatment experience between them.

Commercial Water Treatment

- New commissioning
- Maintenance of existing commercial facilities

Industrial Water Treatment

- Light industries
- Heavy industries
- Food Processing

Integra - Chemical Products

Our in-house R&D team are always striving to produce industry leading products and we're proud applicants for a number of patents, reflecting our commitment to innovation. We have our own cooling water chemical testing rig, including a fully functional loaded cooling tower.

We can integrate programmed servicing, field-testing, laboratory analysis, chemical supply and delivery, dosing equipment, and filtration to ensure our customers receive a managed "total water treatment solution." Our water treatment service packages are customised to provide a "Total Package" solution for our clients.

Integra - Environmental

Integra is committed to producing and using environmentally friendly chemicals to ensure long term environmental stability. Integra technical staff, under the Technical Director, are constantly researching, trialing and evaluating chemicals with lower toxicity and greater biodegradability in an effort to negate the environmental impact of our water treatment programs and promote responsible product stewardship.

Waste minimisation is a company priority and adherence to local regulatory requirements is a key consideration in the development of any water treatment proposals for our clients. The production of energy is recognized as having an associated environmental impact. Integra utilise the latest machinery and equipment in an effort to minimise our client's consumption and ours.

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GREENFLEET

Making the World Green. Walking the Talk.



A Dirty Job, but Someone's got to do it

Environmental charity Greenfleet is not waiting for politicians to take action on climate change. They've been getting their hands dirty for more than a decade now, planting more than six million trees in native forests around Australia. Those six million trees, growing on behalf of Greenfleet supporters, will capture more than 1.6 million tonnes of carbon dioxide over their lifetime – equivalent to taking more than 400,000 cars off the road for an entire year.

Greenfleet's biodiverse, native forests are planted primarily to recapture carbon dioxide to offset greenhouse gases generated by driving, energy consumption in the home and workplace and air travel, however they also deliver many other environmental benefits.

The reintroduction of biodiverse native forests across Australia's denuded rural landscapes helps to reduce salinity and erosion problems, provide wildlife corridors for our native animals, and improve soil and water quality.

Established in 1997, the Greenfleet program took around ten years to plant its first three million trees, while the next three million has taken less than two years. This increase in environmental action is encouraging, but there is still much to do.



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While governments and politicians waste time trying to negotiate global agreements and compromises, climate change is advancing and we are regularly seeing the effects of climate change in local weather patterns.

Across Australia, 2009 will be remembered for extreme bushfires, dust-storms, rainfall deficiencies, areas of flooding and record-breaking heat waves. Data collected by the Bureau of Meteorology indicates that Australia's annual mean temperature for 2009 was 0.9°C above the 1961-90 average, making it the nation's second warmest year since high-quality records began in 1910.

The past decade was the warmest on record, continuing the trend of each decade since the 1940s being warmer than the preceding one. Prior to this there was no discernable trend, which suggests an apparent shift in Australia's climate from one with natural variability to one with increasingly warmer temperatures.

Many maximum temperature records were set across southern and eastern Australia in 2009, especially in South Australia and New South Wales, while rainfall for the same areas were below average. However, despite generally low rainfall, the year was also marked by several intense flood events.

These observations are all climate change predictions realised. Climate change won't wait for politicians to develop emissions trading schemes and reduction targets full of compromise. However, the good news is that the forests we plant now immediately start to recapture carbon dioxide from the atmosphere and also help the Australian landscape build natural resilience to the effects of climate change.

But Greenfleet is not all about planting forests and offsetting emissions. Greenfleet firmly believes that to tackle climate change we all need to AVOID and REDUCE greenhouse gas emissions wherever possible, then recapture or offset what is left.

Any change you can make to reduce energy and fuel consumption is a step in the right direction. If you don't know where to start – or you think you've already done all you can – check out Greenfleet's website for loads of tips to help you avoid and reduce greenhouse gas emissions at home, at your workplace and when travelling.

And remember, whatever you do to reduce greenhouse gas emissions, you are unlikely to eliminate them entirely – so it's important that you offset what's left. Find out more about reducing your greenhouse gas emissions and offsetting with Greenfleet at: <http://www.greenfleet.com.au/>

GREENFLEET

Making the World Green. Walking the Talk.



Actions Speak Louder than words

It's important to know that our environmental advocates are actually walking the talk. Here are some of the things that Greenfleet does to reduce its own greenhouse gas emissions:

- While the Greenfleet office is located in central Melbourne, almost half work from home from their regional Victoria locations. This not only reduces the travel footprint of the organisation, it means accessing talent from different areas without forcing people to travel long distances or relocate. Another five Melbourne-based staff have the ability to work remotely as needed.
- The location of the Melbourne office was selected due to its proximity to public transport – Southern Cross Station is just one block away and a selection of tram routes are within easy walking distance.
- Public transport tickets are included in salary packages for Melbourne-based staff to discourage driving to the office and meetings, unless absolutely necessary.



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- Electronic systems (telephone, email, web-conferencing, etc.) are favoured over physical travel where possible. When interstate travel is required, Greenfleet staff try to organise several meetings in similar locations to minimise the impact of getting there and back.
- Local contractors are used for planting activities, seed collection and growing seedlings wherever possible. Again this serves a dual purpose of reducing travel emissions and also accessing relevant local expertise.
- Fertilisers are not used in Greenfleet tree planting operations; this ensures that no nitrous oxide (one of the six Kyoto-recognised greenhouse gases) is released from revegetation works.
- The Melbourne office has been 'delamped' – every second fluorescent tube has been removed from the overhead lighting system, without impact on staff amenity.
- Greenfleet purchases 100% accredited GreenPower for electricity used in its Melbourne office.
- Venetian blinds are adjusted to limit the amount of sunlight (and therefore heat) that enters the office in summer and to retain heat in winter.
- Office thermostats are adjusted in summer and winter to reflect the change in outside temperatures.
- Shower, change and storage facilities are available to encourage cycling to work.

Greenfleet is also helping major organisations like AE Smith, Europcar, Telstra, AAMI, Foster's Group, and many others, develop greenhouse gas reduction and offset programs for the workplace and their clients. Read about some of these programs in the *Greenfleet supporters* section of the Greenfleet website.

- Another people management initiative is the inclusion of public transport tickets in salary packages for Melbourne office based staff to discourage driving to the office unless necessary.
- We try to use local contract expertise for planting activities, seed collection and growing seedlings. Again this serves a dual purpose of reducing travel emissions and also accessing relevant local expertise.
- We have 'delamped' the Melbourne office – removing every second fluorescent tube from the overhead lighting system.
- We use venetian blinds on our windows to limit the amount of sunlight (and therefore heat) that enters the office in summer and to retain heat in winter.



Off the Paper Trail

Motorola's MC75 helps AE Smith off the paper trail

AE Smith (www.aesmith.com.au) is the largest privately owned mechanical services contractor in Australia, and has 112 years of practical experience. Its team of more than 650 professionals is organised into four separate but complimentary business units with offices spanning Australia from Cairns to Tasmania and Sydney to Perth. AE Smith is the 'partner of choice' for commercial and industrial air conditioning, mechanical services, energy efficiency and building technologies.

The perilous paper trail

The AE Smith Service business provides a large number of Australian organisations with proactive preventative maintenance for all types of heating, ventilation, and air conditioning (HVAC) systems. It has a team of more than 135 technicians, each visiting multiple sites on a daily basis.

In the past AE Smith Service relied on a series of paper based processes to manage its technicians' work processes. These include 'tasking' to ensure a set series of activities are completed during each site visit; documenting issues when called out to investigate



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a system breakdown; purchase ordering; and lastly, as part of a technician's pre-start safety evaluation which is a critical aspect of Workplace Health and Safety (WHS) compliance.

Aldo Cevaal, Group General Manager of AE Smith Service elaborates, "Like most people, Technicians absolutely hate paperwork. They want to get in there and fix the problem without worrying about the admin. We have a shortage of labour in this industry, so one of our objectives on the project was to make the technicians' job easier so that we could attract skilled professionals to our workforce.

"The next issue we wanted to overcome was the logistics of our technicians having to bring every piece of paper back to the office on a weekly or fortnightly basis. Leaving the field to visit the office could have a turn around time of as much as two hours, which is time that technicians weren't spending with our clients. With the cost of labour on the rise, it didn't make sense to have all 135 of our field staff making regular trips back to the office." said Mr Cevaal.

Additionally, once the paper work was returned to branch offices admin staff were required to manually enter documented information into the IT system, which was a time consuming process open to human error. AE Smith also has a high number of technicians for whom English is a second language, and at times admin staff would struggle to transcribe the hand written information recorded within the paperwork.

Mr Cevaal continues, "The Motorola mobile computing solution also provides our customers with the added security of knowing mandatory WHS requirements are fulfilled by AE Smith Service technicians electronically onsite and as required.

"The outmoded paper trail processes of old were inefficient and impacting both our gross margin and ability to service customers to our high standards. In the service business, it's the administration, and the time that staff spend away from customers that ultimately affects your bottom line.

"We wanted a mobile device that would make life easy for our technicians and internal admin staff. We needed to speed up our ability to document information in the field and have that data sent back to the office in a format that was accurate, timely and easy to process. We knew this would help to improve both our customer service and our bottom line.

"We also wanted to introduce technology that would positively enhance our Service delivery to customers. If they so desired, the mobile solution we were looking for would empower our customers with the technology to: track the financial and energy performance of their HVAC system down to an individual piece of equipment if needed; make informed



capital decisions based on historically accurate system reliability information; interface online and in real time with AE Smith Service; and rigorously strengthen the practical delivery of the 'committed to zero harm' AE Smith WHS policy and procedures by of our staff and customers."

AE Smith introduces the MC75

AE Smith had been investigating enterprise mobility for nearly ten years before it made a final decision. The first generation of handheld devices it researched were large, cumbersome and difficult to use. The company also felt that its back office systems weren't mature enough to support mobility at that time.

“Our estimated ROI on the complete mobile computing solution is 8 months.”

More recently, AE Smith considered a Korean device but was concerned about the vendor's ability to provide efficient service levels. Nor was the device rugged enough to meet the demands of its technicians out in the field.

"I also went over to America," explains Mr Cevaal, "and investigated a mobile device that was being used by a crane company in a similar fashion to what we wanted to do. We gave our technician's the opportunity to play with each of the devices we researched and ultimately it was the Motorola product that they felt most comfortable with."

AE Smith has rolled out 135 MC75s to its technicians across Australia. This Enterprise Digital Assistant combines an unparalleled number of business capabilities into a compact, rugged device. With 3G and wireless capabilities, integrated GPS, 1D and 2D bar code scanning, high resolution 2 megapixel digital camera, Bluetooth and IrDA connectivity the MC75 has been designed to endure all day, everyday use outside the enterprise.



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Motorola—Continued

“Our technicians were particularly impressed with the large size of the MC75’s Full VGA screen which makes it very easy to view information. From a business perspective, we found Motorola’s customer service appealing and also liked the fact that they have branches spread across Australia, so we wouldn’t have to invest in shipping devices across the country for repairs if needed.

“The ruggedised nature of the MC75 was very important because our technicians are often climbing ladders, scaling walls and roofs, so the device is being knocked around a lot. The MC75s are highly compatible with Telstra’s 3G network which was also appealing to us because the technicians needed to send information back to the office from inside buildings and in remote areas.”

AE Smith staged its deployment on a branch-by-branch basis during an 18-month period, to ensure that each region received proper support and training.

Less paper, more efficient processes

AE Smith has experienced a range of benefits from the MC75 implementation. The most significant advantage has been removing paper-based processes from the technicians’ daily tasks.

“There is a huge cost saving here. We have 135 technicians and each of them was averaging two hours turnaround time to deliver their paper work to the office. By giving them the power to complete all their required documentation on the MC75 and send it directly back to head office in real time we have achieved significant savings in both time and money - not to mention happier staff and a superior outcome for AE Smith customers. Our estimated ROI on the complete mobile computing solution is 8 months.

“On top of that, it now takes less resources to process all that information because no one has to sift through all that paper work back in the office. Without all this paper work, we’ve also been able to set up a central call centre in Melbourne that is responsible for job dispatching across the country. This has created further efficiencies.

“There’s now very little need for our technicians to leave the road and come back to the office. And when they do, it’s for meaningful things such as training and safety demonstrations.” said Mr Cevaal.

The MC75’s colour camera was another critical part of AE Smith’s selection process, and the company is now able to attach photographic evidence to its invoices, to show customers what work has to be done during any particular visit.



“There are times when repairs to a customer’s HVAC system are significant and unbudgeted. We find that it helps some customers better understand how their money has been invested if we can show them clear and easy to see before and after pictures of their new or repaired HVAC system.” Mr Cevaal explains.

AE Smith is also using Motorola’s Mobility Services Platform (MSP), which allows it to remotely automate and troubleshoot the staging and provisioning of its mobile devices. According to Mr Cevaal, the ability to monitor device issues and battery life in real-time is only one benefit of the MSP service.

“A by-product of the MSP service is that we can monitor whether our staff are actually using the devices. If a technician tells us that he didn’t receive a particular job dispatch, we can check whether that job went through or if that technician even has the device with him. It means that our technicians have to be more accountable which helps us improve customer service overall.

“We’re really happy with the Motorola’s commitment to ensuring that our mobile solution is running smoothly. It’s not often that we get staff contacting us about issues with the MC75’s, they’ve proven to be quite reliable which is great.” said Mr Cevaal.

The Future

AE Smith is enthusiastic about the future of mobility within its business, and its relationship with Motorola. In the near future it plans to refine its use of the MC75’s GPS system, allowing call centre personnel to match the location of individual technicians with the nearest job to improve resolution time for customers.

“We also have plans to leverage the MC75’s bar code capabilities, which will allow us to prove that we have visited a piece of equipment. This is important for customers who have to comply with maintenance regulations. It will also allow us to better track what work has been done on individual pieces of equipment, so that we can improve the long-term advice we offer to clients.

“I think we’re ahead of many of our competitors when it comes to mobility. I believe that the whole service industry is heading in this direction, and having taken on the benefits of mobility earlier than most, puts us ahead of our game.” Mr Cevaal concluded.

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