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Business Waste Reduction Project – Case Study Grafton Correctional Centre

Background

The North East Waste Forum (NEWF) is a collective of five local councils that have come together to share resources to help avoid and reduce waste going to landfill in the Northern NSW region. The NEWF collective not only provides support for participating local Councils in managing waste, but also provides support and advice to various commercial sectors on how best to implement sustainable practices that reduce waste generation, wastes landfilled, and promote the recovery of recyclable resources.

An initiative of NEWF, The Business Waste Reduction Project (BWRP), began in April 2005 and focussed on developing Waste Reduction Action Plans for six businesses, ranging from hospitality, through to aged care facilities, a correctional centre, a club facility and a large shopping complex. The following is a case study for Grafton Correctional Centre.

The Challenge

The main objective of the BWRP was to assess the efficiency of waste management practices at six businesses, characterise their waste streams and come up with waste management systems that would reduce the volume of waste going to landfill through waste avoidance, reuse and recycling and save these businesses money in the process. These studies have now been completed. It is hoped that their outputs will serve as effective blueprints for improving waste management among similar business in northern NSW.

Waste Characterisation

A waste audit was conducted at the beginning of the project to determine the composition and quantity of waste generated by Grafton Correctional Centre, and also to identify the most appropriate areas to target waste reduction.

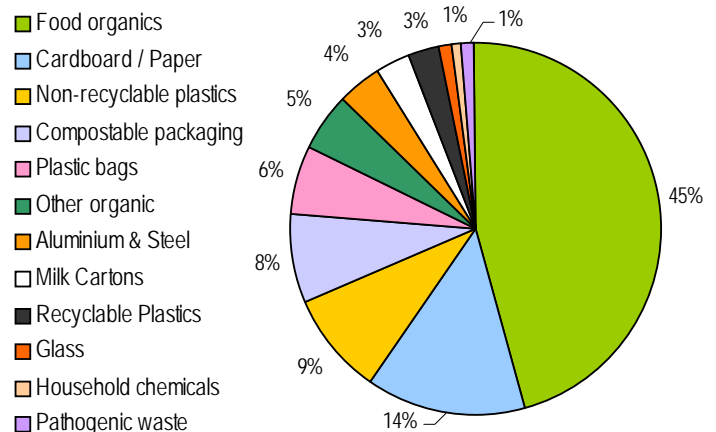
Grafton Correctional Centre



Grafton Correctional Centre (GCC) houses approximately 270 inmates at any one time and has around 150 staff.

Prior to the study, GCC generated on average between three and four skip loads full of waste materials (1.5m³) each day. Cardboard and paper recycling facilities have been for some time. However, management were unsure as to the level of diligence staff were exerting on segregating these materials.

All clinical waste generated on the premises is segregated and processed by authorised external organisations.



Almost half of the waste generated by Grafton Correctional Centre was comprised of compostable food organics (46%), followed by recyclable paper and cardboard (14%).



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Waste Reduction Action Plan

Composting Organics

With over half of the waste stream comprised of compostable organic materials (46% food and 9% compostable paper materials) the most obvious step to reduce waste at GCC was to investigate various composting systems. It was decided that Bokashi composting bins would be the most convenient for GCC. Trials were undertaken by staff first, before another 6 Bokashi bins were purchased for broader use. Processing garden organics onsite was also encouraged through the purchase of a mulcher.

Recycling

Interestingly, survey results revealed that 90% of staff and inmates recycle at home (paper, cardboard, glass, cans and plastics), but only 28% admitted to recycling in any capacity at GCC. When questioned as to the reasons why they didn't recycle in the workplace, the overwhelming majority stated that the facilities and signage at GCC were inadequate. This was evident, as although cardboard and paper recycling facilities have been for some time, 15% of the general waste bin still comprised of recyclable cardboard and paper. Thus, the location and accessibility of recycling bins (and accompanying signage) were considered paramount in encouraging better recycling in appropriate bins.

Although GCC recycled cardboard and paper, no facilities were available for the recovery of commingled recyclables (glass, cans, plastics, milk cartons). Part of their Waste Reduction Action Plan was devoted to looking into purchasing bins for commingled recyclables, locating a suitable storage area, and also a means of transporting the materials to the recycling recovery centre.

Opportunities for the recovery of aluminium were also explored. All inmate meals are served on disposable aluminium trays, which were previously discarded in the general waste stream. The aluminium trays, combined with soft drink cans from vending machines equated to around 43 kilos of aluminium waste each week. Investigations into practical cleaning methods are being reviewed.

Other waste reduction initiatives implemented as part of the Waste Reduction Action Plan include substituting disposable polystyrene cups for recyclable / reusable cups, and recycling toner cartridges.

Outcomes

The BWRP at Grafton Correction Centre proved to be very successful, particularly initiatives focussed on reducing the amount of food and garden organics waste and increasing cardboard/paper recycling.

Overall, GCC reduced the amount of waste sent to landfill by 26.5% (a saving of 24 tonnes/year).

The bokashi bins purchased to process food waste proved to be very effective, reducing the amount of food waste in the general garbage bin by almost 50% (or 18 tonnes per year).

Other achievements include a reduction in the quantity of cardboard allocated to the general waste bin (down by almost one third), as well as small reductions in plastic and steel.

Cost Savings

Despite reducing their waste by more than one quarter, GCC are yet to receive any financial rewards for their efforts. This is partly due to expenses associated with the purchase of 32 new recycling bins, paper and cardboard recycling cages, 7 bokashi bins, paper shredder inserts and the mulcher. It is anticipated that once infrastructure costs are offset by savings in waste services, GCC will begin to notice cost savings with their new system.

The Future

GCC is currently writing up a waste reduction and purchasing policy as part of a centre wide environmental policy, which should ensure reduced waste to landfill and overall cost savings.

Efforts still need to be directed towards better recovery of some recyclable materials, particularly aluminium.

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