

# Case Study

## Blue Route Mall Waste Minimisation Club: Waste Minimisation at Woolworths

### Background

Woolworths Holdings Limited is a South African based retail group that operates locally and internationally through two subsidiaries (Woolworths Limited and Country Road Limited). Woolworth's stores are based in Africa, the Middle East, Australia, New Zealand, the United States of America and Singapore. The group employs 11 472 people

Woolworths Blue Route Mall is a clothes and food retail outlet within the Woolworths Group. The Woolworths branch has been with the Blue Route Shopping mall since the mall's inception in the seventies.

### Process

The main processes that take place in the shop are receiving goods, preparing food, selling goods and taking stock.

### Identifying Waste Minimisation Options

The bulk of the savings opportunities available in the Mall can be incurred through co-operation of the tenants. Conservatively, savings between 2 -5% are possible by modifying systems to reduce peak demand (electrical energy), reduced resource utilisation (water and electricity), identifying wastage by improved monitoring, separation of waste at source and improved housekeeping. A total of 13 waste minimisation opportunities were identified for the site. These are listed in Table 1.

### Implementation of Waste Minimisation

Of the waste minimisation options identified, five have already been implemented by the company. Savings in water costs and general waste disposal have also been identified.

#### *Water consumption and billing method*

The Mall management billed Woolworths on a pro-rata basis calculated from the square meterage they occupied. Woolworths requested that they be billed according to actual water usage and actively reduced water consumption. The nett result was a 90% reduction in water usage based on the "theoretical" usage (charged by Mall management?). Savings gained in this way amounted to over R120 000 per annum.

#### *Separation and Recycling*

In the past, Woolworths Blue Route discarded about 38 tons of waste per year directly to landfill at an estimated disposal cost of R20 000 / annum. Woolworths now recycles close to 80% of this general waste generating an income stream of R6 000 – R15 000 per annum while reducing the disposal costs to ~R5 000 per annum.

Table 1. Summary of identified waste minimisation options (August 2002).

<b>Waste Minimisation Opportunities</b>		<b>Status</b>
1	Proper separation of waste streams	Implemented
2	Policy change- billed for usage	Implemented
3	Recycle waste materials (cardboard and plastic)	Implemented
4	Metering own water usage	Implemented
5	Install timers on geysers and insulate	Implemented
6	Good housekeeping and active monitoring of key resources	Investigating
7	Install occupancy sensors for lights in low usage areas	Investigating
8	Utilize outside air for cooling (100% air economizers)	Investigating
9	Night pre-cooling to reduce the amount of cooling during the day	Investigating
10	Heat Recovery from condenser loop (concept proposal)	Investigating
11	Optimise cooling towers – VSD	Investigating
12	Peak Demand Reduction – Automated Systems	Investigating
13	Placing aerators on taps	Investigating
14	Installing an infra-red laser to start/stop the escalator to save energy	Investigating
15	Plastic bags for shoppers	Investigating

## Economic Benefits

Waste minimisation can bring major financial savings to the company. These could include the following:

<b>Recommendation</b>	<b>Savings. Rand / year</b>	<b>Payback</b>
Water reduction	~R120 000	Immediate
Waste reduction	~R15 000 R6 000 – R15 000 yield*	Immediate

\* Woolworths already receives financial remuneration for this waste stream.

## Environmental Benefits

As a result of active waste minimisation initiatives and membership of the Waste Minimisation Club for Blue Route Mall, benefits to the environment have also been realized. These include:

- Recycling of plastic and cardboard.
- Reduced solid and wet waste to landfill.
- Reduced energy consumption.

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