



DCSI Building Services and Sustainability Manager John McInnes with the 'Switchy' mascot

Case Study
UPCLOSE
 Zero Waste SA Industry Program

Department for
 Communities and
 Social Inclusion

Riverside Centre – a model in sustainability

Achieving zero waste is the challenging target of any organisation serious about minimising its environmental impact.

In a groundbreaking waste management and sustainability program, the South Australian Department for Communities and Social Inclusion (DCSI) has achieved outstanding progress toward realising this ultimate goal.

It is setting a new benchmark in green practice with a wide range of initiatives that are being rolled out across the department's offices in metropolitan Adelaide and regional South Australia.

The DCSI's Riverside Centre has lead the reform and is quickly establishing itself as a model for office sustainability.

Initiatives such as a printer and paper reduction program, three-bin waste and

recycling system and the move to a low-emission car fleet are having a marked impact.

But while such reforms have been critical in the move to a more sustainable operation, achieving a cultural shift in thinking among the 700 managers and staff working at the building has also been central to the overall success.

Driving through the changes has involved some tough decisions, acceptance by the workforce that their efforts do make a difference and realisation among management that significant cost savings can be achieved.

Zero Waste SA is providing strategic support for the sustainability program as it is progressively introduced at other DCSI centres.

“Achieving cultural change is extremely important in such a wide-ranging sustainability program that affects everyone working here. When people walk through the doors they want to get on with their job, so it's very important when asking them to adopt green practices that any new system is convenient and easy to understand.”

John McInnes

Building Services and Sustainability Manager
 Department for Communities
 and Social Inclusion



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“ **This is an outstanding achievement and sets this DCSI site as an exemplar in waste and recycling practices. It is also considered as a current best practice working model for waste and recycling systems for office environments in Adelaide. This is the first site that Rawtec has reviewed to achieve 100% recycling and resource recovery.** ”

Mark Rawson
Principal Consultant
RawTec

DCSI CAR FLEET GOES GREEN

DCSI's car fleet is another priority of the department's environmental program.

The nature of its work in the community means the DCSI requires a large fleet of more than 600 passenger vehicles. These are now gradually being replaced with LPG and hybrid petrol/electrical cars to limit CO₂ emissions.

Since 2005–06 the ratio of low emission vehicles has increased from 26% to 67% of the total fleet.

The department estimates this has resulted in annual fuel savings of \$180,000 compared to a standard petrol fleet and a reduction in CO₂ emissions of 262 tonnes.

Sustainability objectives

Achieve a zero waste office environment and a work culture that encourages sustainability in all areas of operation.

Green Savings

Riverside recycling

- ^ 100% of solid waste recycled or resource recovered*
- ^ annual waste collection costs cut from \$35,000 to \$15,000
- ^ 76 tonne reduction in annual CO₂ emissions

Riverside printer consolidation

- ^ print devices reduced by 68%
- ^ total cost of ownership reduced by \$900,000
- ^ 73.35 tonne reduction in annual CO₂ emissions
- ^ goal to reduce printer-staff ratio from 1-2 (2007) to 1-8 by 2011

DCSI fleet management

- ^ 67% of passenger car fleet either gas or hybrid petrol/electric
- ^ annual running costs of 600-car fleet down \$180,000 compared with similar size petrol fleet
- ^ annual carbon emissions cut by 262 tonnes

Outcomes

- ^ sweeping changes in waste management
- ^ extensive recycling minimises waste to landfill
- ^ significant cost savings – waste collection, printing, fleet management
- ^ carbon emissions substantially reduced
- ^ strong staff support to adopt green practices
- ^ development of a best practice model which is being rolled out department-wide

Zero Waste SA support

- ^ support for green program implementation
- ^ funded waste recycling performance review by RawTec
- ^ advice on new recycling initiatives e.g. introducing a three-bin system and food waste recycling
- ^ follow-up waste recycling study by RawTec
- ^ development of a case study

* 100% indicates that all waste and recycling streams are sent to a recycling or resource recovery facility and not directly to landfill. Recycling or resource recovery facilities may still send a small residual component to landfill.



Extensive recycling has cut annual CO₂ emissions by 76 tonnes

The move towards zero waste

The Riverside Centre was already achieving impressive recycling targets when Zero Waste SA organised a waste management performance review in 2009.

According to the assessment report, the building was realising one of the highest recycling rates encountered.

At the time it was estimated that 70% to 75% of solid waste was being recycled due mainly to high volumes of paper collection. That equated to annual savings of about \$5,000 in waste collection charges and a 76-tonne reduction in landfill CO₂ emissions.

While this is higher than most offices of a similar size, the Riverside Centre was determined to build on its already extensive recycling program.

In late 2009 the centre began rolling out a new three-bin system that includes food waste recycling and sending non-recyclable dry waste to an alternative fuel program. This has succeeded in reducing to zero the amount waste going directly to landfill, although a small residual amount may still be forwarded by recycling facilities.

As part of its green program, the centre has taken on board advice from the performance review and adopted accepted colour codes for the different bins in line with industry standards.

Other improvements to make the process more convenient and clearer for users include the co-location of bins and improved signage.

Under the three-bin system:

Green bins – carry all organic waste and spoiled paper towels for processing by a composting firm. The introduction of food waste separation has not only provided a new recycling stream, but has also reduced the chance of other recyclables being contaminated.

Yellow bins – take recyclable materials such as milk and juice cartons, boxes, bottles and aluminium cans.

Red bins – are for rubbish, i.e. all items which are not able to be composted or recycled in the yellow or green bins. With recyclables and compostables removed from the general waste stream, this residual material can be turned into an alternative fuel for cement manufacturing.

A poster on each bin clearly identifies the materials that can be deposited and, also lists items that are not allowed.

Separate bins are provided at other collection points for clean paper products and cardboard, and items such as batteries and print cartridges are also collected and sent for recycling. Paper towels from bins in toilets are being recycled through the organics stream.

Improved recycling practices have also seen a large drop in demand for shredding of confidential papers. Staff tend to think more carefully about what needs shredding and confidential bins are padlocked to prevent inadvertent contamination.

DCSI now intends to repeat the Riverside success with similar recycling programs at its other offices in South Australia. This will include a planned move to a single waste management contractor to manage the entire collection and recycling program.

Removing desk bins

The move towards a zero waste operation at the Riverside Centre has involved decisions that have been occasionally confronting. Removing personal desk bins was one of them.

Building Services and Sustainability Manager John McInnes said while there was initial resistance from some people, such a step was necessary to improve recycling and prevent the different streams becoming contaminated.

Today only bins for paper recycling are allowed under desks.

Improving energy efficiency

The focus on attitudinal change initiated at the Riverside Centre is having an impact across the department.

John McInnes says awareness raising on the intranet and in DCSI newsletters is having a marked improvement in energy efficiency.

Switch-off campaigns in all regions has helped it realise an energy efficiency improvement of 22.5% based on a 2001–02 energy baseline.

“The department was stranded on an efficiency rating of 3% for several years before we initiated the campaign in 2007,” says John. “We’re now well on track to achieving our 25% energy efficiency target by 2014.”

This outcome is in line with the State Government’s energy targets in South Australia’s Strategic Plan (see *South Australian Government Annual Energy Efficiency Report 2007–08*).

Printers removed in consolidation program

Personal printers and other devices such as photocopiers and fax machines are a prominent feature of the modern office. Three years ago DCSI's Riverside Centre was no different.

For the 700 people who worked in the building, there were 350 print devices – a ratio of one for every two staff.

The full extent of this excess became apparent in 2007 when John McInnes commissioned an audit by a document management consultancy.

The review was the catalyst for a comprehensive print reduction program with the total number of devices being progressively reduced. By the end of 2010 the number of printers will be trimmed to just 90, despite an anticipated increase in staff numbers to about 800.

This reduction equates to a \$400,000 cut in capital holdings, savings in operating costs of about \$500,000 and an estimated 73.35 tonne reduction in CO₂ emissions through energy savings.

In addition, there is less need for maintenance and IT support, along with reduced demand for consumables such as toner and paper.

Many of the printers have been replaced by a single multifunctional device strategically positioned on each of the seven Riverside floors.

"In future printer acquisitions will have to go through an approval process involving my office to ensure the numbers don't start increasing again," Mr McInnes said.

Meanwhile, the consolidation program is being extended to other DCSI agencies across South Australia, with print devices at Housing SA and Disability SA already halved. This equates to savings in total cost of ownership of about \$3.5 million over a five-year period.

The printer reduction program is due to be introduced at Families SA and Domiciliary Care SA during 2010.

Marketing campaign promotes sustainable practice

The success of a wide-ranging sustainability program inevitably depends on the level of support from management and staff.

John McInnes and his team have put considerable effort into marketing and communications to generate enthusiasm for their changes.

"Taking away printers and desk bins is not going to be very popular unless people clearly understand why you are taking such action," says John.

"While most people are happy to take environmental responsibility in their own home – because it's a nice family thing to do and can save money – in the office it tends to be a different story.

"Likewise, directors and executives aren't going to be overly interested unless they are convinced of the dollar savings.

"To succeed there's a real need for greening champions and a cultural shift to ensure the program becomes part of everyday business."

DCSI internal newsletters and the intranet have been used to spread the green message along with a specially designed cartoon character called "Switchy".

Created in-house, the character represents an animated light switch which urges staff to switch off lights, computers and monitors. It is also designed to promote a switch in behaviour in other areas.

The importance of staff involvement in achieving sustainability targets also feature in new workplace protocols introduced at DCSI's 5 Star Green Star building opened at Mt Gambier in December 2009.

All staff are being given a building user guide that includes a special section on greening initiatives covering areas such as energy efficiency, water conservation and waste management.

John McInnes

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Department for Communities and Social Inclusion

The Department for Communities and Social Inclusion has four main service divisions – Disability SA, Domiciliary Care SA, Families SA and Housing SA – which have offices throughout regional South Australia. The Riverside Centre in North Terrace is one of the department's principal administrative hubs with more than 700 staff.

www.dcsi.sa.gov.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



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