Corporate Social Responsibility Report continued

Environment

As a manufacturer of goods operating across a global platform we are committed to the prevention of pollution and reducing our environmental impact. The main environmental impacts of our processes continue to be the emission of carbon dioxide and the generation of solid waste which we send to landfill.

Within four of our major locations, and as a result of local regulatory requirements, we operate our own waste water treatment plants. In the fifth, Scotland, we partially treat our effluent to ensure we meet the outflow parameters before discharging directly into the public sewerage system, where our waste is combined with domestic effluent and treated by Scottish Water.

The environmental concerns differ region by region and thus, as a company with worldwide operations, our business similarly is subject to a variety of regulatory regimes and cultures. As a consequence, we deal with environmental issues through a network of field and regional specialists operating within the business units. There continues to be active global co-operation between our sites, and this ensures that the many country-specific solutions we have implemented across our manufacturing facilities have now been adopted across several business units where common solutions are practical.

While the individual business units measure the relevant environmental impacts aligned to the specific country or regional legislation, we also collectively monitor our group-level performance via three main measures:

- carbon dioxide (CO_2) emissions from the use of fuels and electricity in our factories;
- water consumption; and
- solid waste produced in our processes disposed of via landfill.

All three are important to us but our major focus has been on emissions from the burning of fuels and, as such, it is a main area of commitment. We monitor and maintain our equipment and processes to reduce the impact of fuel consumption and electricity-related CO_2 emissions. Major capital projects such as those undertaken in the US and China have incorporated the best available technologies at the design stage to minimise our emissions and energy usage per kilometre of product.

Global targets

In 2015 we met and surpassed the targets we had set in 2011, which was a 10% reduction per km product in carbon dioxide emissions, water use and solid waste to landfill. In effect we achieved double the target we had set.

Having evaluated the legislative requirements in the countries where we operate, and investigated the opportunities presented by technology, new targets were adopted in 2015 that by 2020 we would:

- reduce emissions (tonnes CO_2 per million metres production) by 30%;
- reduce energy usage (GJ per million metres production) by 15%;
- reduce water usage (cubic metres per million metres production) by 10%; and
- reduce landfill (tonnes of solids sent to landfill from process) to zero.

These targets demonstrate our aspirations in making a step-change in environmental performance into the next decade and underline our commitment and resolve to manage our environmental impacts and responsibilities.

Carbon dioxide

In 2018, our CO_2 emissions per million metres of casing increased as shown on the chart opposite. This was mainly due to increased production as we built inventory levels, and conducted a significant amount of product development work.

Energy consumption

Energy consumption and emissions are closely related, and so our consumption data followed a similar trend to our emissions data.

In Scotland, Devro invested more than £2 million in a state of the art Combined Heat and Power (CHP) system that was commissioned in July. The CHP system generates more than 90% of the Moodiesburn plant's requirement for electricity and utilises the waste heat from the exhaust to replace steam previously generated from the gas fired boiler. As a result, the Moodiesburn boilers now run at 80% of their previous setting saving an annualised 22,000 Therms of natural gas per month.

Water

Our water consumption is a mixture of well extracted and mains supply, this being driven both commercially and by the conditions in the regions. We measured water usage for the first time in China with the commissioning of the new Nantong plant and, of course, had water usage in both the existing and new manufacturing facilities in Sandy Run, US. Similar to our energy profile, we made significant reductions per million metre of casing produced in the established plants (circa 18%) which offset some of the usages that can be expected from commissioning of new processes. In total we continued the trend of reducing usage globally, with a 2% reduction on 2017 and a total 8% reduction against the 2015 baseline.

As the graph opposite shows we have reduced water usage in all but one of the last 12 years and our current rate of water required to produce our products has now been reduced by over one-third since 2005.

Solid waste to landfill

In the various regions in which we operate, local legislation governs landfill use and is quite diverse. However, there is a common message to reduce the impact wherever and whenever possible.

We remain focused on finding new avenues for our process waste and continue to evaluate new technologies with our business partners. We made some significant progress this year, especially in Scotland, where for the duration of 2018 we diverted the vast majority of collagen waste to composting and hence, energy generation. This trend continued across all plants throughout 2018. As a result we have now reduced landfill by 87% against our 2015 benchmark.

This is wholly consistent with our strategic aim to reduce waste from our manufacturing processes in the short-term, and find new avenues for disposal in the longer-term, in order to achieve our stated goal of zero landfill from process waste by 2020.

Environmental management systems

Our main vehicle for compliance and improvement continues to be our environmental management systems. All our manufacturing sites employ environmental management systems based around the ISO 14001 model. Five of the plants have now been accredited with the ISO 14001 Standard with Nantong passing their stage 2 audit in 2017. The plants in the Czech Republic and Australia have been upgrading against the requirements of the new Standard (ISO 14001:2015) and were successfully audited in 2017 against the new variant. The two Scottish plants joined them and attained their accreditation in May 2018. In the two remaining plants, all systems have been based on the ISO model and this will ease accreditation when the plants seek evaluation against the Standard.

Greenhouse gas emissions

Our greenhouse gas emissions are mainly due to the use of energy in our factories and centre on heat and electricity for our manufacturing processes. In addition, we use HFCs and HCFCs in refrigeration equipment, own a number of vehicles and rent offices. The figures in the table opposite cover all of these activities except where we rent an office where the energy use is not measured separately. The impact of this on our numbers is not material.

Methodology

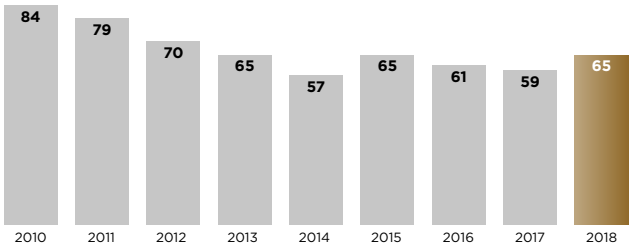
We have reported on all of the emission sources required under the Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013, and taking account of the GHG Protocol Scope 2 Guidance (2015).

GHG emissions data (tonnes of CO_2e)

	2018	2017	2016
Scope 1 emissions (tes)	**59,932**	62,438	70,681
Scope 2 emissions (tes)	**79,738**	75,877	74,450
Scope 1 + 2 emissions (tes)	**139,670**	138,315	145,131
Intensity measure (£m turnover)	**253**	257	241
Normalised emissions (tonnes of CO_2e per £m turnover)	**551**	538	602

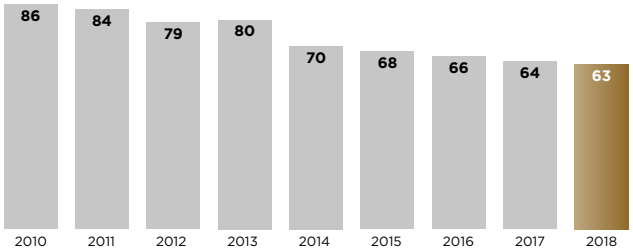
CO2 emissions

(tonnes CO_2/million metres equivalent casing, shown as % of 2005 performance)



Water use

(m^3 water/million metres equivalent casing as percentage reduction against 2005)



Tonnes waste

(sent to landfill/million metres equivalent casing, shown as % of 2005 figures)