



Keith Fulton, PMP Limited Environmental Management Coordinator, in the paper warehouse

Case Study  
**UPCLOSE**  
Zero Waste SA Industry Program



## PMP's path to environmental accreditation

When Griffin Press moved to a new purpose-built facility at Salisbury South in 2006, the company invested in the latest printing technology with high safety and environmental performance. The move also signalled a significant shift in the way the business addresses environmental issues in all other areas of operations.

Part of PMP Limited – a leading provider of printing services in Australia and New Zealand – Griffin Press was approved by Lloyds Register Quality Assurance Limited to the Environmental Management System: AS/NZS ISO 14001:2004 in 2009.

The Adelaide business was nominated as the lead site to gain ISO 14001 accreditation for PMP's 15 other printing sites; the entire group implements a wideranging program to achieve high levels of environmental sustainability.

Documentation and systems developed by Griffin Press will be progressively adopted by PMP's other printing plants.

Griffin Press is taking action on many fronts to lower the company's environmental footprint. They are minimising waste and pollution, conserving natural resources and implementing best practices across the business to raise environmental standards.

“**Being part of the Industry Program process opened up a huge amount of information. In the first 2 months of investigation we discovered a roll-on roll-off bin on site that was seldom used. We removed this bin, saving the business \$50,000 a year.**”

**Keith Fulton**  
Environmental Management Coordinator  
Griffin Press



**Government of South Australia**  
Zero Waste SA

**AVOID • REDUCE • REUSE • RECYCLE**



“Obtaining external support for our various environmental initiatives has proved invaluable in keeping us on track and ensuring that we have all the necessary systems in place.”

**Keith Fulton**

Environmental Management Coordinator  
Griffin Press

## PAPER PROCUREMENT

Griffin Press makes every effort to ensure that paper used at the print works is not from illegally harvested sources or forests that need protecting. As part of its environmental policy, the company achieved Forest Stewardship Council Chain of Custody accreditation in 2007, which ensures its paper suppliers are internationally recognised.

The accreditation is not only important for sustainable production but, together with ISO 14001, can be an important marketing tool. In a recent statement publisher Hachette Australia acknowledged that its books would now be printed by Griffin Press which is “an accredited ISO AS/NZS 14001:2004 Environmental Management System Printer”.

The statement said: “Hachette Australia is delighted to be promoting environmentally responsible, socially beneficial and economically viable management of the world’s forests... customers know that purchasing a Hachette book is not only a great read, but a green one as well.”

## Sustainability objectives

Recognition as a responsible and innovative print manufacturer that has achieved the highest levels of environmental sustainability.

## Identified opportunities

- wine industry sustainability
- wastewater recycling
- energy efficiency
- employee training
- green supply chain

## Annual savings

**Waste disposal** – over 1340 tonnes annual landfill reduction with \$90,000 waste cost saving

**Energy** – \$26,000 annual electricity saving with targeted 15% CO<sub>2</sub>e reduction by 2010–11

**Water** – 75ML annual reduction with targeted further 50% reduction by 2010–11

## Outcomes

- less reliance on chemicals
- major savings in waste to landfill
- gas, electricity and water savings
- development of environmental systems
- customer recognition for environmental achievement
- enhanced market position
- extensive employee involvement
- AS/NXS ISO 14001:2004 environmental accreditation
- green supply chain

## Zero Waste SA support

- funded sustainability diagnostic
- co-funding for ISO 14001 system development
- waste review and general waste contract advice
- carbon awareness workshop
- environmental awareness and management systems training
- waste review and contract advice
- sustainability management workshops
- ongoing assistance with sustainability action plan
- case study development



As well as supporting carbon reduction initiatives by parent company PMP, Griffin Press has sought advice from various external agencies to play the best way forward for waste management and eco-efficiency.

In 2008 the book printer joined the Zero Waste SA Industry Program which has instigated key initiatives to support the transformation process, including:

- an initial sustainability diagnostic to benchmark strengths and weaknesses in the company's sustainability management practices with a follow-up assessment to track improvements
- training in Environmental Awareness and Management Systems (EMS) auditing for support staff in implementing ISO 14001
- a full-day workshop to raise awareness of options for reducing carbon emissions, which will help the company meet PMP group targets for a 15% reduction by 2010–11
- co-funding Business SA's environmental consultancy to help PMP achieve ISO 14001 accreditation in preparing
- documentation to qualify for the standard and developing induction and training programs for employees
- a special focus on waste reduction as part of ISO 14001 system preparation – an initiative that has cut landfill haulage and dumping costs by about \$90,000 a year.

## Audits expose weaknesses in waste management

Measures to minimise waste have been a revealing process for Griffin Press. Not only has the company found much better options to landfill, it now realises that not all waste management companies are the same. It pays to choose very carefully – and check the fine print.

One of the company's first initiatives under the Industry Program was to have waste streams audited to establish exactly what was happening with packaging and other materials arriving at the printing works. All purchase volumes and costs were checked, waste streams identified and targets set for lowering waste amounts going to landfill.

Developing new environmental systems for ISO 14001 also alerted Griffin Press to the failings of some waste management companies. Lack of documentation meant the company was unaware of total volumes and the final destination of specific waste streams.

"We have now appointed waste companies with professional systems in place, the contracts are transparent and Griffin Press is kept up-to-date with documentation on destination and volumes," says Keith. "Our costs for these services have also reduced."

## Cutting waste to landfill

Griffin Press has made significant inroads into reducing waste to landfill since it began developing effective environmental management systems. Separate bins have been introduced for the various waste streams and investments made in more sustainable production systems

**Spine paper offcut** – One of the largest by-products of book printing is spine paper offcut created from the binding process. The spine of the book is removed to allow a glue application for the cover of the paperback book. Until recently Griffin Press sent on average 1300 tonnes of this offcut to landfill every year.

With an alternative waste management company, a new process has been created for the offcut at the landscaping supply company Jeffries, where it is mixed with food waste and turned into compost/mulch. This is then used by Barossa vineyards.

**Paper** – Suction pipes remove all white waste from the production areas to the site baler where the offcuts are baled, loaded directly on to truck trailers and sent to a pulp mill at Albury. An on-site shredder, installed to remove additional white waste paper before baling, has streamlined this recycling stream.

**Cardboard** – Huge volumes of cardboard and brown paper used to end up as landfill. From late 2008 this waste has been collected in a large on-site compactor then sent for recycling, accurate reporting.

**Plastic** – An average half-a-tonne of plastic waste was being dumped every week. A new plastic waste stream now bales plastic waste which is collected for recycling. The equipment used in this process was provided free of charge.

**Metals** – Griffin Press has managed to significantly increase its income from recycling aluminium printing plates since it changed waste companies. The metal is weighed, documentation provided and regular income received based on current world aluminium prices.

**Wood** – Wooden pallets used to end up in landfill. Griffin Press now requests that suppliers remove them from the site. Any left over are collected by a recycler, shredded and turned into mulch.

**Ink and oil** – Waste ink and oil are collected and sent to Geocycle, a processor in Victoria, for incineration as an alternative fuel in cement kilns.

**Noise** – To reduce noise, mufflers are being placed on air pumps. The number of site compressors has been reduced from 5 to 3 will be reduced further.

## Reducing chemicals, energy and wastewater

PMP has begun a major electricity sub-metering project to actively monitor all electricity consuming aspects of their process and facilities. Significant savings have been made in chemicals, water and electricity following an internal project on the treatment process for printing plates.

Griffin Press adopted the system after a successful trial showed it could cut annual chemical use from 24,000 litres to less than 4000 litres, and water use from 150,000 to 75,000 litres. Griffin Press is currently working with their plate provider to provide an additional process that will reduce water use by a further 60%.

They have removed the process for plates to be baked by the inline oven. Power consumption is down 60%, maintenance is less, as is the disposal cost for used chemicals. Total annual savings in energy usage are estimated at \$25,000. Maintenance staff have begun a re-lamping project that is installing green energy lights with a 1520 year life span in the front office, saving PMP \$19,000.

Isolators on the main plant throughout manufacturing areas mean there is no longer any need for the large compressor. Enough compressed air is supplied by 2 small units.

The move to new premises in 2006 was also an opportunity for Griffin Press to better manage wastewater from plate making and printing.

A water treatment plant, installed as part of the fit-out, allows water to be safely disposed of in the sewer system, rather than removed and treated offsite – at a cost. The manual handling of removing wastewater from the printing process area has also been eliminated. The water initiatives have also reached the plant's toilets where automatic timers have been installed for flushing.

## Printing industry tackles spoilage rates

Zero Waste SA has been supporting industry-wide efforts by the Printing Industries Association of Australia SA/NT to implement environmental sustainability programs for the sector. Initiatives have included a sustainability diagnostics program to evaluate the current direction and progress of efforts to improve environmental practices and waste minimisation.

A Printing Industries' literature survey found that waste spoilage generation rates for printers vary significantly from 1% to 25%, with 12% the industry average.

The smaller the print job, the higher the spoilage rate. Hazardous waste was also considered a "significant issue".

Printing Industries identified numerous benefits for printers that adopt waste minimisation:

- reduce costs resulting from less landfill and income from recycling
- improved environmental image attracting new environmentally sensitive customers
- better staff morale leading to better productivity
- fewer regulatory pressures on companies and the industry
- improved public perception of the sector.

Griffin Press and parent company PMP are among the companies at the forefront of industry reform.

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## Griffin Press/ PMP Limited

Griffin Press is Australia's leading book manufacturer, with capability for both long and short print runs. The company produces books for publishers of all sizes at its technologically advanced manufacturing plant at Salisbury in Adelaide. Parent company PMP Limited is an ASX Top 200 company with more than 3000 staff across Australia and New Zealand. It specialises in marketing advisory services, creative and photographic services, digital pre-media solutions, printing and letterbox and magazine distribution.

[www.pmplimited.com.au](http://www.pmplimited.com.au)

## Zero Waste SA

A South Australian Government agency that advances improved waste management policies and the development of resource recovery and recycling. The Zero Waste SA Industry Program advises and supports companies to achieve sustainability goals in waste, water and energy.

[www.zerowaste.sa.gov.au](http://www.zerowaste.sa.gov.au)



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