



the sporting benefits of the site, the community will be able to generate income from the facility.

#### **GRIP (Grater Rape Intervention Project)**

The Mill also funds the GRIP organisation, which provides humanitarian assistance, rehabilitation and empowerment to sexual assault and domestic violence survivors, as well as services to those affected and infected by HIV and AIDS as a result of sexual assault.

### **ENVIRONMENTAL SUSTAINABILITY**

Mpact's commitment to sustainability is illustrated in our tagline "smarter, sustainable solutions". Environmental sustainability is therefore a core value for the business as we embrace the reality that the environment sustains us. Much of Mpact's business is built on recycling with most of our fibre, and an increasing portion of plastics, being supplied by our Recycling division and recycling practices at our operations.

Mpact is very dependent on water, especially at the paper mills, and much effort and investment has gone into optimising water use over many years in recognition of the fact the South Africa is a water-scarce country. This has been emphasised by the current drought. In recent years there has been increasing focus and effort in reducing the environmental footprint of our energy use in terms of Green House Gas and other atmospheric emissions, fossil fuel use, and ash generation. Environmental legislation in South Africa has also become very complex and maintaining compliance is a priority for Mpact.

#### **Recycling**

Mpact is the largest paper recycler in South Africa with Mpact Recycling recovering 526,937 tonnes of paper fibre and plastics from pre- and post-consumer sources across all grades of paper in 2015. Of this, about 75% of the recovered paper is recycled into containerboard and carton board at our three paper mills. The balance is sold to other manufacturers particularly Mondi Shanduka Newsprint. Mpact recycling has also embarked on collection of plastics with a focus on PET bottles, which are supplied to the newly established Mpact Polymers business for recycling into recycled PET (rPET). The rPET is sold to the Mpact Plastics Wadeville plant for use in PET preforms for beverage bottles and other PET products, and to external customers.

Mpact Plastic Containers has increased the recycling capacity at its Brits plant for recovering old and damaged plastic crates that are processed into polymer flakes for manufacture of new crates.

With recycling being core to Mpact's business, plants across all divisions practice recycling with the waste streams generated on their sites. Waste management plans are regularly reviewed to bring into effect the requirements of the Waste Management Act which focuses on the reduction > reuse > recycling > recovery > landfill hierarchy.

Total non-hazardous waste disposed to landfill amounted to 37,872 tonnes (2014: 31,450 tonnes), while hazardous waste disposal was 1,048 tonnes (2014: 814 tonnes). Material recycled totalled 73,471 tonnes (2014: 79,297 tonnes).

#### **Water and wastewater**

As water is recognised as a scarce and precious resource, water consumption at all operations is monitored and reported. Interventions to reduce water use include monitoring and awareness drives, equipment upgrades, process optimisation, rainwater harvesting, and the treatment and reuse of waste water.

For the manufacturing operations (mills, corrugators and plastics plants) the water use per tonne of product was 6.42kl/tonne (2014: 6.61kl/tonne).

## Energy

Apart from electricity purchased from the national grid, Mpac also uses fossil fuels in the form of coal, natural gas, heavy fuel oil, and diesel at its operations.

The total recorded energy used in 2015 was 5,879TJ (2014: 5,643TJ) of which 4,374TJ (2014: 4,173TJ) was direct energy consumed (fossil fuels) while 1,505TJ, or 418 GWh, (2014: 1,470TJ or 408 GWh) was indirect energy consumption (purchased electricity). For the manufacturing operations (mills, corrugators and plastics plants) the energy consumption per tonne of product amounted to 7.17 GJ/tonne, slightly higher than the 2014 number of 7.12 GJ/tonne, largely due to electricity co-generation at the Piet Retief Mill, which is aimed at reducing the load on the national grid.

Mpac established an Energy Centre of Excellence in 2014 that aims to reduce energy consumption and CO<sub>2</sub> emissions by coordinating and driving energy efficiency projects and green energy generation initiatives. Energy experts from across the Group meet biannually to report on progress, share ideas and

participate in technology supplier discussions. Initiatives already actively perused in the Group include:

- optimisation of boiler efficiency;
- production process monitoring and optimisation initiatives;
- installation of Variable Speed Drives;
- replacement of old lighting technologies with modern low energy lighting;
- replacement of various heating and cooling equipment with modern high efficiency units; and
- creating awareness among employees to conserve energy wherever possible.

In 2015 Mpac engaged with the National Business Initiative's Private Sector Energy Efficiency Programme (PSEE). This entailed assessing energy use across the Group and developing energy baselines for all operations, developing energy management plans at operational, divisional and Group level, an evaluation of the Mpac environmental database, and drafting of an energy policy. This study will form the basis for the way Mpac manages energy into the future.



## Atmospheric emissions

The main source of atmospheric emissions is from boilers. In terms of the new Air Quality Act, none of Mpact's boilers requires Atmospheric Emissions Licences (AEL) though they are now subject to Controlled Emitter regulations released in 2013. All relevant operations are in discussion with their local authorities to ensure compliance with these regulations. However, the Copeland Reactor at the Piet Retief Mill does require an AEL and this has been obtained in a licence that also provides the necessary Controlled Emitter authorisations for the site's boilers and other atmospheric emission sources.

Controls are in place to monitor sulphur dioxide (SO<sub>2</sub>), particulates and carbon dioxide (CO<sub>2</sub>) emissions from the boilers and these are reported monthly. Emissions are managed through the use of good quality (low sulphur) coal, boiler efficiency optimisation and maintenance of grit arrestors in the boiler stacks. The primary focus remains energy optimisation to reduce the amount of fuel burned in the first place.

As discussed under the Energy section, Mpact is actively addressing energy consumption. These efforts double as the means of addressing global warming through greenhouse gas emission reductions. Energy reductions noted above therefore account for reductions in both Scope 1 (direct emissions from site) and Scope 2 (arising from electricity purchased) emissions. Scope 1 emissions were 405,240 tonne CO<sub>2</sub>e (2014: 388,086 tonne CO<sub>2</sub>e) and Scope 2 emissions were 430,529 tonne CO<sub>2</sub>e (2014: 404,234 tonne CO<sub>2</sub>e) bringing total Scope 1 and 2 emissions to 835,769 tonne CO<sub>2</sub>e (2014: 792,320 tonne CO<sub>2</sub>e). This increase is attributable to the incorporation of new business and increased output of existing businesses. For the manufacturing operations, the total carbon emissions per tonne of product was 1.02 tonne CO<sub>2</sub>e (2014: 1.02 tonne CO<sub>2</sub>e) with Scope 1 emissions contributing 0.5 tonne CO<sub>2</sub>e (2014: 0.5 CO<sub>2</sub>e) and Scope 2 emissions contributing 0.5 tonne CO<sub>2</sub>e (2014: 0.5 CO<sub>2</sub>e).

## Responding to potential Carbon legislation

For Government to meet South Africa's commitment to reduce greenhouse gas emissions below business as usual by 34% by 2020 and 42% by 2025 they intend implementing a "mix of measures" aimed at reducing carbon emission and driving the country towards a "green" economy. The measures proposed include a carbon tax, carbon budgets for businesses, Desired Emission Reduction Outcome targets for sectors, declaration of greenhouse gasses as "priority pollutants", and on the positive side, energy reduction tax incentives.

Mpact has actively engaged with Government both directly and indirectly, through industry associations, to understand and give input into the development of these measures. The activities mentioned in the Energy section should also be noted as Mpact's approach to managing its carbon footprint and reducing the potential impact of legislative measures on the business.



## Compliance

As a socially responsible company, Mpact recognises that compliance with legislation is essential to the sustainability of its operations. Mpact is committed to keeping abreast of environmental legislation and actively participates in the review process through membership of the Paper Manufacturing Association of South Africa (PAMSA) Environmental Committee which gives input to draft legislation. Our operations also subscribe to legal registers tailored to their specific situations and are notified by the service providers of changes in legislation.

All operations have Environmental Management Systems in place most certificated to the ISO 14001 standard. These operations are audited internally and externally for ISO and legal compliance.

## Environmental excellence awards

The Scarab Award is presented to the operation that performs best in an externally conducted survey on environmental management practices. The overall 2015 winner was the Springs Mill, Gauteng, while the Springs Mill and Recycling Maydon Road plants were awarded Platinum status awards for environmental management.

## SUSTAINABILITY DEVELOPMENT

In 2015 substantial focus went into developing the foundations of an energy management policy, plan and strategy for Mpact. This will also translate into a greenhouse gas management framework. Added to this is good work done on both water and waste management across the business, giving Mpact a solid base for addressing its natural capital and environmental sustainability.

Human capital is addressed in Mpact's growing focus on safety and health initiatives amongst employees, contractors and their communities.

Mpact understands that it exists within a strained social environment and actively invests in social capital through the CSI programme and its pursuit of empowerment, employment equity and B-BBEE initiatives.