ENVIRONMENTAL CASE STUDIES

The Felixton Mill Upgrade

The Felixton Mill, situated near Empangeni on the KwaZulu-Natal North Coast, was established in 1953. Since then it has been transformed through several phases of development and investment. The mill currently produces containerboard for local and export markets utilising waste paper and bagasse, a fibre residue of sugar cane, as primary raw materials.

It is currently being transformed through a R765 million investment aimed at producing advanced lightweight containerboard to cater for the increasing demand for packaging weight reduction. In addition to the enhanced product offering, this significant investment in the latest paper machine technology and machinery will improve the mill's overall competitiveness, with significant improvements expected in energy and operational efficiencies.
On completion of the project the mill will no longer utilise bagasse fibre in its products.

The upgrade, which is scheduled to be completed by the end of 2017, will also result in a 60,000 tonne increase in the mill's design capacity to 215,000 tonnes.

Over the past two decades the Felixton Mill has done a tremendous amount of work to reduce its environmental footprint, with the following achieved since 1995.

Parameter	% reduction
Total energy	36
CO_2	39
Total water	66
Total suspended solids (Wastewater)	81
Solid waste	76

The current upgrade project at Felixton will further improve all aspects the mill's environmental footprint and it is anticipated that energy per tonne of product will decrease by 16% and water and wastewater by 40% to 50%. Further to this, the wastewater quality will improve dramatically due to elimination of the bagasse pulping process.

Mpact Polymers

The state-of-the-art Mpact Polymers PET recycling plant being built in Wadeville, Germiston, close to one of Mpact Plastics' existing manufacturing facilities is due to be commissioned during the second half of 2015 at a cost of R350 million. The newly-formed company, Mpact Polymers (Pty) Ltd, is jointly held by Mpact (79%) and the IDC (21%).

At full capacity the plant will process about 29,000 tons of PET plastic bottles a year, generating 21,000 tons of rPET from waste and saving some 180,000 cubic metres of landfill space each year.

Development of the plan for PET recycling was done in collaboration with key customers to ensure that the processed recycled material meets international standards. Mpact worked with Coca-Cola and its bottling partner Amalgamated Beverage Industries (ABI), a subsidiary of SABMiller Ltd, as the anchor customer for the project, as well as with the industry body PETCO to bring the project to fruition.

The project which will create about 1,000 jobs directly and indirectly is also supported by the Ekurhuleni Metro, the IDC and the DTI. The recycling industry in South Africa currently provides jobs for about 100,000 people. Mpact has helped more than 40 entrepreneurs start recycling businesses. The company provides further support through buy-back centres that purchase material and has set up sorting and baling facilities that provide further work opportunities.

It has also initiated projects to develop collections in deep rural and township areas which include buy-back centres set up in Empangeni and collections at a landfill site in Hluhluwe in KwaZulu-Natal, Mabopane and Soshanguve around Pretoria, Diepkloof in Soweto as well as Daveyton and Tsakane in Ekurhuleni.

Mpact Recycling, the largest paper recycler in South Africa, has been recycling paper for about 50 years and collects around 450,000 tons of recycled paper a year. The South African market currently uses about 124,000 tons of bottle-grade virgin PET a year with some 59,700 tons of baled PET collected in 2013, indicating a clear opportunity to expand PET recycling by introducing the rPET back into beverage bottles.