Morgan Advanced Materials

EHS Report 2012

ADVANCED MATERIALS
RESILIENT PERFORMANCE

Morgan
Advanced Materials

Contents

MORGAN IS A WORLD LEADER IN ADVANCED MATERIALS

We produce a wide range of specialist, high-specification materials that have extraordinary attributes and properties.

Engineered into products, they deliver enhanced performance, often under extreme conditions.

Our dynamic, highly skilled people are continuously engaged in finding solutions for complex and technologically demanding applications, which are used all over the world.

In short, we supply innovative, differentiated products made from highly technical advanced materials which enable our customers' products and processes to perform more efficiently, more reliably and for longer.

OUR STRATEGY

Our strategy is based on building a sustainable business for the long term, by continuing to focus on our five strategic priorities and remaining committed to delivering strong returns to our stakeholders.

OUR GOAL

- Our goal is to continue to be one of the world's very best advanced materials companies

OUR AIM

- Our aim is to create long-term sustainable shareholder value

STRATEGIC PRIORITIES

- Be innovative, differentiated and high value-added to our customers
- Be number one or number two in our chosen market segments
- Have a culture of operational excellence and cost efficiency
- Focus on higher growth, higher margin, non-economically cyclical markets
- Find, keep and develop the right people

STRATEGY IN ACTION

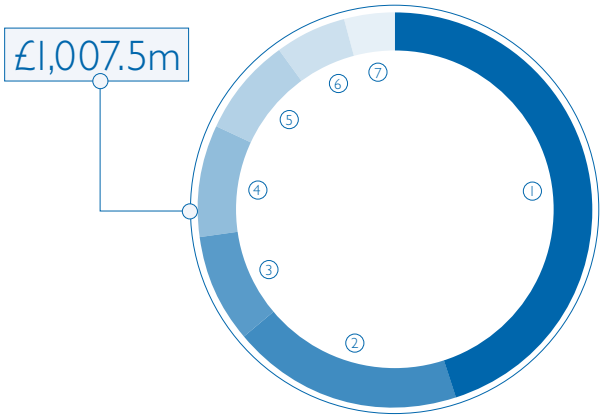
Morgan identifies major opportunities in sectors driven by megatrends where its materials science and applications engineering skills can solve technically demanding challenges. The Company chooses its markets carefully, focussing on those in which it can achieve leadership quickly and then continue to refine its output to increase the proportion of high-margin, technically complex products. See page 16.

MORGAN ADVANCED MATERIALS AT A GLANCE

A truly global operation with significant business in the dynamic growth economies of Asia and South America.

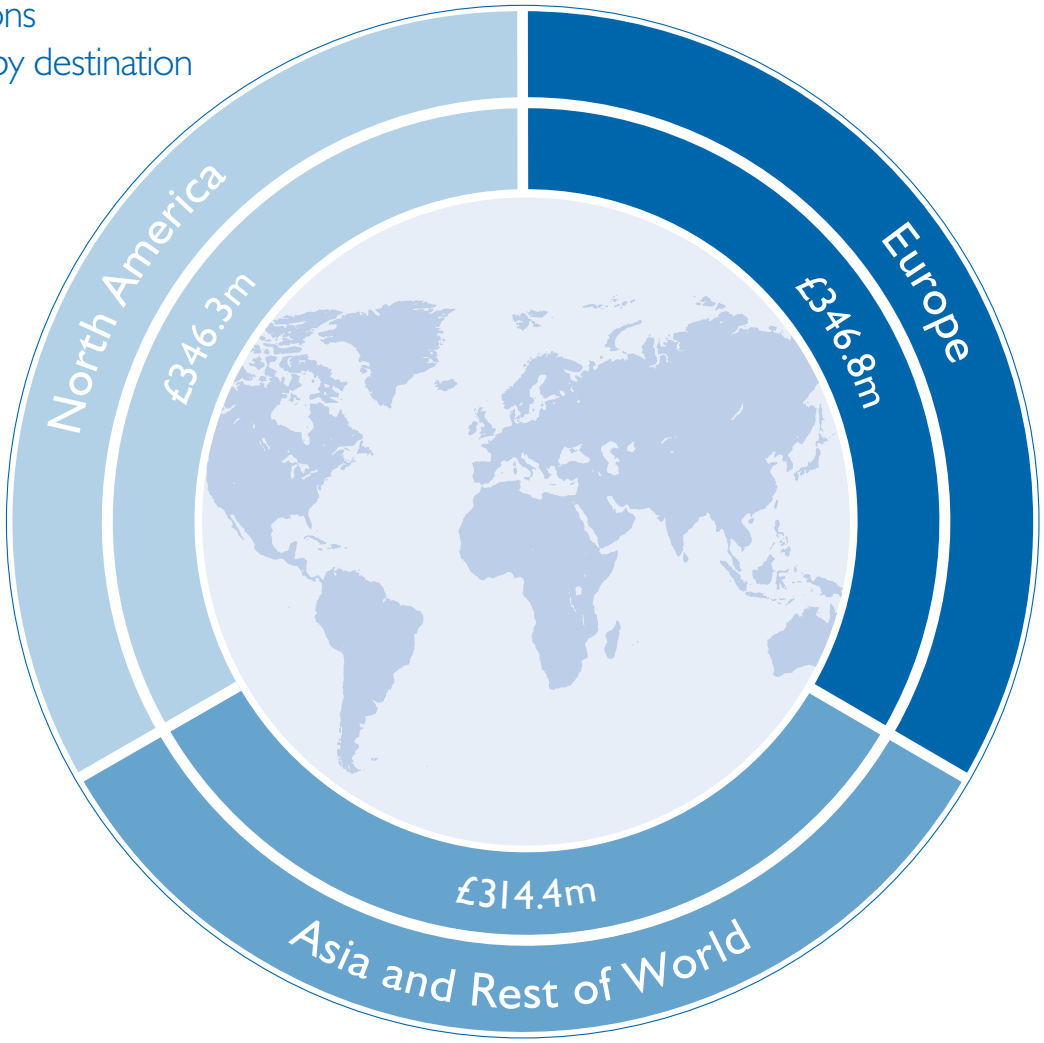
Morgan's markets
→

2012 total revenue



① Industrial 45%
② Transportation 19%
③ Electronics 9%
④ Petrochemical 9%
⑤ Security & Defence 8%
⑥ Energy 6%
⑦ Healthcare 4%

Our regions
→ Sales by destination



OUR BUSINESS

Morgan is a world leader in advanced materials. We supply innovative, differentiated products made from a wide range of specialist, high-specification materials which enable our customers' products to perform more efficiently, reliably and for longer in a wide range of markets.

MARKETS


Industrial


Transportation


Security & Defence


Electronics


Petrochemical


Energy


Healthcare

For more information please visit www.morganadvanced materials.com

PRODUCTS


Molten Metal Systems


Engineered Ceramics

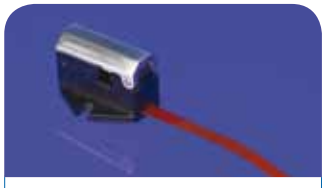

High Temperature Insulation


Seals and Bearings


Fire Protection


Brazed Assembles


Electrical Transfer


Sensors and transducers


Rotary Transfer

For more information please visit www.morganadvanced materials.com

INTRODUCTION

Kevin Dangerfield Chief Financial Officer

We believe that it is important to ensure that improved financial performance is not achieved at the expense of our programme of continuous improvement in our EHS performance. We see this as a key part of our aim of producing long term sustainable value.

Introduction

During my visits to Morgan sites I am always impressed by the efforts that are being made throughout the Group to reduce the impact of our operations on the environment and to improve health and safety performance.

Thus it is with great regret that I have to report that during 2012 two Morgan employees were involved in fatal accidents at the Group's manufacturing facilities. The accidents occurred in China in July and in the UK in December and have been the subject of detailed investigations, both by Morgan and the relevant authorities.

I want to reaffirm the Group's commitment to conducting all its activities in a manner which achieves high standards of health and safety for employees and others affected by its operations. This commitment is continuous and on-going and involves significant investment in safety systems and training as well as capital projects to improve the safety of the workplace.

Investigations have led us to believe that a significant contributory cause of both these accidents was failure to adhere to specified operating procedures. In order to help minimise the risk of further such accidents, during 2013, we will be working to introduce an enhanced behavioural safety culture throughout the Group.

This is the ninth year in which we have published an EHS Report and our EHS programmes continue to be integral to our business and are aligned with our Core Values Statement and our strategic priorities.

We believe that it is important to ensure that good financial performance is not achieved at the expense of our programme of continuous improvement in our EHS performance. We see this as a key part of our aim to producing long term sustainable value.

The Group delivered a resilient financial performance in 2012 despite difficult circumstances in many of our markets. We met or exceeded our environmental objectives in terms of improvements in CO_2 intensity, energy intensity, recycling, water intensity but failed to meet our waste reduction target. While the Group's lost time accident frequency was down in 2012, the total lost time as a result of these accidents showed an increase over the previous year.

The Company again participated in the Carbon Disclosure Project (CDP) in 2012. We were one of the seven top performing FTSE 350 companies in CDP's Carbon Performance Leadership Index and one of only 35 in the Carbon Disclosure Leadership Index. Following on from this achievement, the Company was one of five shortlisted for "Achievement in Sustainability" in the PLC Awards 2012.

During 2012 we continued to work with PricewaterhouseCoopers LLP (PwC) in order to provide independent assurance of the EHS KPI data that we include in this report and the Annual Report. For 2012, PwC provided assurance on our energy, CO_2 emissions, water and waste intensity and recycling data. Their assurance report is included on page 15 of this report.

We have now completed the programme of recruitment of regional EHS managers and, together with the introduction of enhanced behavioural safety training later this year, we are looking to see an improvement in the Group's safety performance.

I look forward to reporting further progress next year, but in the meantime if you have any comments or suggestions, please let us know at ehs@morganplc.com.

Kevin Dangerfield
Chief Financial Officer
May 2012

REPORT OVERVIEW

About Morgan Advanced Materials

Formerly known as The Morgan Crucible Company plc, Morgan Advanced Materials is a world-leader in advanced materials, focused on specialist ceramics, carbon and composites. Working at the forefront of advanced materials technology, the Group develops solutions that help to make the world more efficient, better protected and healthier.

The Group's business model is aligned with and driven by its strategy as set out on page 2. Across all businesses and sites Morgan utilises advanced materials technology and manufacturing expertise to design, develop, manufacture and integrate technically differentiated solutions that help enhance the performance and efficiency of its customers' products or operations. This is supported with a focus on service excellence and the development of genuine partnerships such that the Group works alongside its customers and suppliers in the ongoing refinement of products and solutions.

The Group's name was changed to Morgan Advanced Materials on 27th March 2013. This name change has been made as part of a move to a simpler organisational model which builds on actions taken in the past years to create a unified and consistent "one Morgan" business. The outward-facing part of Morgan's business model is combined with an internal focus on operational excellence and effective cost management.

Morgan Advanced Materials has a wide portfolio of products which help make the world safer, healthier and more efficient, helping to improve the environmental sustainability of the Group's customer's products and operations. Although Morgan has not sought to quantify this benefit, a key part of the Group's contribution to sustainability is the development and supply of new and improved products.

The Group's focus on high-quality customer solutions and efficient operations combine to satisfy Morgan Advanced Materials' stated aim of creating long-term sustainable shareholder value.

2012 revenue for the Group decreased by 8.5% to £1,007.5 million and operating profit was down 14.9% to £122.0 million. As the Group's intensity targets and KPIs relate environmental measures to revenue, the reduction in production volumes inevitably had an impact on the absolute CO_2 emissions, energy use and water use. Whilst the lower volumes led to lower efficiency in some of the Group's energy-intensive operations, as detailed on page 10 the Group was still able to improve its CO_2 and energy related metrics as a result of the actions taken to increase efficiency.

Additional information on all areas of Morgan Advanced Materials' CSR-related activities and performance can be found on pages 18-27 of the Group's 2012 Annual Report.

About this report

Morgan Advanced Materials' 2012 EHS Report summarises the Group's environmental, health and safety performance in the year ended 31 December 2012. This, the Group's ninth annual EHS Report, covers the available data for the whole business. It also details the Group's EHS Policies and management systems.

Morgan's Environment, Health and Safety (EHS) Policy and implementation programmes support its five strategic priorities and Core Values Statement. EHS performance has a direct and significant effect on operating performance and is therefore a key focus for risk assessment and operational management across the Group.

The Group is committed to minimising the impact of its operations on the environment and to ensuring that the working environment is safe and that all individuals take responsibility for achieving this.

The health and safety data in this report covers 100% of Morgan Advanced Materials' employees and the environmental data covers 100% of its production sites.

The Group has engaged PricewaterhouseCoopers LLP ('PwC') to provide independent external assurance on its energy, CO_2, waste, recycling and water related environmental data and KPIs for 2012. PwC's independent assurance report is set out on page 15.

Further information about Morgan Advanced Materials is available on the Group's website at:
www.morganadvancedmaterials.com

EHS POLICY AND MANAGEMENT

EHS Policy

Morgan Advanced Materials' EHS Policy applies to all Group businesses worldwide. It requires high standards of EHS management at all Group facilities and seeks to provide continuous improvement in environmental, health and safety performance in support of the Group's strategic priorities.

As summarised below, the Policy is made available to all employees and published on the Group's website and intranet.

The purpose of Morgan Advanced Materials' EHS Policy is:

- To maintain a safe working environment for staff, contractors and visitors across all Morgan Advanced Materials companies worldwide ("the Group").
- To minimise the impact of the Group's activities on the environment.
- To confirm the Group's commitment to excellence and continuous improvement in Environmental, Health and Safety ("EHS") performance.
- All employees have responsibility for EHS policy and related matters:
- The Chief Executive Officer has overall accountability for corporate responsibility matters.
- The Chief Financial Officer is responsible for EHS policy, strategic direction and performance monitoring.
- The Chief Operating Officer and the operational management teams have responsibility for EHS performance and reporting across the businesses for which they are responsible, and for implementing this Policy and ensuring compliance.
- The manager of each operation has operational responsibility for EHS.
- Employees at all levels are responsible for implementing EHS rules and guidance, avoiding potential and actual hazards, for warning others accordingly and for identifying opportunities for improvement.

It is the Group's EHS policy that all businesses:

- Comply with EHS legislation, regulations and other applicable legal requirements as a minimum standard.
- Conduct operations so as minimise the impact on human health, prevent pollution, minimise CO_2 emissions and to reduce hazards.
- Include EHS and climate change related considerations in business decisions, promote resource and efficiency programmes across the Group and minimise the environmental impact of historic, current and future operations.
- Supply products that, when used in compliance with product safety communications and common safety practices, will not present an unacceptable risk to human health and safety.
- Assess and minimise the environmental impact of the Group's products during design, manufacture, use, and on disposal.
- Set objectives and targets for the continuous improvement of EHS performance and monitor and report progress internally and externally as appropriate.
- Ensure competence in EHS matters through training and education at all levels of the organisation.
- Conduct periodic reviews of the Group's Environmental and Health & Safety management systems.
- Maintain communications with stakeholders on EHS matters to help ensure alignment with their needs and expectations.
- Encourage business partners to adopt this same accountability.

In addition to the Group Policy, Morgan businesses are required to ensure that they are aware of and take account of national, regional and local EHS laws and regulations and best practice, including that set out in the Group's EHS Good Management Practice Manual.

Where appropriate the Group's operations have supplementary environmental and health and safety policies, key performance indicators and targets according to the risks, opportunities and needs of each particular business.

EHS POLICY IMPLEMENTATION

Morgan Advanced Materials' EHS Policy forms the basis of its environment, health and safety management systems and processes. The core objectives of these systems are to identify risks and opportunities, legal and other requirements and to monitor and continuously improve performance in support of the Group's strategic objectives.

The Group's operations involve the normal environmental and health and safety risks associated with manufacturing and other activities in the countries in which Morgan Advanced Materials operates. EHS management processes are designed to be forward-looking in the identification, management and mitigation of EHS risks and opportunities that could impact the Group's short- and long-term performance and value.

The governance structure for EHS places responsibility for EHS performance with the Chief Operating Officer and the operational management team, with each site having a point of accountability. EHS performance is reported regularly to the Board by the Chief Financial Officer who has specific responsibility for EHS policy, strategic direction and performance monitoring. He is supported by the Group Director, Environment, Health and Safety who provides Group direction and oversight with responsibility for implementation of Group EHS programmes, including standards and procedures, the review of the adequacy of EHS resources and training across the Group, for performance reporting and all assurance processes.

Morgan Advanced Materials recognises the need for high, consistent and demonstrable standards in EHS governance and control and during 2012 the Group continued the recruitment of EHS leaders in all the regions that it operates. This global network of EHS specialists reports to the regional management teams and is responsible for improving the standards of EHS management and performance in the Group's businesses. This is in line with the proposals for the enhancement and formalisation of EHS governance arrangements that were adopted by the Board at the end of 2011.

In addition, as described on page 9 below, the Group commissioned external assurance on selected EHS data from PricewaterhouseCoopers LLP (PwC).

Morgan Advanced Materials' EHS management processes include the EHS Compliance Audit Programme. This programme helps ensure compliance with national and other regulatory requirements, with the Group's EHS reporting criteria and with good management practice as set out in the Group's Environmental, Health and Safety Good Management Practice Manual which is issued to all sites world-wide. The audits also cover the EHS management systems and the EHS KPIs reported by each site and also help to identify how sites can anticipate and respond to developing and impending regulations and improve their EHS performance to meet internationally accepted good practice.

In Europe and Asia-Pacific, the programme is conducted by external auditors, whilst in the Americas it is conducted by internal experts and reviewed by external consultants. The audit reports are reviewed by the Director, Environment, Health and Safety and by the regional management teams. Sites are required to develop a corrective action plan following the audit. These actions are regularly tracked by the audit teams.

Manufacturing sites are audited on a three year rolling cycle. During 2012 29 sites were audited (2011: 25 sites) and the plan for 2013 is to audit 36 sites.

In 2012 environmental management systems were in place at 94 sites worldwide, including 41 major sites certified to ISO 14001 (2011: 39 sites). Two additional sites in the USA and India achieved certification in 2012. These new certifications are in addition to the ongoing programme of re-certifications. All major production sites worldwide have health and safety management systems in place, with eight sites certified to OHSAS 18001 and a further seven sites working towards certification.

WORLD ENVIRONMENT DAY 5 JUNE 2012

Morgan sites in India organized a number of events to mark World Environment Day on 5 June 2012, with the United Nations Environment Programme theme of 'Green Economy: Does it include you?'

Some 100 trees were planted on site and the initiative was extended to involve local schools where a further 25 trees were planted.

The teams at the Ranipet and Gujarat sites also made an environmental protection pledge and have been working to reduce their environmental footprint:

During 2012 the Ranipet site increased its use of renewable electricity by 1,500% to some 2.7GWh. The power is sourced from a local green electricity initiative which uses woody biomass as fuel. This includes Juliflora and Cotton and Maize stalks and other material which would previously have been left to rot in the fields. The green electricity initiative has also helped to create local employment.

The Gujarat site, which is located in a region where there is a shortage of water, reduced its use of ground water by 65% from over 35,000m3 in 2011 to under 15,000m3 in 2012. This was achieved through improvements to the reverse osmosis water treatment facility, the recycling of 100% of the effluent from the paper plant through the use of ultra-filtration and disc filters and the treatment and recycling of water from the toilets and other domestic uses. The site team has further plans in hand to reduce water consumption in 2013.

EHS POLICY EFFECTIVENESS

In addition to the EHS Compliance Audit Programme, the Group monitors the effectiveness of its EHS Policy through a series of EHS key performance indicators (KPIs). These are reported monthly by all sites and are subject to twice-annual review and challenge at Group level with reporting of performance to the Executive Committee and the Board by the Chief Financial Officer.

The charts in this report summarise the Group's EHS performance in real terms, covering 100% of production sites and 100% of employees during the year. Environmental intensity KPIs are reported at constant currency and, where necessary, historic data has been restated to reflect changes to the business, in reporting methodology and to ensure year-on-year consistency.

As noted above, the Group commissioned an external assurance process from PwC and in 2012 expanded this to cover the Group's waste and recycling KPIs in addition to CO_2 intensity, energy intensity and water intensity that were assured in 2011. The assurance report from PwC is set out on page 15*. In addition, a work-programme is underway with a view to PwC providing assurance for the Group's lost time accident frequency data.

Environmental performance

Wherever possible the Group works to minimise the impact of its business on the environment. The Group monitors the effectiveness of its environmental policy through a series of environmental key performance indicators (KPIs) reported by all sites on a monthly basis with the Executive Committee and the Board receiving regular reports. The Group also sets targets for key aspects of its environmental performance. These targets are summarised in the table on page 20 with performance against each target reviewed by KPI below.

Key environmental impacts

Morgan Advanced Materials' key environmental impacts include the Scope 1 and Scope 2 CO_2 emissions due to the use of energy in the Group's processes and facilities, the consumption of raw materials, water use and discharge, the recycling and disposal of waste and the impact of products on the Group's customers' environmental performance.

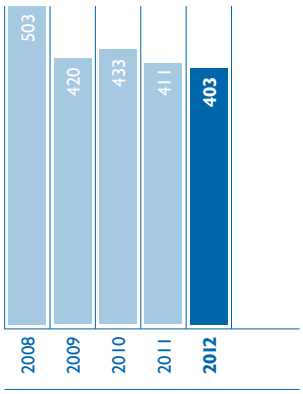
Morgan sets two-year targets for the reduction of the impact of its operations on the environment, as measured by CO_2 emissions, energy, waste and water intensity. The Group's 2012 performance is a report against the targets for the two-year period 2010-12.

During the coming year the UK Government plans to introduce a mandatory requirement for UK quoted companies to report on their greenhouse gas emissions in their Annual Report to shareholders. Morgan has been reporting its CO_2-related performance in its Annual Report since 2005 and believes it will be well placed to comply with this requirement.

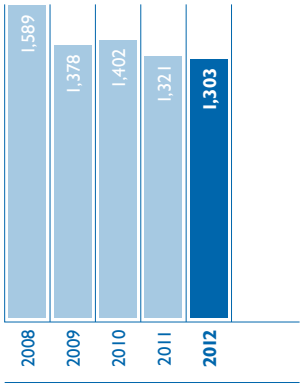
* Note the PwC assurance report was issued prior to the Group's change of name and is therefore addressed to the Directors of The Morgan Crucible Company plc.

EHS POLICY EFFECTIVENESS
continued

Total CO_2 intensity^*
Tonnes CO_2/£m revenue**



Energy intensity^+
MWh/£m revenue**



^ The 2012 and 2011 CO_2 intensity and energy intensity information has been subject to assurance by PwC. See the Independent Assurance Report on page 15 for further details.
* Scope 1 emissions from fossil fuel usage and Scope 2 CO_2 using country-specific electricity factors.
** Constant currency basis and updated to reflect changes in reporting methodology.
\+ Energy from all sources.

Environmental performance

Energy use and emissions intensity

Much of the Morgan Advanced Materials' production involves the use of high-temperature processes. The Group reports the environmental impact of the energy used in these process and elsewhere in its facilities as CO_2 emissions, indexed to turnover. This takes into account the use of all sources of energy. Business performance is assessed on the basis of energy and emissions intensity i.e. energy use and emissions relative to turnover.

The Group's CO_2 intensity^ was reduced by 2% in 2012 bringing the reduction over the two years 2010-12 to 7%. This was ahead of the target to reduce the CO_2 emissions intensity due to energy use by 5% over the two year period.

2012 energy intensity^ was down by 7% compared to 2010, with a marginal decrease in the year. The reduction over the two years was achieved through increased efficiency at many of the Group's energy-intensive businesses driven by energy reduction programmes. This 7% reduction follows on from the 12% reduction achieved over the two-year period 2008-10.

In absolute terms total CO_2 emissions due to energy use in 2012 were some 405,600 tonnes, including 152,600 tonnes of Scope 1 emissions and 253,000 tonnes of Scope 2 emissions. Total 2011 emissions were some 445,000 tonnes and 428,500 tonnes in 2010. Total energy use was some 1,313 GWh in 2012 against 1,430 GWh in 2011 and 1,388 GWh in 2010.

In addition to improving energy consumption and emissions performance through increased efficiency, changes in the Morgan Advanced Materials business and product mix influence the Group's energy and emissions when indexed to turnover. Emissions are also affected by changes in national electricity-CO_2 conversion factors. More details on Morgan Advanced Materials' carbon management can be found in the Group's submissions to the Carbon Disclosure Project. See www.cdproject.org for further details.

LOW CARBON ENERGY IN SWANSEA

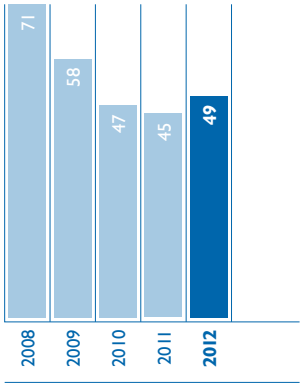
The 'green team' at the Morgan site in Swansea, UK has been working to reduce energy use and increase efficiency across the site which makes advanced carbon and graphite products for the world-wide mass transit, industrial, power generation and defence markets. The site's objective is to reduce fossil fuel use by 20% over the coming 12 months as part of a programme to enhance efficiency and international competitiveness.

Key to achieving this objective, and to engaging employees, is the 250 kW solar 'farm' commissioned during 2012. The 862 solar photo voltaic panels located on the roof of the site is the first phase of a longer term plan to increase the use of renewable technologies.

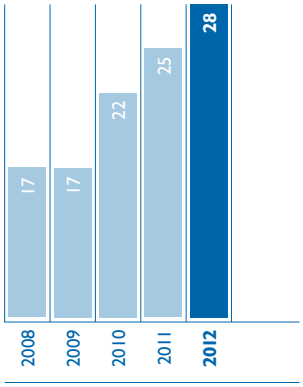
The green team approach helped the site win the 'Low Carbon Swansea award' with the judges commenting that they "… were impressed by the green team approach and the buy-in from the shop floor workers through to the General Manager." The site has also been short-listed for the Business in the Community national awards in June 2013.

EHS POLICY EFFECTIVENESS
continued

Waste intensity^~
Tonnes waste/£m revenue**



Recycling %^
% of total waste~ recycled



^ The 2012 waste intensity and recycling information has been subject to assurance by PwC. See the Independent Assurance Report on page 15 for further details.
** Constant currency basis and updated to reflect changes in reporting methodology.
~ Hazardous and non-hazardous waste, including recycled material.

Waste and recycling

Waste management is a key area of focus for the Group with opportunities to reduce the use of raw materials, packaging and other consumables. As well as saving money through waste reduction, by recycling certain waste streams including scrap metal, cardboard and other materials, the Group can turn costs into revenue.

Hazardous and non-hazardous waste is monitored according to waste stream and disposal route, with performance assessed on the basis of waste intensity (i.e. waste quantities indexed to turnover). The Group also monitors and targets the proportion of total waste which is recycled.

Reported waste intensity^ increased by 4% over the two years 2010-12, which is behind the target to reduce waste intensity by 5% over the period. The increase in reported waste intensity follows programmes to identify and dispose of accumulated waste and surplus materials and equipment across a number of sites world-wide. Additionally the Group undertook a thorough review of waste generation and reporting in 2012. As a result a small number of waste streams are included in the 2012 reports which were not fully covered by previous reports.

Total waste reported in 2012 was some 48,900 tonnes up from 48,600 tonnes in 2011 and against 46,400 tonnes in 2010.

The proportion of total waste which was recycled was 28%^ in 2012, up from 22% in 2010 which was ahead of the target to increase recycling by 5% of total waste over the two years 2010-12.

Over 13,000 tonnes of waste material was recycled during the year. This included some 1,100 tonnes of paper and cardboard, 200 tonnes of plastic, 1,100 tonnes of wood and 1,000 tonnes of metal. The remainder of the recycled material included scrap, dust, slag and other process by-products which were used by others as raw materials.

Consistent attention to waste management has helped to drive increased rates of recycling through increased site-level awareness of re-use, waste minimisation and recycling opportunities. As a result a number of major sites recycled over 80% of their waste during the year and the focus going forward will be on benchmarking under-performing sites as well as reducing total waste intensity.

RECYCLING TO CREATE SPACE AT ELKHART, IN

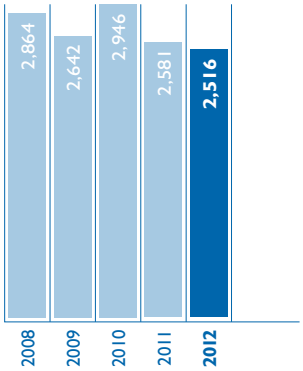
The Thermal Ceramics site in Elkhart, IN, USA took a team-based approach to engage employees in helping to recycle 160 tonnes of waste and to free-up some 8,000 square feet of space within the site's existing footprint. This space will help to accommodate a planned doubling of the site's output of high temperature insulation and fire protection materials for the aerospace and industrial sectors.

The multi-departmental team used a phased approach to clear out a production tooling storage area which had been used to store obsolete equipment, tooling and other items accumulated over a 20 year period.

In phase 1 the team sorted and tagged all the material in the area according to whether it was to be retained, repaired and sold or disposed of. In phase 2 the team worked with a local contractor specialising in the salvage, repair and resale of industrial equipment to realize value for the items which could be repaired and sold. In phase 3 the remainder of the material, a total of some 160 tonnes of metals, plastic, wood, cardboard and other material, was recycled.

EHS POLICY EFFECTIVENESS
continued

Water intensity^#
m^3/£m revenue**



^ The 2012 and 2011 water intensity information has been subject to assurance by PwC. See the Independent Assurance Report on page 15 for further details.
** Constant currency basis and updated to reflect changes in reporting methodology.
# Water from all sources, including process, irrigation and sanitary use.

Water use and intensity

The Group reports water use for potable, sanitary, irrigation and process purposes. A significant proportion of the Group's water usage is in production processes, approximately 60% of which is subsequently discharged. The Group monitors use of water from both on-site extraction and from local authority and similar sources and assesses performance on the basis of water intensity.

Water use intensity^ was down by 3% in the year, bringing the reduction the over the two years 2010-12 to 15%. This was ahead of the target to reduce water intensity by 5% over the two years 2010-12. This improvement was achieved through a focus on reducing water use at the Group's more water-intensive businesses, combined with further reductions achieved through re-use and recycling of water at a number of sites. Particular emphasis is placed on reducing water use in countries and regions of high water stress including in India and China.

Total water use in 2012 was 2.53 million m^3, down from 2.79 million m^3 in 2011 and from 2.92 million m^3 in 2010.

Environmental Regulatory Compliance

Morgan Advanced Materials received no fines or penalties in relation to environmental compliance matters during 2012. However, two facilities in the USA received notices of violation. At one site this related to the presence of Boron in the waste water discharge. The cause was identified, rectified and confirmed by retesting with no fines imposed. At a second site the issues related to the late submittal of a waste report, the site's air permit and to an acid scrubber pH neutralisation tank. All three issues were addressed and confirmed with no fines imposed.

The Group also has a small number of ongoing remediation programmes to address historical soil and groundwater contamination issues.

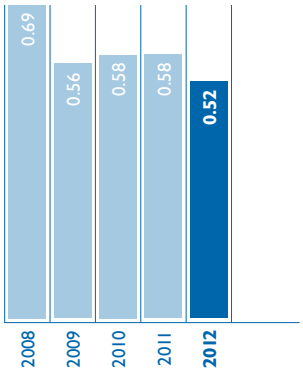
WATER REUSE AT KAILONG

The Thermal Ceramics site in Kailong, China is the Group's largest fibre manufacturing facility in Asia, producing high temperature insulating products including spun and blown fibre, vacuum formed boards and shapes and nine different types of insulating paper. Historically Kailong was also one of the Group's most water intensive sites in China.

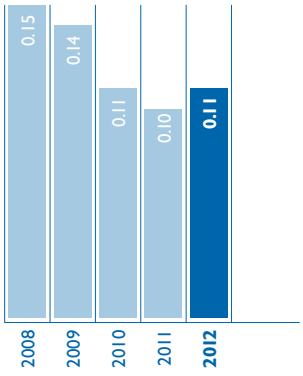
During 2011-12 the Kailong site team planned and implemented a series of water reduction and reuse initiatives, including segregation of process discharges for treatment and recycling, installation of UV sterilization and new disc filters. These initiatives, together with process changes, reduced water use by some 100,000m3 in 2012, cutting water intensity at the site by 38%. The quality of the remaining water discharged was also improved and the team at Kailong is looking to implement further performance enhancements in 2013.

EHS POLICY EFFECTIVENESS
continued

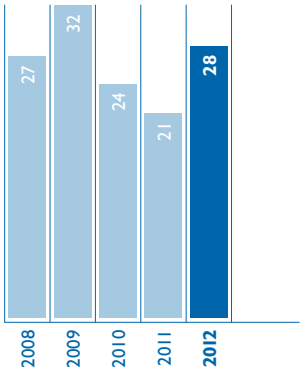
Lost time accident frequency*
LTAs/100,000 hours worked*



Health and safety-related lost time
% of total working time



Lost time per LTA*#
Days per LTA*



* Lost time accident (LTA): accident which results in one or more days' lost time.
\# Total time lost due to health and safety in 2012 divided by the number of lost time accidents reported in the year.

Health and safety
In accordance with the Group EHS policy outlined on page 7 Morgan Advanced Materials is committed to conducting its activities in a manner which achieves high standards of health and safety for all employees. The Group's policy statement on this is clear and communicated throughout the Group and health and safety metrics receive a high degree of focus at all levels of the business. The policy statement is supported by site level assessment and monitoring of risks.

As mentioned in the introduction, there were two fatal accidents involving employees in 2012. The accidents had different causes with the first fatality occurring at the Group's Yixing Thermal Ceramics facility in China when an employee became trapped in an automated unloading and stacking machine. The Group has conducted a review of machine guarding, operator training and related procedures at its manufacturing facilities worldwide and is committed to making any necessary improvements. A second fatality occurred when an employee at the Technical Ceramics site in Ruabon, UK suffered crush injuries whilst moving a piece of heavy machinery. This incident is subject to an on-going investigation by the United Kingdom Health and Safety Executive. Although differing in nature, these fatal accidents have demonstrated the importance of the behavioural safety culture throughout the Group and Morgan Advanced Materials is committed to introduce programmes to further enhance this in 2013.

The Group's health and safety KPIs include accident frequencies and causes and related lost working time. These are reported monthly by all sites to monitor the effectiveness of the Group's Health and Safety Policies and related systems. The Executive Committee and the Board receive reports and review health and safety matters on a regular basis.

The Group's health and safety reporting and analysis systems continue to be refined to enable the production of KPIs that more accurately reflect the health and safety situation throughout the Group and a work-programme is underway with a view to PwC providing assurance for the Group's lost time accident frequency data.

The health and safety KPIs in this report cover 100% of employees (2011: 100%).

FIRST AID TRAINING IN CHINA – KAILONG

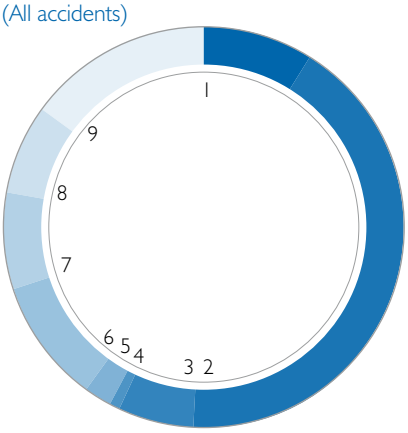
Morgan sites in China have been working with local hospitals and other qualified organisations to up-skill their first aid teams. Four sites have been through the programme so far, including the Kailong site where 20 employees participated, developing various skills such as CPR, resuscitation and administering first aid to casualties with different types of injury. These included wounds, shock, injuries to bones, muscles and joints, burns and scalds and eye injuries.

As pictured, the session at Kailong included practicing CPR on a 'CPR Annie' training mannequin.

The first aid skills programme is ongoing and is complemented by ergonomics training for both office and production staff. These training programmes included in the EHS training plan and training matrix for each site in China.

EHS POLICY EFFECTIVENESS
continued

Accident causes
(All accidents)



1 Muscoskeletal 9%
2 Cuts & abrasions 42%
3 Slips, trips, falls 6%
4 Fall from height 1%
5 Exposure to harmful substances 2%
6 Struck by object 10%
7 Strike stationary object 8%
8 Moving machinery 7%
9 Other 15%

Health and safety performance

Morgan Advanced Materials' long-term health and safety objective is to have no accidents or work-related illnesses. In 2012 the Group continued to extend its accident prevention and training programmes with the objective of reducing accident numbers and the time lost per lost time accident. Particular focus is placed on those sites with below-average performance as measured by their EHS KPI s and through the EHS Compliance Audit Programme.

In 2012 the frequency of lost time accidents across the Group was down 11% at 0.52 per 100,000 hours worked (2011: 0.58). The number of lost time accidents reported was 113 (2011: 131). Manual handling related cuts and abrasions remain the most common causes of accidents and the Group continues to address this, specifically targeting businesses with below-average performance.

All accidents are reported in the year in which the accident actually occurs, whereas the lost time, which impacts lost time as a % of total working time and the lost time per LTA metrics, is reported in the year in which the individual is away from work.

Reported lost time due to accidents and work-related illnesses as a percentage of working time increased from 0.10% in 2011 to 0.11% in 2012. This was caused by an increase of 12% in the number of days lost during 2012 and a 3% decrease in the number of hours worked. The increase in the number of days lost in 2012 largely related to time lost in the year due to accidents which occurred in 2011.

The reported average number of days lost per LTA in the year increased to 28 days from 21 days in 2011. This calculation was impacted by accidents that occurred and were reported in 2011 which resulted in lost time in 2012. Thus the 2011 figure includes the accident but not all of the lost time and the 2012 figure includes the balance of the lost time but not the accident. Whilst such items will always occur, in this instance it does lead to a large increase in the reported figure and, if the accidents and lost time were to be fully reported in the same period, then the increase in the days lost per LTA would be approximately 10%. There has been no change in the underlying nature or severity of the accidents reported.

Health and safety Regulatory Compliance

No reported health and safety enforcement prosecutions were received during the year, however, three sites received enforcement or violation notices, as follows:

One site in the UK received a notice in respect of a machine guarding issue. An additional guard was installed and the issue was cleared during a follow-up visit. A site in the USA also received a notice in respect of machine guarding and was fined US$4,550. A site in Australia received notices regarding training, signage and other issues. The notices were complied with and no fines were imposed.

INDEPENDENT ASSURANCE REPORT

Independent assurance report to the Directors of The Morgan Crucible Company plc.*

The Directors of The Morgan Crucible Company plc ('Morgan Crucible') engaged us to provide limited assurance on the information described below and set out in Morgan Crucible's EHS Report for the year ended 31 December 2012.

What we are assuring ('Selected Information')

The selected environment, health and safety ('EHS') data for the year ended 31 December 2012 marked with the symbol ^ presented in the EHS Report 2012. The scope of our work was restricted to the Selected Information for the year ended 31 December 2012 and does not extend to information in respect of earlier periods or to any other information in the EHS Report 2012.

How the information is assessed ('Reporting Criteria')

We assessed the Selected Information using Morgan Crucible's Reporting Criteria as set out at http://www.morgancrucible.com/governance/responsible-business/environment-health-safety[1].

Professional standards applied[2] and level of assurance[3]

We have used ISAE 3000 (limited level of assurance) and we have complied with the ICAEW Code of Ethics.

Understanding reporting and measurement methodologies

There are no globally recognised and established practices for evaluating and measuring the Selected Information. The range of different, but acceptable, techniques can result in materially different reporting outcomes that may affect comparability with other organisations. The Reporting Criteria used as the basis of Morgan Crucible's reporting should therefore be read in conjunction with the Selected Information and associated statements reported on Morgan Crucible's website.

Work done

Considering the risk of material misstatement of the Selected Information, we:

- Made enquiries of Morgan Crucible's management, including those with responsibility for EHS management and Group EHS reporting;
- Evaluated the design of the key structures, systems, processes and controls for managing, recording and reporting the Selected Information. This included visiting eight sites and analysing a further 31 sites, selected on the basis of their inherent risk and materiality to the group, to understand the key processes and controls for reporting site performance data to the group EHS team;
- Performed limited substantive testing on a selective basis of the Selected Information at corporate Head Office and in relation to the same 39 sites noted above to assure that data had been appropriately measured, recorded, collated and reported; and
- Assessed the disclosure and presentation of the Selected Information.

Morgan Crucible's responsibilities

The Directors of Morgan Crucible are responsible for:

- Designing, implementing and maintaining internal controls over information relevant to the preparation of the Selected Information that is free from material misstatement, whether due to fraud or error;
- Establishing objective Reporting Criteria for preparing the Selected Information;
- Measuring Morgan Crucible's performance based on the Reporting Criteria; and
- The content of the EHS Report 2012.

Our responsibilities

We are responsible for:

- Planning and performing the engagement to obtain limited assurance about whether the Selected Information is free from material misstatement, whether due to fraud or error;
- Forming an independent conclusion, based on the procedures we have performed and the evidence we have obtained; and
- Reporting our conclusion to the Directors of Morgan Crucible.

Our conclusions

As a result of our procedures nothing has come to our attention that indicates the Selected Information for the year ended 31 December 2012 has not been prepared in all material respects with the Reporting Criteria.

This report, including our conclusions, has been prepared solely for the Directors of Morgan Crucible as a body in accordance with the agreement between us, to assist the Directors in reporting Morgan Crucible's EHS performance and activities. We permit this report to be disclosed in the EHS Report for the year ended 31 December 2012, to enable the Directors to show they have addressed their governance responsibilities by obtaining an independent assurance report in connection with the Selected Information. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Directors as a body and Morgan Crucible for our work or this report except where terms are expressly agreed between us in writing.

PricewaterhouseCoopers LLP
Chartered Accountants
London
15 February 2012

1 The maintenance and integrity of Morgan Crucible's website is the responsibility of the Directors; the work carried out by us does not involve consideration of these matters and, accordingly, we accept no responsibility for any changes that may have occurred to the reported Selected Information or Reporting Criteria when presented on Morgan Crucible's website.

2 We have complied with International Standard on Assurance Engagements 3000 – 'Assurance Engagements other than Audits and Reviews of Historical Financial Information' issued by the IAASB, and with the applicable independence and competency requirements of the Institute of Chartered Accountants in England and Wales (ICAEW) Code of Ethics. To comply with those standards, our work was carried out by an independent and multi-disciplinary team of sustainability and assurance specialists.

3 Assurance, defined by the International Auditing and Assurance Standards Board (IAASB), gives the user confidence about the subject matter assessed against the reporting criteria. Reasonable assurance gives more confidence than limited assurance, as a limited assurance engagement is substantially less in scope in relation to both the assessment of risks of material misstatement and the procedures performed in response to the assessed risks.

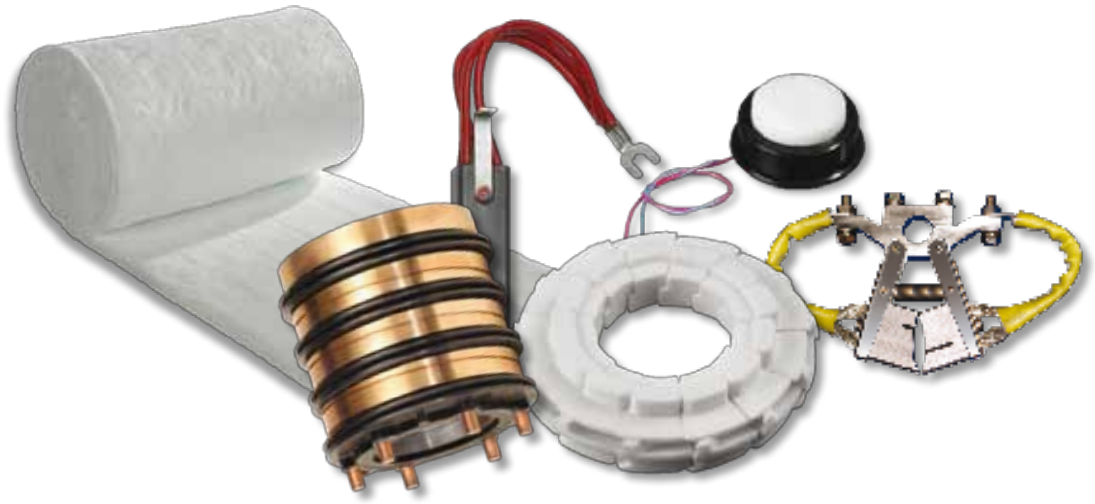
* Note the PwC assurance report was issued prior to the Group's change of name and is therefore addressed to the Directors of The Morgan Crucible Company plc.

MORGAN ADVANCED MATERIALS: ENHANCING GLOBAL SUSTAINABILITY

STRATEGY IN ACTION

Morgan identifies major opportunities in sectors driven by megatrends where its materials science and applications engineering skills can solve technically demanding challenges. The Company chooses its markets carefully, focussing on those in which it can achieve leadership quickly and then continue to refine its output to increase the proportion of high-margin, technically complex products.

HOW **ENERGY EFFICIENCY** ISSUES ARE CREATING OPPORTUNITIES ACROSS MORGAN ADVANCED MATERIALS' SECTORS AND MARKETS



The development of advanced materials science and engineering has a major role to play in the global drive towards energy efficiency. In implementing its strategic priorities, Morgan is ideally placed to provide the technical support that its customers need to plan their own approach to improving energy management.

HOW ENERGY EFFICIENCY ISSUES ARE CREATING OPPORTUNITIES ACROSS MORGAN'S SECTORS AND MARKETS

Energy demand is a crucial global issue. Advanced materials are increasingly playing a significant role in helping to develop greater energy efficiencies for a sustainable future.

As Global energy demand continues to rise, the solution to the world's energy problems will include optimisation of a range of traditional and renewable energy sources.

The dilemma of how to deal with rising energy demand will not be met by a single panacea solution. The way to make a difference and to start to reverse the global trend is through a combination of efforts. Energy efficiency improvements, clean energy initiatives and education to reduce consumption will all play a part. And in all these, materials science and developments in ceramics and carbon technology in particular, have a major role to play.

Morgan Advanced Materials is working with leading players in energy generation, distribution and usage on a wide range of significant projects, where incremental advances in the performance of critical components can facilitate step changes in commercial advancement and application.

The Company works with customers in energy and related industrial sectors all over world, but particularly in the high growth expanding industrial economies in China, India and Latin America.

In well-developed markets and dynamic growth economies, innovation in carbon and ceramics is helping to improve efficiencies in fossil fuel energy generation and distribution systems, and is a key enabler in the new clean energy infrastructures including wind, solar and electric vehicle technology.

In the drive to reduce energy consumption, ceramic materials are being used to make energy efficiency improvements in a wide variety of existing industrial and transportation systems, for example by reducing friction and increasing reliability. Ceramic and carbon materials are also used to provide high performance insulation for use in buildings and in industrial processes.

Central to Morgan's strategy, culture and vision are the first-class people that make it happen. The company strives to attract, retain and develop the very best for every aspect of the business from engineering excellence and technical innovation to business management and customer service. This fundamental recognition of the contribution of the individual is apparent throughout the company's activities from its outstanding graduate and apprenticeship schemes to its acquisition strategy and lean management team.

In the energy sectors there are many examples of how Morgan's expert teams, advanced materials science and engineering are making a contribution to the cumulative global effort to manage climate change now and in to the future.

Carbon and ceramic components play a critical role in traditional and renewable power generation and throughout the electricity supply chain.

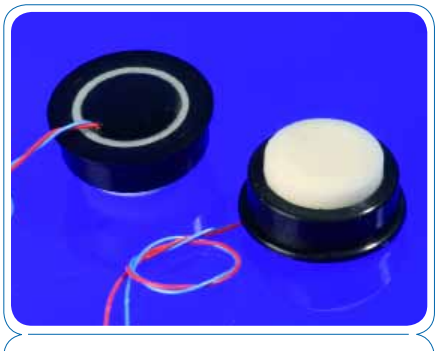
World-renowned for performance and reliability, Morgan's carbon brush technology is used in coal, gas, nuclear and wind power plants all over the world and is at the heart of electricity storage and distribution systems for applications from rail transport to electric vehicles.

Ceramic technology is contributing to the development of solar energy systems in the production of photovoltaic cells using silicon wafers and by thin film deposition.

For example, alumina/silica rollers are used to move the wafers through the high temperature (900°C) deposition furnaces without damage, and fully stabilised zirconia is used for high reliability thermocouples. Similarly, high purity aluminium oxide bars and locator pins are used for wafer lifting, stacking and transporting between furnaces. They provide greater strength at high temperatures and eliminate the buckling associated with metal equipment.

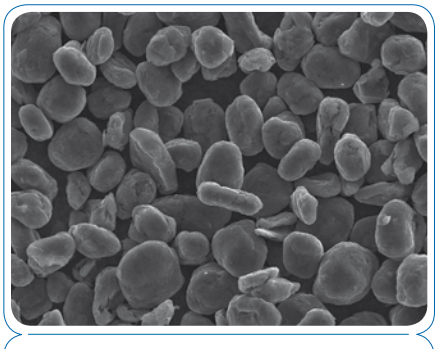
A specialist ceramic, Pyrolytic Boron Nitride (PBn) has been developed by Morgan for use in crucibles and boats used to hold materials for thin film deposition. It is chemically inert at high temperatures, has low wetting to alloys and is resistant to chemical shock. As a result, the crucibles remain dimensionally stable and do not react with the molten material.

ENHANCING SUSTAINABILITY



Smart metering
Piezoelectric ceramic sensors enable accurate measurement and control of gas usage.

Rail
Morgan materials ensure reliable and efficient operation of electric trains.



Electric cars
The development of new carbon materials holds the key to better performing electric cars.

SMART METERING

Morgan Ceramics is developing ultrasonic piezoceramic sensors which provide utility companies and OEMs with high reliability, high accuracy gas measurement cost-effectively, making high volume manufacture of smart domestic gas meters a reality.

RAIL

Rail is on average four times more energy efficient than road transport. It has huge potential to make a difference to fuel consumption globally. Carbon technology is at the heart of rail transportation with brushes, collectors and rotary current transfer products used in over-ground and underground rail and tram systems all over the world.

Railway applications are exceptionally demanding on these components; they have to be able to cope with large current peaks, weak load operation, intermittent usage and aggressive environments and especially in long distance networks, perform in high ambient temperature differentials and humidity.

Morgan Engineered Materials' advanced technology components perform optimally over a wide range of environments from sub zero to >40°C ambient and at up to 2km above sea level. They are designed for high reliability on all types of rolling stock from high-speed trains to long haul trains covering varying terrain, changeable loads, impact and vibration.

ELECTRIC CARS

The development of new carbon materials holds the key to better performing electric cars.

Electric vehicles are starting to become a reality on our streets. All the leading car manufacturers now have models available, but battery life remains the limiting factor, with few being capable of more than 100 miles range.

Lithium Ion battery anodes are made from highly engineered graphite powders, and it is development of these materials that holds the key to longer lasting batteries and better performing electric cars.

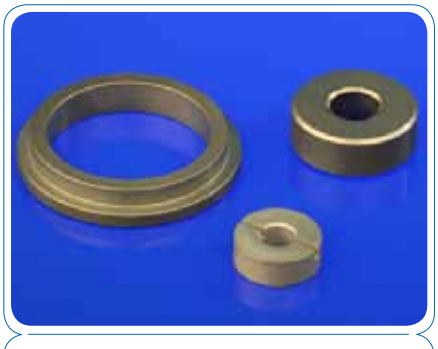
Morgan Engineered Materials is developing a full range of carbon-based anode materials. These include novel performance-enhancing coatings as well as nano-metal additives for improving capacity. The company is working with academic and industrial partners (University of Cambridge and Boston-Power) to develop metal-loaded carbon nanoparticles tailored for this application.

4x
Energy efficiency of rail vs. road

INCREASING EFFICIENCY

LED technology
Carbon and ceramic materials are key enablers for LED technology and for low cost smart gas meters.

Insulation
Advances in ceramic insulation materials help industrial installations to reduce energy consumption.



Pumping systems
Pumping systems account for nearly 20% of the world's energy demand.

LED TECHNOLOGY

Morgan Engineered Materials makes graphite felt which is used in LED sapphire production to provide a uniform thermal environment to support crystal growth. This highly stabilized, long-life insulation enables long process cycles and the high chemical inertness of the insulation minimizes contamination of the sapphire ingot.

INSULATION

Morgan Ceramics' new low bio-persistent Superwool® Plus fibre, designed for use in duct and chimney insulation, process heater linings, pipe wrap and automotive exhaust heat shields is 17% more energy efficient than traditional insulation products such as Refractory Ceramic Fibre (RCF) and Alkaline Earth Silicate (AES).

High-temperature insulating fibre, bricks and monolilithics are used to help optimise thermal efficiency in industrial applications from 500°C to 1,600°C.

+17%
Superwool® increase in energy efficiency

PUMPING SYSTEMS

Improvement in the efficiency of pumps and pump systems has the potential to impact global energy consumption significantly.

Morgan Ceramics has developed a family of graphite-loaded silicon carbide materials based on the patented PGS100 for hardwearing seals in long-life pumps for demanding processing applications such as those with extremely caustic environments, abrasive process fluids or high pressures and operating temperatures.

The material contains a free-graphite, which improves lubricity, for greater dry run survivability and better thermal shock resistance than conventional sintered materials. The graphite also gives it better pressure-velocity capability between hard-face mating pairs. As a result, it lasts twice as long as other materials in harsh field conditions.

GROUP EHS TARGETS

Morgan Advanced Materials sets two year targets for environmental performance. The Group's 2012 environmental performance is a report against the targets for the period 2010-12.

In addition to Group targets, Morgan Advanced Materials' businesses set targets and undertake initiatives appropriate to their specific opportunities for improvement, as is highlighted in a number of the case studies in this report.

AREA	2012 TARGET/OBJECTIVE	2012 PROGRESS	FUTURE OBJECTIVE
Environmental and Health and Safety data reporting	Consider the potential for external assurance of the Group's waste and lost time accident frequency related KPIs in 2012.	**Ongoing:** Independent external assurance was extended to cover the Group's waste and recycling KPIs in 2012 in addition to the CO_2, energy and water data which were assured in 2011.	Gain external assurance for the Group's lost time accident frequency related KPIs in 2013.
Environmental management systems	Continue to extend ISO 14001 coverage.	**Achieved:** A further two sites were certified to ISO 14001 during the year.	Maintain and where appropriate extend ISO 14001 coverage.
Reduction in emissions intensity	A 5% reduction in emissions intensity due to energy use over the two years 2010-12.	**Achieved:** Emissions intensity due to energy use improved by 7% over the two years 2010-12.	A further 5% reduction in emissions intensity due to energy use over the two years 2012-14.
Reduction in waste intensity	A 5% reduction in waste intensity over the two years 2010-12.	**Not achieved:** Waste intensity increased by 4% over the two years 2010-12.	A 5% reduction in waste intensity over the two years 2012-14.
Increase recycling	Increase proportion of total waste which is recycled by 5 percentage points over the two years 2010-12.	**Achieved:** The proportion of total waste which is recycled was up by six percentage points to 28% over the two years 2010-12.	Continue to increase the proportion of total waste which is recycled over the two years 2012-14.
Reduction in water use intensity	A 5% reduction in water intensity over two years 2010-12.	**Achieved:** Water use intensity improved by 15% over the two years 2010-12.	A 5% reduction in water use intensity over the two years 2012-14.
Health and safety management systems	Continue to ensure all production sites have H&S management systems. Work to extend OHSAS 18001 coverage.	**Ongoing:** All production sites are covered by an H&S MS. One further site was certified to OHSAS 18001 over the two years 2010-12. Seven further sites are planning certification.	Work to introduce programmes to enhance the behavioural safety culture across the Group.
Reduction in lost time accident frequency	Continue to make progress towards the long term goal of zero accidents.	**Ongoing:** Lost time accident frequencies were 11% lower in 2012 than 2011 at 0.52 per 100,000 hours worked.	Reduce accident frequencies to make further progress towards the long term goal of zero accidents.
Reduction in lost time	Continue to reduce the average time lost per LTA.	**Not achieved:** Average lost time per lost time accident increased from 21 days per LTA in 2011 to 28 days in 2012.	Reduce the average time lost per LTA and implement additional monitoring systems to further manage lost time.
EHS compliance audit programme	Continue to audit all manufacturing sites on a three-year rolling cycle.	**Ongoing:** Sites are audited on a three-year cycle with 29 EHS audits completed during 2012.	Continue to audit all manufacturing sites on a three-year rolling cycle with 36 EHS compliance audits planned for 2013.

NOTES

1. Data gathering and comparisons. Morgan's EHS reporting processes are focussed on data that is of EHS and commercial value and are increasingly accurate. Thus improvements in environmental and health and safety performance reporting and measurement may increase or decrease some reported figures and require historic data to be restated. Where possible, the Group ensures meaningful comparisons between annual performance indicators are available.

2. Assurance. In 2012 the Group engaged PwC to provide independent external assurance on the Group's CO_2 intensity, energy intensity, water intensity, waste intensity and recycling information as marked with the symbol ^ in this report and in the Annual Report 2012. The report from PwC is set out on page 15.

In addition, all Morgan Advanced Materials manufacturing facilities are regularly reviewed under the Group's EHS Compliance Audit Programme. Those sites certified to ISO 9001, ISO 14001, OHSAS 18001 and other standards have regular external audits. The Group's Director, Environment, Health and Safety and the Divisional EHS teams also work with independent external consultants to review and where appropriate verify the Group's environmental and health and safety related key performance indicators.

3. Guidelines. A variety of guidelines, reports, standards and other authorities have been consulted and utilised in the compilation of this report. These include the UK Government's Department for Environment, Food and Rural Affairs environmental reporting guidelines, the Global Reporting Initiative's Sustainability Reporting Guidelines 2006 and the International Organization for Standardization's ISO 14001 standards.

4. External Assistance. Morgan Advanced Materials utilised the assistance of CSR Consulting Ltd. in the compilation and production of this report.

5. Feedback. The Group welcomes feedback on this EHS report and comments on ways reporting could be further developed at Morgan Advanced Materials. You can contact the Group by e-mail at ehs@morganplc.com or write to Morgan Advanced Materials plc, Quadrant, 55-57 High Street, Windsor, Berkshire SL4 1LP, United Kingdom.

Employees and others who have concerns regarding EHS or other matters which cannot be satisfactorily resolved locally may also use the Morgan Advanced Materials Ethics Hotline. Further details are available on the Morgan Advanced Materials website and on the Group's intranet.

Morgan Advanced Materials plc
Quadrant, 55-57 High Street
Windsor, Berkshire SL4 1LP
Tel: +44 (0)1753 837000
Fax: +44 (0)1753 850872

www.morganadvancedmaterials.com