

# ENVIRONMENTAL SUSTAINABILITY

Mpact embraces the principle that it is our responsibility to care for the environment that sustains us as a people and as a business. This is reflected in our tagline “smarter, sustainable solutions”. As such Mpact gives much attention to environmental management issues such as water, waste, energy, air emissions and land use and aims at all times to comply with legislation and strives towards international best practice.

In 2016 substantial focus went into developing the foundations of an energy management policy, plan and strategy for Mpact. This will also translate into a GHG management framework. Added to this is the work done on both water and waste management across the business giving Mpact a solid base for addressing its natural capital and environmental sustainability

## COMPLIANCE

Environmental legislation in South Africa has become extremely complex in recent years. Sites that have, or potentially have, notable environmental impacts maintain Environmental Management Systems

(EMS) in accordance with the ISO 14001 Standard. Environmental Legal audits are conducted for those sites to ensure compliance with the Standard. Additionally, an annual review of environmental management at all sites is conducted by Legal Consulting Services.

## ENVIRONMENTAL EXCELLENCE

In recognition of the work done by Mpact’s operations, annual awards are given to sites that have done well with regard to their environmental programmes. These awards are given in Platinum, Gold, Silver and Bronze categories according to the degree of compliance with a set of internal standards aligned to ISO 14001. The top achiever is awarded the Scarab Award for Excellence in Environmental Management in deference to the humble scarab beetle that is nature’s prime example of recycling.

The 2016 recipient of the Scarab Award for Environmental Excellence was Felixton mill, while three operations achieved Platinum status, namely Felixton mill, Springs mill and Recycling Parow.



## ENERGY

The Southern African region is heavily dependent on coal-based power in the form of on-site steam generation and electricity purchased from the national grid. Consideration of the impact of carbon dioxide equivalent (CO<sub>2</sub>e) emissions on global warming has led to urgency in reducing energy consumption.

Against a baseline year of 2012, Mpact aims to reduce energy consumption per tonne of saleable product from its manufacturing operations by 15% by the year 2020. In 2016 manufacturing operations consumed 5,389 TJ (2015: 5,840 TJ) at a consumption rate of 6.84 GJ/t (2015: 7.16GJ/t). This represents a 7% saving per tonne of

product since 2012 (2015: 2.6%) Total energy consumption, including energy for non-manufacturing sites declined to 5,389 TJ (2015: 5,873 TJ). Energy savings have been due to improved process and operational efficiencies and investment in energy efficient equipment.

Mpact is investigating renewable energy solutions such as solar photovoltaic and waste-to-energy technologies at some of its operations to reduce energy consumption of fuels used on site and electricity purchased, thereby reducing greenhouse gas emissions.

## AIR

Mpact embraces the global drive for reduced Greenhouse Gas (CO<sub>2</sub>e) emissions. In our industry this is achieved through reduced energy consumption and dependence on fossil fuels as discussed above.

# ENVIRONMENTAL SUSTAINABILITY CONTINUED

Mpact's goal is to reduce combined Scope 1 and Scope 2 CO<sub>2</sub>e emission per tonne of manufactured saleable product by 20%, against a 2012 baseline, by the year 2020.

In 2016 Mpact's Scope 1 CO<sub>2</sub>e emissions amounted to 355,217 (2015: 407,089t) and Scope 2 Emissions were 434,565t (2015:417,990t). Combined CO<sub>2</sub>e emissions were therefore 789,782t in 2016 (2015:825,079t). The combined CO<sub>2</sub>e per tonne of manufactured product in 2016 was 1.011tCO<sub>2</sub>e (2015: 1.008 tCO<sub>2</sub>e per tonne of product) which represents a reduction against the 2012 baseline of 4.6% (2015: 4.8%)

## WATER

Water use has always been a priority consideration in our operations, as we acknowledge that we operate in a water scarce country. This is especially so in our paper mills which are highly dependent on reliable water supplies. Efforts to continually reduce our water use and wastewater discharge have meant that the current drought has not impacted negatively on our ability to operate. This is a demonstration of the strategic benefit of being efficient in the use of natural resources.

Mpact aims to achieve a 20% saving of water used per manufactured tonne of product by 2020 against the baseline year of 2012. In 2016, there was a 13% saving per tonne of product compared to 2012 (2015: 6.0%). Optimisation projects in a number of manufacturing operations and in particular the paper machine rebuild at Felixton to be completed in 2017, will go a long way to enabling Mpact to meet this target.

In 2016 the Group consumed 4,740MI of water (2015: 5,280MI). For the manufacturing operations this equated to 5.98 kl per tonne of product (2015: 6.45kl per tonne of product).

## WASTEWATER

Wastewater discharge from the Group in 2016 was 3,454 MI (2015: 3,544MI). For manufacturing plants, specific wastewater discharge was 4.95 kl per tonne of product (2015: 4.61kl per tonne).

Efforts to reduce water use have a direct impact on the volumes of wastewater discharged.

## MATERIALS

Much of Mpact's business is developed around recycling with most of our paper fibre and an increasing percentage of plastic polymers coming from recycled material collected by our Recycling division and through recycling practices in the business. Nonetheless virgin fibre and polymer are still required and there are some residual materials that are not yet recyclable and must be disposed of as waste.

### i) Raw materials

In terms of virgin raw material for the paper mills:

- Mpact Felixton mill purchases bagasse, the fibrous residue of sugar cane, from the adjacent sugar mill. The current rebuild project at Felixton will however result in the mill using only recycled fibre and it will no longer purchase bagasse after the 2016 sugar season.
- Piet Retief Paper mill purchases sawdust, offcuts and logs from local sawmills and plantations.
- Springs mill purchases white virgin pulp from local suppliers for the outer white layers of its folding boxboard products.

Polymers for the plastics businesses are purchased from local suppliers whenever possible.

### ii) Recycling

Mpact Recycling (including Remade) recovered 622,000 tonnes (2015: 527,000 tonnes) of recovered paper, plastics and other recyclable materials in 2016. Most of the recovered paper was sold to the three Mpact paper mills, for manufacture of containerboard and folding boxboard, and to Mondi Shanduka Newsprint, while the recovered PET bottles were sold to Mpact Polymers for the manufacture of recycled PET (rPET) and the rest to other recyclers. The rPET product produced by Mpact Polymers is sold primarily to Mpact Plastics manufacturing operations and other external customers.

Mpact Plastics containers have entered into arrangements with municipalities and retail outlets to recycle old and damaged wheellie bins, crates and baskets. Under these arrangements Mpact Plastic Containers cleans and grinds down the returned items. The ground material is excluded into pellets that are blended with virgin material to mould new products for sale to the same customers.

### iii) Waste

Residual materials that cannot be recycled, or are disposed of through registered waste service providers or municipalities, according to their waste categories.

Non-hazardous waste recycled was 79,446 tonne (2015: 73,471 tonne). For the manufacturing sites amounted to 100 kg per tonne of product (2015: 90kg per tonne of product).

Total non-hazardous waste disposed of by the Group amounted to 33,787 tonnes (2015: 37,872 tonnes) which for the manufacturing operations amounted to 37.2 kg per tonne of product (2015: 42.7 kg/tonne product).

Hazardous waste disposed of amounted to 1,111 tonnes (2015: 1,048 tonnes) or 1.4 kg per tonne product (2015: 1.29kg/tonne product), a large proportion of which was used oil that was sold to oil recycling companies. Recent legislation requiring sale of fluorescent tubes to recyclers has been complied with.

Most of the Mpact manufacturing sites are active in driving recycling initiatives through careful segregation and sorting of waste materials to recover as much of the recyclable material as possible. We also give attention to recycling alternatives such as waste-to-energy processes.

Waste targets for 2020 have not been set yet as the target will be greatly impacted by the viability of waste-to-energy technologies that are still in the feasibility stage of development.

## RECYCLING DEVELOPMENTS

Recovered paper sources include pre- and post-consumer material sourced from a multitude of paper collection programmes.

The Group's recycling businesses comprise of Mpact Recycling, which has seven (2015: seven) operating sites across the country and Remade which has nine operations primarily situated in Gauteng. Together, these businesses collect recovered paper and plastics for recycling from pre- and post-consumer sources, diverting recovered material from landfills.

The businesses are an essential source of quality raw material into the Group's manufacturing operations and considerably decrease reliance on virgin fibre and plastic.

The benefits of the Group's recycling activities include local beneficiation of raw materials, job creation and small enterprise development. With regards to environmental stewardship, recycling produces lower greenhouse gas emissions than the production of virgin fibre and plastics, and prevents the landfilling or incineration of this recovered material.

Through major capital projects, namely the Mpact Polymers and Felixton mill, Mpact has created new job opportunities in the recycling industry, many of them in rural areas. The recovery rates for waste paper and used PET bottles should increase consequently.

Mpact's investment in processing equipment at its Springs mill to recycle liquid packaging containers creates the opportunity to divert more of these containers from landfill and create a new income stream for businesses in the collection of recyclables.

For more information, view Mpact Recycling's regional videos on Mpact's website. 

### NORTHERN KWAZULU-NATAL RECYCLING PROJECT

Consumption of packaged goods in rural areas of South Africa is increasing as social grants are made available to more people. In the case of Northern KwaZulu-Natal, this represented an opportunity to collect additional packaging for recycling while also creating jobs and business opportunities for the local communities. In 2014, Mpact developed a community project to address the high costs of collecting and transporting the recycling material from widely dispersed locations to its branch in Richard Bay.

Objectives of the project were to:

- Enable recycling in Northern KwaZulu-Natal rural areas by empowering individuals in communities to start their own small and sustainable collection businesses either sorting recyclable fibre at the landfill sites or collecting waste from the shops before it goes to the landfill sites.
- Increase the supply of recyclable waste to the mills
- Benefit the communities and the environment by minimising waste being sent to landfill sites.

It was initially difficult to convince the collectors to deal with Mpact Recycling as previously they had been dealing with middle men who were purchasing materials from them and selling onto Mpact Recycling or its competitors. As such, they had been doing a lot of the hard work, but with little reward. By dealing directly with the collectors, Mpact Recycling has been able to make improve prices and regular collections and regular payments. The waste collectors were taken to the Mpact Recycling Richards Bay operation to see exactly how the materials are weighed, sorted and paid by grade – thus providing further education and support. The presence of an Mpact employee who could converse with the collectors also helped in gaining credibility, support and buy-in from the collectors.

Since January 2015, the initiative has grown such that Mpact Recycling has placed balers where there are large volumes of suppliers enabling the collection of both baled and loose fibre. The supplier base has increased to 54 regular suppliers.

	2014 January to December	2015 January to December	2016 January to December
<b>Total tonnage</b>	635	4 203	<b>5 815</b>

Mpact Recycling covers the KwaZulu-Natal North Coast from Mandeni to Kosi Bay and inland from Tugela Ferry to Pongola. Our collection footprint is large – at least 210 jobs have been created through the collection and sorting of the materials; impacting on over 1,000 families – many of whom are now able to feed their children through their collections of the recyclables.

Mtima Recycling is a recycling business in Eshowe that started with six full time employees and one Light Duty Vehicle and has since grown to 21 full time employees with three Light Duty Vehicles. Babakababa Trading, based in Nongoma, was a family-run business operated by a mother, son and daughter. It now has eight full time employees and the enterprise purchased its own baler.

Mpact Recycling is proud to say that we have met and exceeded our objectives; and what started out as a small project has turned into a full scale recycling programme benefitting the communities of Northern KwaZulu-Natal.