



## MORGAN ADVANCED MATERIALS



MORGAN ADVANCED MATERIALS IS COMMITTED TO BUILDING A SUSTAINABLE COMPETITIVE ADVANTAGE IN ATTRACTIVE MARKETS WITH TRULY DIFFERENTIATED PRODUCTS AND SERVICES UNDERPINNED BY WORLD-LEADING TECHNOLOGY.

The Group produces 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.

The Group's 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, the Group supplies innovative, differentiated products made from highly technical advanced materials which enable its customers' products and processes to perform more efficiently, more reliably and for longer.

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## AT A GLANCE

#### OUR STRENGTHS

- → Leading technology and material science capability and process know-how
- ightarrow Application engineering
- ightarrow Customer focus, reputation and brand
- ightarrow Strong market positions
- ightarrow People and culture

#### our markets



HEALTHCARE Morgan Advanced Materials produces components used in medical monitoring and diagnostic instrumentation and tools for treatment and surgery.



PETROCHEMICAL Morgan Advanced Materials makes critical components for tough assignments in the global petrochemical industry.



TRANSPORTATION Morgan Advanced Materials makes high-performance products to exacting standards for aerospace, automotive, marine and rail applications.



ELECTRONICS Morgan Advanced Materials makes components that help the electronics industry in its drive towards higher performance and reliability in smaller, lighter, more robust products.



SECURITY AND DEFENCE Morgan Advanced Materials supplies precision-engineered materials, components and assemblies to meet the exacting standards of the international defence and security markets.



#### ENERGY Morgan Advanced Materials develops products for power distribution and generation from renewable and traditional sources and insulation materials for heat management.



INDUSTRIAL Morgan Advanced Materials designs and manufactures products for use in a broad range of challenging process and manufacturing environments.

# OUR GLOBAL FOOTPRINT APPROXIMATELY 8,800 EMPLOYEES MANUFACTURING IN OVER 30 COUNTRIES SELLING INTO OVER 100 COUNTRIES MARUFACTURING IN OVER 30 COUNTRIES

#### PRINCIPAL PRODUCTS

#### I. INSULATING FIBRE, BRICK AND MONOLITHICS

Extensive range of high-temperature insulation products used to reduce energy consumption in industrial processes.

## **2.** ELECTRICAL CARBON, LINEAR AND ROTARY TRANSFER SYSTEMS

Used to transfer current and data between stationary and rotating or linear moving parts, in motor, generator, current collector and rotary signal applications within mining, power, transportation and industrial markets.

#### 3. SEALS AND BEARINGS

Providing improved performance, reliability and extended life to pumps and similar equipment used in petrochemical, aerospace and water applications.

#### 4. CERAMIC CORES FOR INVESTMENT CASTING

Consumable products used to create intricate internal cooling cavities in aero engine and industrial gas turbine blades.

## 5. PIEZOELECTRIC SENSORS AND TRANSDUCERS

Products for measurement duties including level, flow, vibration and pressure in aerospace, medical, industrial and defence applications.

### 6. CRUCIBLES FOR METALS PROCESSING

Comprehensive range for optimum performance in non-ferrous metal and alloy melting in foundries, die-casters and metal processing facilities.

#### 7. PERSONNEL BALLISTIC PROTECTION

Lightweight armour systems combining advanced ceramics with high-technology composites to create high-performance products.





## FINANCIAL, REGIONAL AND OPERATIONAL HIGHLIGHTS

#### FINANCIAL AND REGIONAL HIGHLIGHTS

- In very challenging markets, revenue on a like-for-like basis decreased by 0.8% compared to 2014.
   The full-year book-to-bill ratio was 0.99 times, with the outstanding
- order book c5% below that at the end of last year on an organic and constant currency basis.
- $\rightarrow$  EBITA margin for the full year was 12.0% (2014: 12.8%).
- Cash flow from operations was strong at £135.6 million (2014: £120.0 million).
- Net debt at the year end was £216.0 million (2014: £207.0 million). Net debt to EBITDA ratio at the year end was 1.6 times (2014: 1.4 times).
- The Group has booked a £22.1 million charge before tax in the income statement (2014: £51.9 million) in respect of a number of specific adjusting items, details of which are provided in the Financial review on page 45. Due to the nature of these items they are excluded from the underlying profit figures. All but £0.5 million of the 2015 charge relates to non-cash items.
- Proposed final dividend of 7.0 pence per share (2014: final 7.0 pence per share), which would result in a full-year dividend of 11.0 pence (2014: 10.9 pence), a 0.9% increase.
- → In North America, the majority of businesses saw a decline in revenue in the second-half of 2015 having achieved revenue growth in the first-half. For the full year, revenue decreased by 2.3% on a like-for-like basis compared to 2014, maintaining mid-teen margins of 14.0% (2014: 14.9%).
- The Europe region achieved like-for-like revenue growth of 1.7% compared to 2014 despite a weaker second-half of the year. Full-year reported European EBITA margins declined to 11.7% (2014: 12.2%).
- The Asia/Rest of World region continued to experience headwinds in trading with revenue down 1.5% on a like-for-like basis. China remained the principal headwind, with revenue down 11.2% year on year. EBITA margin at reported rates reduced to 11.6% (2014: 12.8%).
- The Group has carried out a review of its strategy and is setting out its overall vision and direction and six execution priorities to position Morgan to deliver resilient financial performance and faster growth. Further details are given in the Chief Executive Officer's review on pages 7 to 9.

EBITA MARGIN FOR THE YEAR CASH FLOW FROM OPERATIONS ULL-YEAR DWIDEND

## CHAIRMAN'S STATEMENT



ANDREW SHILSTON CHAIRMAN THE GROUP HAS DELIVERED SOLID FINANCIAL PERFORMANCE IN A DIFFICULT TRADING ENVIRONMENT. THE REVIEW OF THE GROUP'S STRATEGY, THE CHANGES TO THE ORGANISATION STRUCTURE, AND THE SETTING OF CLEAR EXECUTION PRIORITIES POSITIONS THE GROUP WELL TO DEAL WITH CHALLENGING MARKET CONDITIONS.

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### CHAIRMAN'S STATEMENT continued

2015 was another year when Morgan demonstrated the resilience of its current portfolio of products and businesses. Despite the collapse in the oil price affecting a number of our customers and the uncertainties in many markets, particularly China, the Group delivered a Group EBITA and a cash flow from operations very much in line with expectations, albeit with an EBITA margin a little lower at 12.0% compared to 12.8% in 2014. Sales at constant currency were broadly the same as in 2014 at £911.8 million. Cash performance was also good with net debt of £216 million at the end of the year despite heavy investment in capital expenditure. It is proposed that the final dividend remains unchanged at 7.0 pence per share, which would take the full-year dividend to 11.0 pence, compared with 10.9 pence in 2014.

The Board continues to believe that the technology, applications engineering and customer relationships the Group possesses should enable revenue to grow in years to come. It is also recognised that despite the significant steps taken to exit low-margin businesses, the Group remains too complicated and needs to focus on fewer products and markets, concentrating management effort and financial investment on those that offer the greatest opportunities for growth.

It is with great pleasure that the Board welcomes Pete Raby as the new Chief Executive. As he explains in his review, considerable progress has been made in defining a new framework for the Group, both in terms of addressable markets and changes to the way we operate in order to capitalise on opportunities. The Board fully supports these changes, which build on the solid foundation established over the last 10 years, but it will take time, particularly with uncertain markets, for the benefits to be realised.

Pete Raby became Chief Executive in August and for the first seven months of the year Kevin Dangerfield was the acting CEO, a role he performed very well alongside the responsibilities of being the Chief Financial Officer. The Board is very grateful for these efforts.

The Chief Operating Officer, Andrew Hosty, left the Group at the beginning of 2016 after 24 years with the Group, and the Board thanks him for his contribution in helping to position the Group for growth. We wish him well for the future. Other changes to the Board have recently been announced with the appointment of Helen Bunch, effective 24 February 2016, and the stepping down of Victoire de Margerie on 4 February due to the growth in her other commitments. The Board thanks Victoire for her significant contribution to the Group over the last four years and is delighted to welcome Helen. I believe that the composition and operation of the Board allows it to make an effective contribution to the progress of the Group.

The changes that Pete Raby is proposing to the Group will involve considerable efforts and offer new opportunities to many employees in the Group. It will also involve some roles being eliminated. The Board wishes to recognise the impact the new organisation will have on everyone and to recognise in advance the contribution by all employees in making the transition as smooth as possible.

ANDREW SHILSTON CHAIRMAN



## CHIEF EXECUTIVE OFFICER'S REVIEW



PETE RABY CHIEF EXECUTIVE OFFICER

WITH GOOD BUSINESSES IN ATTRACTIVE MARKETS AND COMMITTED EMPLOYEES, WE HAVE A NUMBER OF OPPORTUNITIES TO GROW. GOING FORWARD, WE WILL FOCUS ON OUR CORE STRENGTHS AND ON DOING FEWER THINGS BETTER, IN ORDER TO DELIVER RESILIENT FINANCIAL PERFORMANCE AND FASTER GROWTH. I am delighted to be reporting to you as the Chief Executive Officer of Morgan Advanced Materials plc. My decision to accept this role was based on the challenges and opportunities that I thought Morgan would offer and my experience over the seven months since I joined has affirmed this decision. Morgan is a good business with committed employees, differentiated technology, strong applications engineering capability and a good reputation with our customers.

Before I comment on the results for the year and expectations for the future I want to take the opportunity to thank Kevin Dangerfield and Andrew Hosty for their contribution in 2015. Kevin was Interim CEO from the start of the year until my arrival in early August and led the Group well during that period.

Andrew Hosty left the Group at the beginning of 2016. In his 24 years with Morgan, most recently in the role of Chief Operating Officer, Andrew made a considerable contribution to the Group. I would like to thank him for his commitment and service and wish him well for the future.

#### Group results

Group revenue for 2015 was £911.8 million, 1.1% below 2014 at reported exchange rates. On a like-for-like basis, Group revenue was lower by 0.8% – growth in Europe, particularly in the Thermal business, was offset by weaker conditions in a number of North American markets and in Asia, where sales in China were approximately 10% lower than in 2014.

Like-for-like sales in the second-half of 2015 were 3.1% lower than in the first-half of 2015. Whilst Asia achieved some revenue improvement in second-half, with strong growth in Korea and Japan, this was more than offset by revenue declines in Europe and North America, reflecting the wider slowdown in those markets.

## CHIEF EXECUTIVE OFFICER'S REVIEW continued

The EBITA margin of 12.0% for 2015 compares with the 2014 margin of 12.8%, with the weaker trading conditions impacting margins, partially offset by cost reductions.

Group underlying EPS reduced to 20.8 pence (2014: 22.1 pence).

During 2015 the Group increased its R&D investment to 2.8% of revenue and successfully established the new Global Materials Centre of Excellence for structural ceramics in Stourport, UK.

This is an important further step in strengthening our technology development capability and accelerating the development and introduction of new products.

Net capital expenditure of £62.7 million was significantly higher than the £32.5 million in 2014. The Group has continued its investment in additional capability and capacity, particularly in the Asia/Rest of World region and in the insulating ceramic fibre business stream, to support future growth. In addition to this, the 2015 capital expenditure included approximately £12 million for the acquisition of the freehold of the Swansea, UK facility.

Operating cash generation was good, with a net cash inflow from operating activities of £135.6 million (2014: £120.0 million). Net debt at the year end was £216.0 million (2014: £207.0 million). The net debt to EBITDA ratio at the year-end remained relatively low at 1.6 times – the increase relative to the 1.4 times at the end of 2014 was due largely to the high level of capital expenditure in 2015, but the Group remains well within its banking covenants and has good headroom and balance sheet capacity for appropriate future investment.

#### Group strategy review

Between September 2015 and February 2016 we have completed a review of the Group's strategy and have set the overall vision and direction for the Group. We have assessed our strengths and weaknesses, reviewed the market position and outlook for our key technologies and products and developed a long-term goal for the Group and a set of medium-term execution priorities.

Our long-term goal is to build a Group with distinctive capabilities and performance in three areas:

- I. Materials science capability and technology
- 2. Application engineering capability
- 3. Customer and end-market focus

We have strengths in these areas today to build on, and these capabilities will be our focus. Through the application of our skills in these areas we will add value as a Group. We will apply these skills in markets that are growing and where we can operate at scale, on a global basis. We will apply these skills to solve difficult materials-based problems for our customers, ethically and safely, and where they value our differentiated solutions. This set of capabilities provides a resilient and distinctive source of differentiation and is an enduring strategic goal for the Group.

To reach this goal we need to develop our capabilities further and address performance gaps in the business. We have set six execution priorities that we will pursue over the next three years to strengthen the Group and deliver resilient financial performance and faster growth:

#### I. Move to a global business structure

At the same time as the release of the 2015 full-year results, we have announced a new management structure which sees the Group being organised on a global business basis, with two global divisions and six business units:

- → Thermal Products division. Organised in two global business units:
- -Thermal Ceramics
- Molten Metal Systems
- → Carbon and Technical Ceramics division. Organised in three global business units: – Electrical Carbon
  - -Seals and Bearings
- -Technical Ceramics
- → Composites and Defence Systems. A single global business unit.

This re-organisation will improve global co-ordination across the Group and will strengthen accountability within each global business unit. There will be a simplified approach to global customers and markets, increased efficiencies driven through best practice sharing and better leverage of R&D across regions. There will be greater operational focus, including better planning and management of our manufacturing footprint, better alignment of technology development priorities with customer needs and growth opportunities in global market segments. The Asia/Rest of World region is an important growth driver for the Group and the investment in capability and capacity will continue and there is a dedicated senior resource in the structure to drive Asian growth. Where appropriate, resources will continue to be shared, for example in IT and key HR functions, within regions rather than diluted or replicated.

#### 2. Improve our technical leadership

We will increase our R&D investment to grow our technical lead and accelerate new product development, reducing time to market. We have two successful centres of excellence today, Insulating Fibre, part of Thermal Ceramics, and Structural Ceramics, part of Technical Ceramics, and two more will be established, Brazing and Joining, in Technical, and one for Carbon Science that will support Electrical Carbon and Seals and Bearings. These centres allow us to concentrate development efforts for these materials and capabilities. R&D spend was increased to 2.8% of sales in 2015 and we anticipate increasing this by around 1% of sales over the next three to five years, funded by savings from improved operational execution. We will strengthen our stage gate development process and ensure it is applied consistently across the Group.

#### 3. Improve our operational execution

We have a number of opportunities to improve our operational execution – both our efficiency and our effectiveness. The operational opportunity varies by business unit and we will allocate capital and target specific improvements to efficiency and effectiveness on a businessby-business basis. For example, our Thermal Ceramics business will target efficiency improvements through a combination of global best practice implementation, application of lean manufacturing techniques and global sourcing of raw materials; the Technical Ceramics business will focus on improvements in quality, yield, scrap and delivery; and, Electrical Carbon will focus on capacity utilisation and efficiency.

#### 4. Drive sales effectiveness and market focus

Through the change in organisation structure we will strengthen accountability for global customers and simplify co-ordination for global end-markets within the business units. During 2016 we will be focused on improving a number of aspects of our sales process and capabilities. We will focus on our sales process and its efficiency, the management of key customer accounts, the management of our distribution channels and deepening our understanding of end-markets and their faster growing segments. The Group has a good relationship with its existing customers but there is more to be done to win new customers and take our solutions to new markets.

### 5. Increase investment in people management and development

We are aiming to strengthen our leadership capability and deepen functional capabilities across the business, including in sales and engineering. Senior leaders will be benchmarked externally, new talent introduced and future leadership candidates identified from within the business. Performance management will be enhanced for the Group's top management and the structures and targets for incentive schemes will be reviewed. The Group will invest more in executive training and create clear career paths for its technologists and engineers. The intake of graduate trainees will be increased from 30 to 50 a year over the next four years.

#### 6. Simplify the business

Through the re-organisation of our business we will focus on running each business unit on a global basis, looking, over time, to build our business units to global scale and exit those products and markets where we cannot achieve that.

We will continue to refine our strategy during 2016 and in particular will build our implementation plans in greater detail and refine our approach as we learn from the initial implementation work.

#### Looking forward

With the global market environment particularly uncertain as we enter 2016, we have planned prudently for the year. We will continue to invest in priority technologies and capabilities to improve the resilience of the Group, improve our execution and position us for future growth.

#### PETE RABY CHIEF EXECUTIVE OFFICER

## WHAT MORGAN DOES

#### GROUP ACTIVITIES

Morgan Advanced Materials is a world-leader in advanced materials, focused on specialist ceramics, carbon and composites. Working at the forefront of materials science, the Group supplies differentiated products to a range of attractive growth markets, satisfying technically demanding applications and enabling customers' products to perform more efficiently, reliably and for longer in a wide range of markets.

#### **BUSINESS STRUCTURE**

Operating from approximately 80 manufacturing facilities, supported by a network of sales offices, and employing approximately 8,800 people, Morgan Advanced Materials has a significant operational presence in all the world's major regions, serving customers in more than 100 countries.

Through 2015 the Group reported through three geographical Regions, North America, Europe and Asia/Rest of World, each offering the full range of Morgan's product and services. The Regional management teams collaborate closely in terms of product and market development and delivering service excellence, providing an effective single point of contact for customers.

#### PRODUCTS

Morgan Advanced Materials manufactures an extensive range of products, satisfying a variety of applications across numerous end-markets.

The principal product ranges are:

- → Electrical carbon, linear and rotary transfer systems – 14% of Group revenue in 2015 – primarily used for transferring electrical energy in motor and generator applications within mining, transportation and power generation markets.
- → Seals and bearings 8% of Group revenue in 2015 – carbon/graphite and silicon carbide components which deliver improved performance, reliability and extended life to pumps and similar equipment used in petrochemical, aerospace and water applications.

- → Ceramic cores for investment casting 5% of Group revenue in 2015 – consumable products used to create intricate internal cooling cavities in aero-engine and industrial gas turbine blades.
- → Piezoelectric sensors and transducers 4% of Group revenue in 2015 – products for measurement duties including level, flow, vibration and pressure in aerospace, medical, industrial and defence applications.
- → Crucibles for metals processing 4% of Group revenue in 2015 – comprehensive range for optimum performance in non-ferrous metal and alloy melting in foundries, die-casters and metal processing facilities.
- → High-technology composites 3% of Group revenue in 2015 – which are combined with the Group's advanced ceramics for lightweight armour systems, providing ballistic protection in the form of personnel body armour or vehicle armour.

In addition to these principal product ranges, Morgan also offers application-specific products for each of its target markets. These products are designed and manufactured to specific customer requirements using a wide range of structural ceramics, electro ceramics and precious metals.



#### **1ARKETS**

THE GROUP OPERATES IN A NUMBER OF MARKET SECTORS; THE PERCENTAGE OF GROUP REVENUE FROM EACH OF THESE, TOGETHER WITH EXAMPLES OF THE PRODUCTS MORGAN SUPPLIES, IS PROVIDED ON THE FOLLOWING PAGES.

#### INDUSTRIAL

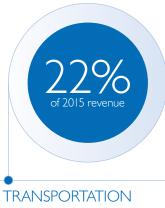
Morgan Advanced Materials designs and manufactures products for use in a broad spectrum of challenging processes and manufacturing environments.

The Group's advanced materials offer a wide range of performance characteristics, including superior insulating properties, dimensional stability, strength and stiffness.

With these materials, the Group engineers components which are highly resistant to chemical and physical wear, corrosion and extreme heat. These components are at the heart of many industrial processes where they drive optimised process efficiency and productivity, alongside reduced waste, improved safety and lower environmental impact.

For example, the introduction of a range of bespoke caster tips made from a special formulation of Morgan's low biopersistent Superwool<sup>®</sup> fibre range, has resulted in the elimination of all RCF (refractory ceramic fibre) materials from Hydro's aluminium production plant in Norway – representing a major step change in health and safety. Morgan created a special formulation of Superwool<sup>®</sup> fibre for this application and even modified its production process to eliminate the possibility of the 'shot' within the fibre creating marks on the aluminium being processed.

Meanwhile, Morgan's relationship with AETC Ltd, one of the world's premier manufacturers of turbine blades for the aerospace and industrial gas turbine sectors continues to go from strength to strength. New programmes are seeing Morgan design and test prototype cores to prove that they meet profile tolerances which can be as tight as +/- 0.08mm. The cores are made from Morgan's proprietary K120 directionally solidified single crystal material which boasts excellent high-temperature stability, making it ideal for use with alloys requiring high-temperature pre-heats.



Morgan Advanced Materials makes highperformance components and sub-assemblies to exacting standards for aerospace, automotive, marine and rail applications, including carbon brushes and collectors for trains and hightemperature fibre products used for emission

control in vehicles.

The Group combines its materials science and manufacturing capabilities to offer consistent and reliable products in flexible production quantities, from small – even one-off – runs to high-volume.

Over the years the Group has applied its materials know-how to solve engineering challenges and enhance performance for air, sea and land transport systems.

Morgan's latest earth return brush holder system for the rail sector is designed to better overcome the problems of vibration and system movement, and movement between the brush and shaft that frequently reduce the quality of brush contact impacting performance. The unit uses a freshly-designed single-piece casing, in contrast to previous composite designs, which along with the flange and brushes is insulated with a high-strength powder coating, and can be fitted to new vehicles or retro-fitted as required.

Boasting rugged construction from carbon, graphite, and silicon carbon-based materials, Morgan's axial and radial seals for the aerospace sector offer supreme reliability in engines, airframes and ground-based turbine engines operating in severe service conditions. The seals are ideal for use in a variety of low and high volume sealing applications, including hydraulic systems, valve and actuator assemblies. OVERVIEV

STRATEGIC REPORT

GOVERNANCE

# WHAT MORGAN DOES continued



Morgan Advanced Materials manufactures a range of components ideally suited to the uniquely demanding operating environments found in the global petrochemical industry.

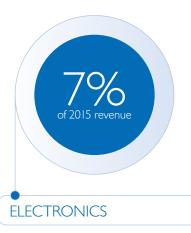
The Group's products and materials are routinely chosen to fulfil critical applications on- and off-shore in exploration, drilling and downstream processing thanks to their resistance to chemical and physical wear, corrosion and extreme heat.

For example, due to their unique microstructure, the Group's zirconia materials exhibit a property known as 'transformational toughening' which makes them exceptionally strong and resistant to corrosion and abrasion. The Group uses them to engineer hardwearing parts for pumps, drilling machinery and specialist fluids handling equipment.

Morgan has also responded to the drive to reduce cost by designing systems with larger pipe diameters which require fewer devices overall by enhancing its capability to manufacture balls with a bore diameter of up to 250mm for severe service valves from its acclaimed Nilcra<sup>®</sup> Zirconia-based material which delivers exceptional strength and toughness together with erosion and corrosion resistance. This compares with a previous maximum bore diameter of 150mm.

While physical properties are vital, accuracy and precision on performance cannot be compromised either. Morgan's new highaccuracy sensors for the oil and gas extraction sector harness the unique capabilities of its proprietary piezoelectric materials meaning they can provide reliable sensing and monitoring in high-temperature environments above 200°C.

Suitable for applications from custody transfer to gas flow monitoring, the sensors draw on the proven properties of lead zirconate titanate (PZT). With a compact footprint and boasting the extremely high sensitivity required – especially in natural gas applications – the sensors are capable of measuring both high and low flow to extreme accuracies.



Morgan Advanced Materials is known globally for its range of high-purity, high-specification components used in semiconductor fabrication and electronic products.

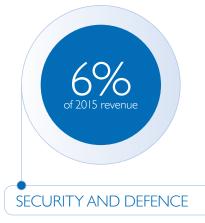
The Group exploits the unique properties of its advanced materials to help electronics manufacturers meet competing demands of size, functionality and cost.

Morgan's design teams work closely with customers to design and manufacture intricate components, achieving explicit electrical and thermal properties within restricted size and shape constraints. Using durable piezoceramics and high-quality dielectric materials, the Group manufactures products for mobile phones, laptops, HD televisions, lighting controls, laser instrumentation, microwave and high-voltage systems. The Group's ceramic metallisation processes have played a major role in the commercialisation of modern communications, signalling and control technologies including ultra-high frequency signal transmission.

In semiconductor and LED substrate fabrication, the Group's high-purity materials and controlled microstructures have brought significant yield improvements in specialist processes for ion implantation, epitaxy and compound crystal growth.

Morgan's commitment to this sector is amply demonstrated by ongoing investment in its capability to manufacture semiconductor processing products, meaning it can now precision grind products of up to 500mm in diameter and 600mm in length and manufacture complex brazed assemblies incorporating its own metallisation inks.

Morgan's products for the semiconductor industry include end effectors for efficient wafer handling, inductively-coupled plasma chambers/plasma focus tubes, ring spacers and electrostatic chucks (ESCs). Its proven range of high-purity materials are eminently suitable for use in high vacuum environments because they do not outgas.



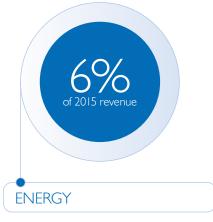
Morgan Advanced Materials supplies precisionengineered materials, components and assemblies to meet the exacting standards of the international defence and security markets.

Materials technology and manufacturing capability are combined to produce solutions that deliver real performance benefits in security and defence applications, from military hardware to surveillance equipment.

In the area of explosive ordnance disposal (EOD), comfort and freedom of movement must be combined with optimum protection for the wearer.

Morgan's latest Silverback 4020 Elite EOD suit combines new technology, cutting-edge materials and premium-quality garment construction. Innovations to the suit include quick-release technology, which allows the user to get out of the suit, unaided, in less than 20 seconds, while the ergonomics and design of the suit afford the user the freedom of movement to crouch, crawl and climb as required – ideal for when forensic evidence needs to be gathered.

Meanwhile its LASA AC914 and AC915 lightweight combat helmets harness the properties of modern composite materials and a configurable suspension to deliver outstanding ballistic performance and comfort. Between them, the helmets offer unparalleled protection against blunt trauma and 9mm rounds, alongside exceptional fragmentation protection. They come with an optional visor and mandible guard to provide even greater high-impact protection for the eyes and face.



Morgan Advanced Materials has an enviable reputation in components for power distribution and generation from both renewable and traditional sources, as well as insulation materials for heat management.

The Group continues to work on diverse energy-related projects from piezoceramics for energy harvesting technologies to high-quality capacitance for high-voltage systems and even specialist fire protection systems for offshore wind farms.

Morgan's latest ultra-wide bandwidth, high-sensitivity air-coupled ceramic sensors for flow metering offer an increase of magnitude in sensitivity compared with alternatives. Based on technology similar to that which underpins four-dimensional imaging, these sensors enable metering manufacturers to greatly increase flow measurement accuracy at low and high flow rates, while also reducing power consumption. They are ideal for integration into acoustic anemometry systems and smart metering systems, as well as air-coupled level measurement of liquids and solids.

In the wind energy sectors, Morgan's market-leading products include a new brush gear for users of Vestas V52 to V80 series wind turbines. Designed to replace the caliper holders fitted as standard on these turbines, they offer numerous benefits including extended service life, as well as considerably longer intervals between brush replacements thanks to a carbon brush wear length double that of the OEM part. The easy-fit carbon brush holder system also means less time spent on replacement, reducing maintenance costs.



Morgan Advanced Materials produces a broad variety of components for use in medical monitoring instrumentation as well as in tools for treatment and surgery.

Medical engineering demands the highest standards of precision, accuracy, reliability and performance. Equipment manufacturers and medical professionals choose the Group's materials for their exceptional physical characteristics.

Experience over many years has given the Group a good understanding of the uniquely demanding environment in which equipment for the global medical market is developed. The Group's capability in materials innovation and quality manufacturing allows Morgan to produce parts which are optimised to meet precise complex physical and chemical specifications.

Recent innovations include the introduction of brazed ceramic-to-metal assemblies for medical imaging applications using ceramic insulators. The assemblies are manufactured with proprietary grades of high-purity alumina ceramic with superior electrical and dimensional stability across a wide temperature range. The assemblies for imaging components include high voltage insulators for cardiothoracic (CT) scanning equipment, anodes and cathodes, filament insulators, getters and headers, as well as ceramic components used in vacuum tubes for x-ray equipment. Morgan's materials and manufacturing process result in better seals with maximum hermeticity for high performance and extended life cycle. Advanced ceramics also allow higher voltages, which result in higher power and improved image resolution.

Morgan has also launched its own range of standard brazed ceramic filament supports for x-ray and analytical equipment, drawing on Morgan's proven high purity alumina grade Sintox FF material. The supports are available in standard and custom shapes, in small and large volumes, while a variety of braze materials can be used, including gold nickel, gold copper and silver copper eutectic. Custom designs can incorporate variations in pin size, form and material.

## **GROUP BUSINESS MODEL**



Morgan Advanced Materials' business model is based on taking the full depth and breadth of its advanced materials capabilities to selected markets across the globe. The Group fully leverages its global infrastructure and end-market positions to most effectively achieve this. Through 2015 the Group reported as three geographical Regions: North America, Europe and Asia/Rest of World. Each serves its local markets with the full range of Morgan's material capabilities. Where appropriate, cross-regional collaboration takes place to support, for example, key global customer accounts, operational benchmarking or new product development. As set out in the CEO review on pages 7 to 9, Morgan has announced a new management structure which sees the Group being organised on a global business basis from March 2016.

The Group's core values are based on a commitment to act with integrity when dealing with customers, employees, shareholders, suppliers and the wider community, so that it continues to maintain the trust and confidence of those with whom it deals. The Group aims to be vigilant and proactive in respect of environmental, health and safety matters. This common culture is critical to the continued growth and development of Morgan Advanced Materials.

The Group is organised and managed to ensure absolute clarity as to responsibility and accountability with a focus on pushing as much decision-making down to the business units as possible, within a well-understood strategic framework and schedule of authorities. The Group's business model is based on building three distinctive core capabilities: materials science and technology, application engineering and customer and end-market focus.

#### Materials science and technology

The understanding of and application of materials science underpins Morgan's differentiated products and services. Research and development is a key part in the development and maintenance of the Group's distinctive materials science capabilities. The Group's research and development (R&D) activities are led by a Chief Technology Officer, who oversees the work of technical resource across the globe and ensures a co-ordinated and focused approach to the large and critical investment that the Group makes in this area.

Due to the importance to Morgan of R&D and the global approach to it, a specific review is provided on pages 36 and 37 of this Report.

#### Application engineering

Our application engineering capability is used extensively across the Group to develop solutions to demanding customer problems. It is the combination of the Group's materials science understanding and the ability to engineer solutions that differentiates Morgan. This capability resides in application engineering teams in each of the business units. These teams have strong relationships with their customers and use their insight into customer issues, and their understanding of the Group's core products and technologies to design solutions for the customers.

#### Customers and end-market focus

At the core of what Morgan does is the development of long-term trusted relationships with customers, working collaboratively with them over time and on multiple initiatives to develop materials, components and sub-assemblies that address very specific needs. The parts that the Group makes often play a critical role in its customers' products, helping them to perform more efficiently, more reliably or for longer, sometimes in the most demanding environments. Relationships are built at multiple levels between Morgan Advanced Materials and its customers, to ensure its materials science and its manufacturing know-how are utilised both at the start of its customers' product life-cycle and through the ongoing refinement of products and solutions, positioning Morgan as the supplier of choice for current and next-generation products.

The Group focuses on growing markets, where customers demand product and service excellence and where the Group's technical differentiation is valued by customers.

The Group enjoys a good spread of customers in terms of markets and geographies and while the loss of certain of these could affect the operations of a particular local business, none are considered financially essential to the Group as a whole. Notwithstanding this, the Group devotes significant resources to ensuring these relationships continue to operate satisfactorily.

Additional information on the markets served by the Group and on its products are included in What Morgan Does on pages 10 to 13.

#### Operations

As noted above, the Group has a truly global footprint that allows it to effectively serve its customer base. Using that footprint to provide excellent service to its customers and maximise operational excellence and cost-efficiency is a critical element of the business model. The spread and number of sites allows the Group to be close to its customers and to optimise its logistics, particularly for the fibre product range.

The Group continues to increase the effective use of its low-cost manufacturing footprint, through sites in Hungary, Mexico, India and China. These sites act as points of supply to their immediate geographic regions and also as global points of supply where appropriate. Operational benchmarking across sites with similar products/ processes is also utilised alongside a suite of operational efficiency initiatives.

The quality and reliability of certain raw material inputs is critical, and just as the Group has developed excellent relationships with customers, it also has long-term and effective relationships with its key raw material suppliers. Wherever possible raw materials are dualsourced, or there are actionable plans in place for alternative sources should the supply chain be disrupted.

#### Role of centre

The Group's head office is based in Windsor. UK and is the location of the Group's central functions comprising approximately 35 people. The centre provides the strategic framework for the Group and drives strategy execution. The centre defines the Group's Responsible Business approach and the processes for appropriate business monitoring through the business planning and budget cycles. The centre is also responsible for external investor relations, funding and treasury management and other areas where it is appropriate for specialist expertise to be brought together in one place for the benefit of the Group, such as pensions, insurance, tax, legal and environmental, health and safety. The corporate centre is small and the lines of communication with the businesses are short and responsive.

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## GROUP STRATEGY

THE GROUP'S LONG-TERM STRATEGY IS TO BUILD THREE DISTINCTIVE CORE CAPABILITIES: MATERIALS SCIENCE, APPLICATION ENGINEERING AND CUSTOMER AND END-MARKET FOCUS, AND TO APPLY THESE TO A PORTFOLIO OF SCALEABLE GLOBAL BUSINESSES WHERE TECHNICAL EXPERTISE AND DIFFERENTIATION ARE VALUED TO SOLVE CUSTOMERS' CHALLENGING PROBLEMS.

THROUGH THIS THE AIM IS TO STRENGTHEN THE GROUP TO DELIVER RESILIENT FINANCIAL PERFORMANCE AND FASTER GROWTH, AT ALL TIMES OPERATING IN AN ETHICAL AND SAFE MANNER.

To support this strategy the Group has set six key execution priorities:

EXECUTION PRIORITIES	IMPLEMENTATION
() Move to a global business structure	The reorganisation to two global divisions and six global business units will improve global co-ordination across and strengthen accountability within each global business unit, simplifying the approach to customers and markets and increasing operational focus.
2 Improve technical leadership	R&D investment will be increased to extend Morgan's technical lead and to accelerate new product development. Additional Centres of Excellence will be established allowing further concentration of development efforts in those areas that can deliver the greatest benefit globally to the Group.
3 Improve operational execution	There are a number of opportunities across the global business units to improve operational execution and resource and capital will be allocated to target specific improvements to efficiency and effectiveness on a business-by-business basis.
(4) Drive sales effectiveness and market focus	The Group will focus on improving a number of aspects of its sales capabilities and process – focusing on the sales process and its efficiency, the management of key customer accounts and distribution channels and deepening the understanding of end-markets and of faster growing segments.
5 Increase investment in people management and development	The Group is aiming to strengthen its leadership capability and deepen functional capabilities across the business, including in sales and engineering. Senior leaders will be benchmarked externally, new talent introduced and future leadership candidates identified from within the business. Performance management will be enhanced for the Group's top management and the structures and targets for incentive schemes will be reviewed. The Group will invest more in executive training and create clear career paths for its technologists and engineers. The intake of graduate trainees will be increased from 30 to 50 a year over the next four years.
6 Simplify the business	Through the re-organisation of the business the Group will focus on running each business unit on a global basis. A Morgan business will have sustainable scale in its end-market and be scaleable, operating in attractive growing markets where it has the ability to add value to our customers. It will have synergies with the rest of the portfolio, be organisationally robust and deliver, or be capable of delivering, strong financial performance.

The Group uses the characteristics of a Morgan business as set out above to test new investment opportunities, to screen its existing businesses for fit with the Group and to identify areas requiring strategic attention and action.

## KEY PERFORMANCE INDICATORS

To support the Group's strategy and to monitor performance, the Board of Directors and the Executive Committee use a number of financial and non-financial key performance indicators (KPIs). These KPIs are selected as being important to the success of the Group in delivering its strategic objectives. Progress is assessed by comparison with the Group's strategy, its budget for the year and against historic performance. Regional and business management use a range of further benchmarks and other KPIs as part of their planning and performance review processes. In order to measure the underlying performance of the business, management further analyse the headline KPIs to exclude the impact of acquisitions and foreign exchange. The list of KPIs selected is reviewed and updated to ensure they remain important to the success of the Group. Financial and non-financial performance is reviewed in more detail in the Corporate responsibility, Review of operations and Financial review sections of this Report.

KPI	2015	2014	WHY A KPI?	PERFORMANCE COMMENTARY
Financial KPIs				
Revenue growth	(I.I)%	(3.8)%	<ul> <li>→ Creating consistent long-term value for shareholders.</li> <li>→ Focus on higher growth markets.</li> </ul>	→ Revenue declined in the year due primarily to weak demand in China throughout the year and a softening in demand in a number of North America end-markets in the second-half of the year.
Group underlying operating profit <sup>*</sup> margin	11 <b>.6</b> %	12.2%	<ul> <li>→ Creating consistent long-term value for shareholders.</li> <li>→ Focus on higher growth markets.</li> <li>→ To have a culture of operational excellence and cost-efficiency.</li> </ul>	→ Full-year margin comprises a first-half margin of 13.0% and a second-half margin of 10.1%, with the second-half decline reflecting the lower revenue and a change in business mix and the impact of restructuring costs and one-off items.
Free cash flow before acquisitions and dividends	<b>£26.3</b> m	£40.1m	→ Creating consistent long-term value for shareholders.	→ The decline compared to 2014 was due to the increase in capital expenditure, up from £33.8 million to £63.5 million, with significant spend on new facilities in Asia and the £12 million acquisition of a UK freehold. Effective management of working capital provided a cash inflow of £12.1 million.
Return on Operating Capital Employed <sup>*</sup>	27.1%	27.7%	→ Creating consistent long-term value for shareholders.	→ Small reduction in ROCE in the year; lower EBITA more than offset the reduction in the asset base, which itself reflected the net effect of the large capital expenditure and the even greater improvement in working capital.
Underlying earnings per share®	20.8p	22.1p	→ Creating consistent long-term value for shareholders.	→ The 5.9% decrease in underlying EPS reflects the reduced earnings in the year.
Dividend per share	11.0р	10.9p	→ Creating consistent long-term value for shareholders.	→ The 2.6% increase in the interim dividend announced at the half-year reflected the strong first-half performance and expectations at that time. The second-half results and the current macro-economic make the position more challenging, but the Group is confident enough in its current position and its outlook to maintain the final dividend at the same level as 2014, giving a 0.9% increase in the full-year dividend.
Non-financial KPI	s†			
Employee turnover	13.6%	13.8%	→ To find, keep and develop the right people.	→ This is believed to reflect an appropriate level of churn within the employee base.
Lost time accident frequency (per 100,000 hours worked)^	0.45	0.55	<ul> <li>→ To have a culture of operational excellence and cost-efficiency.</li> <li>→ To find, keep and develop the right people.</li> </ul>	→ A 17% reduction in this measure and the number of lost time accidents was down 20% to 91 (2014: 114). This reflects the focus placed on health and safety at all sites and across all levels of the Group.
Tonnes CO <sub>2</sub> e per £m revenue^	409	431	→ To have a culture of operational excellence and cost-efficiency.	→ A 5% reduction driven by a large number of production improvement projects at sites in all the Group's regions.

\* Definitions of the measures can be found in the Glossary of terms on page 166.

Non-financial KPIs are at constant currency and updated to reflect changes in reporting methodology.
 Lost Time Accident Frequency and CO<sub>2</sub>e information have been subject to assurance by PwC, see page 32 for further details.

## **RISK MANAGEMENT**

The Group has an established risk management methodology which seeks to identify, quantify, manage and mitigate both existing and emerging risks, underpinned by a 'three lines of defence' model comprising of a comprehensive internal control framework, monitoring and independent assurance processes. The Board considers that risk management and internal control are fundamental to achieving the Group aim of creating long-term sustainable shareholder value.

Risks are identified both 'top down' and 'site up' through the Group's businesses and are quantified by assessing their inherent impact and mitigated probability to ensure that residual risk exposures are fully understood and prioritised for control throughout the Group. The day-to-day management of risk sits within the Group's internal control framework at the level where the impact would materialise, with the effectiveness of the controls and mitigating actions being monitored and assessed through a Groupwide review process which considers the ongoing appropriateness and effectiveness of the controls and monitoring and assurance outcomes in respect of these risks. Senior executives are responsible for the strategic management of the Group's principal risks, including related policy, guidelines and process, subject to Board oversight.

Throughout 2015, the Board/Audit Committee reviewed the status of all principal risks and business specific risks with a notable potential impact at both Group and Regional levels, together with the controls, monitoring and assurance processes established to mitigate those risks. As a result of these reviews, a number of actions were identified to improve controls and the mitigation of risk. Also in 2015, the Group's risk management methodology and related processes were reviewed to ensure alignment with the requirements of the revised UK Corporate Governance Code, with enhanced risk assessment tools and internal reporting mechanisms being implemented.

The following are the Group's principal risks and uncertainties, representing those risks that the Board feels could have the most significant effect on achieving the Group's strategy of building a sustainable business for the long term and delivering strong returns to the Group's shareholders.

#### RISK

#### MITIGATION

#### Strategy and strategic planning risks

#### Technical leadership

One of the core competencies that the Group is focused on is materials science. This is fundamental to achieving the goal of continuing to be one of the world's very best advanced materials companies.

Unforeseen/unmitigated technology obsolescence, the emergence of competing technologies, the loss of control of proprietary technology or the loss of intellectual property/know-how would impact the Group's business and its ability to deliver on its strategic goals.

The Group has a Chief Technology Officer and a dedicated technology team which monitors technology and business developments globally using technology roadmaps linked to 20 major technology families to ensure it remains at the leading edge of technology development. Two global Material Centres of Excellence are now established to focus expertise and resources in core technologies, underpinned by a Technical Advisory Board comprising some of the world's leading academics, who provided valuable insight, advice and challenge in respect of the Group's technology plans during the year.

The technology team proactively manages the Group's technology pipeline and R&D investment in new/improving technologies as well as providing active management of the technology lifecycle. The technology pipeline and key R&D projects are regularly reviewed by the Group Executive and the Board.

Where Group products are designed for a specific customer, they are developed in tandem with the customer to maintain leading-edge differentiated solutions. The Group seeks to secure intellectual property protection, where appropriate, for its existing and emerging portfolio of products; external advisers manage this protection globally.

#### RISK

#### MITIGATION

#### Strategy and strategic planning risks continued

#### People management and development

A key execution priority for the Group is to increase the investment in people management and development, ensuring that the Group has strong leadership and deep functional capabilities.

The advanced technological nature of the Group requires people with highly differentiated skillsets. Any inability to recruit, retain and develop the right people would impact the Group's ability to achieve its strategic goals. Making Morgan a safe, fulfilling and rewarding Group to work for is the primary means of engaging the workforce and managing this risk. The Group has an HR Director and a network of HR professionals within the business who, along with policies and processes, support Morgan's managers to mitigate the risks relating to its people. The HR function covers areas including reward and recognition, recruitment, talent management, skills assessment and development, performance management and employee consultation.

In 2012 the Group launched its Graduate Leadership Programme which continued to run in 2015. The Group continued its global leadership programme in conjunction with Cranfield University, adding an advanced programme to reach more high-potential commercial, functional and technical leaders.

Further detail on People is set out on pages 33 to 35.

#### Operational risks

#### Treasury risks

The Group's global nature means that it is exposed to uncertainties in the financial markets and the banking sector which heighten the Group's funding, foreign exchange, interest rate, credit and liquidity risks as well as the risk of bank failure impacting the Group's cash. The Group's treasury function operates on a risk averse basis and this is enshrined in the Treasury Policy and procedures which specify strict controls on the selection of banks, cash management and other treasury practices and payments globally. The Group treasury team proactively manages and is ultimately responsible for all of the Group's funding, liquidity, cash management, interest rate, foreign exchange, counterparty credit and other treasury related risks. Treasury matters are regularly reviewed by the Board/Audit Committee.

Further detail on Treasury Policies is set out in the Financial review on page 47.

#### Quality of contracts

As a global advanced materials business supplying into critical applications, the quality of the Group's contracts must match the quality and nature of its products. Ineffective contract risk management could result in significant liabilities for the Group and damage customer relationships.

The Group has an in-house legal function supplemented by specialist external lawyers.

The Group Legal Policy requires in-house legal review of high-value or high-risk contracts to ensure they contain appropriate protections for the Group. CEO approval is required before any part of the business can enter into an unlimited liability contract or one where the liability cap exceeds  $\pounds$ 5 million. In 2015, the CEO approved three contracts or tenders with this liability profile, where the underlying risks were considered to be within the Group's risk appetite.

Contract risk management training is provided by the in-house legal function and remains part of the Responsible Business Programme (RBP) and has been rolled-out in 2015 to further mitigate the risk of ineffective contract management. Additionally, a Group wide project has been implemented to ensure that appropriate contractual terms and conditions are in place across the business.

To the extent that risk cannot be mitigated through contractual arrangements, the Group has insurance cover in place, including product liability insurance.

#### IT risks and cyber risks

In order to meet the Group's strategic objectives the availability and integrity of its underlying IT infrastructure and the successful implementation of new core global systems are essential. If a critical business system were to fail or core systems development/ implementation were ineffective, the ability of the business to deliver on its strategic goals would be impacted.

Information security/cyber risks are dynamic and ever-present in the external environment. If the Group lost critical data or information, including proprietary information, through inadequate data management or compromised information security, the business would be impacted and suffer reputational damage. The Group has an IT policy and guidelines in place as well as Group and business IT teams to manage the Group's infrastructure, IT systems roadmap and information security risks.

During the course of 2015 there has been continued focus on testing the global infrastructure, reviewing information security and developing the Group's business continuity plans in relation to IT risk. Good progress has also been made in the development and implementation of new global systems. An enhanced, globally consistent, training and awareness programme is being developed for implementation in 2016.

The Group insurance programme includes business interruption insurance.

## **RISK MANAGEMENT** continued

#### national nicks continued

Operational risks continued	
<b>Product quality, safety and liability</b> Products used in applications for which they were not intended or inadequate quality control/over-commitment on customer specifications could result in products not meeting customer requirements, which could in turn lead to significant liabilities and reputational damage.	Many of the Group's products are designed to customer specifications. Over 90% of the Group's manufacturing output is accredited to ISO 9001 and the Group's quality management systems and training help ensure that Morgan's products meet or exceed customer requirements and national/international standards. Contracts relating to products used in potential high-risk applications are subject to mandatory legal review. While a number of minor product quality issues were identified in 2015, these had no material impact. The Group insurance programme includes product liability insurance; this Group-level insurance is reviewed annually by the Board.
<ul> <li>Single-point exposures</li> <li>The Group has a number of potential single point exposure risks, which include:</li> <li>→ Single-point supplier – a significant interruption of a key internal or external supply could impact business continuity.</li> <li>→ Single-point customer – the unmitigated loss of a major customer could have an impact on Group profit.</li> <li>→ Single-point profit – a key site exposed to a strike, a natural catastrophe or serious incident, such as fire, could impact business continuity. One Group site, Hayward CA, is situated in the California earthquake zone.</li> </ul>	The Group Executive is responsible for monitoring and managing key single-point exposures and has reviewed such exposures during 2015. The level of business diversification within the Group means that such exposures are kept to a minimum. Local and Regional management of these risks involves monitoring and reviewing supply chains (internal and external), dual/multiple sourcing of materials or strategic stock, site security and safety mechanisms, business continuity plans, and maintaining product quality and strong customer relationships. The Group insurance programme includes business interruption cover and specific cover in relation to the impact of an earthquake in California; this Group-level insurance is reviewed annually by the Board.
<b>Environment, health and safety (EHS) risks</b> The Group operates a number of manufacturing facilities around the world. A failure in the Group's EHS procedures could lead to environmental damage or to injury or death of employees or third parties, with a consequential impact on operations and the increased risk of regulatory or legal action being taken against the Group. Any such action could result in both financial damages and damage to reputation.	The Group has a comprehensive EHS programme managed by the EHS Director, with site-based EHS officers to implement and monitor EHS compliance at site level. Independent EHS audits are regularly undertaken at site level. During 2015 the Group completed the rollout of its behavioural safety programme 'thinkSAFE'. As at 31 December 2015 the Group was managing projects to remediate legacy contamination at four former sites and one operational site in conjunction with external specialists and relevant authorities. The anticipated costs of these projects are provided for in the accounts. Further detail of the EHS programme in place to manage these risks is available on pages 25 to 31.

#### Compliance and ethics risks

#### Changes to or non-compliance with laws and regulation

The Group's global operations must comply with a range of national and international laws and regulations including those related to bribery and corruption, human rights, trade/export compliance and competition/anti-trust.

A failure to comply with any applicable laws/regulations could result in civil or criminal liabilities and/or individual or corporate fines and could also result in debarment from government-related contracts or rejection by financial market counterparties as well as reputational damage.

The Group is committed to the highest standards of corporate and individual behaviour and this commitment is set out in the Group's Core Values Statement and Ethics Policy, underpinned by ongoing investment in the Responsible Business Programme (RBP).

In addition to Group compliance specialists, all businesses have established compliance officer roles, responsible for supporting local training and monitoring with trade/export compliance specialists in higher risk businesses and jurisdictions. Nine internal compliance audits were carried out in 2015. Full information is available on pages 22 to 24.

RISK	
External risks	
<b>Changing political, economic and social environment</b> The Group operates in a range of markets and geographies around the world and can be affected by political, economic, social or regulatory developments or instability for example the European referendum, China slowdown or issues stemming from oil and natural resources price shocks.	The Group's broad market/geographic spread helps to mitigate the effects of political and economic crises. Key risks and events are monitored at business and Group levels, with contingency plans in place to manage changing situations. Financial and treasury controls limit exposure to foreign currency, interest rate, credit and liquidity risk. Also, the Group seeks to maintain a sufficiently robust financial position to ensure that its debt ratio is within acceptable market tolerances.
<b>Taxation</b> The Group operates within and across a range of fiscal jurisdictions around the world and can be affected by changes in tax rules, rulings or rates. For example, the Group is cognisant of the 2015 OECD pronouncement on base erosion profit shifting (BEPS) and its potential impact on the taxation of global businesses in the short to medium term.	The Group's tax function, working in conjunction with external specialists as required, closely monitors fiscal developments and changes such as BEPS, to ensure that the Group's tax arrangements and practices continue to comply with the requirements of all relevant jurisdictions whilst enabling efficient management of the Group's tax liability.
Pension funding risk	
The Group participates in defined benefit pension arrangements which are exposed to fluctuating interest rates, investment values and inflation. This coupled with the increased longevity of members could result in funding burdens on the Group in the future.	Active management of the pension scheme assets is the primary means of mitigation. This comprises management both internally within the Group but also externally through corporate actuaries and professional advisers.

This is not an exhaustive list of risks and there are many factors that could change including factors outside of the Group's control. For this reason, a fundamental concept underpinning the Group's approach to risk is that, in addition to the regular review and assessment of risks and controls, each business is required to have an up-to-date and tested business continuity plan and to foster a culture of 'risk-readiness'.

#### Viability statement

In accordance with provision C2.2 of the UK Corporate Governance Code, the Directors have assessed the viability of the Group over a three year period, taking into account the Group's current position and the potential impact of the principal risks documented on pages 18 to 21 of the Annual Report. Based on this assessment, the Directors confirm that they have a reasonable expectation that the Company will be able to continue in operation and meet its liabilities as they fall due over the period to 31 December 2018.

The Directors have determined that a three year period to 31 December 2018 is an appropriate period over which to provide its viability statement. This is the period reviewed by the Board in its strategic planning process and is considered to be appropriate given the dynamics in the markets in which the Group operate.

To allow the Directors to make this assessment, a business base case has been built up, initially using a detailed bottom up approach and then applying what the Directors consider to be an appropriate set of assumptions in respect of growth, margins, working capital flows, capital expenditure, dividends and all other matters that could have a significant impact on the financial performance and liquidity of the Group. Assumptions have also been made in respect of the Group's ability to secure additional financing, specifically to replace the Private Placement Senior Notes that are due for repayment in 2017, as detailed in note 19 to the Accounts. The resulting base case provides the Directors with an EBITA, debt and finance charge headroom relative to current bank covenants.

The Directors have made a robust assessment of the principal risks facing the Group and their potential impact and the adequacy of the headroom relative to a severe but plausible combination of these risks. While the review has considered all the principal risks identified by the Group, the following were focussed on for enhanced stress testing: technological obsolescence; product quality, safety and liability; export compliance; and, the risks from a deep global recession. The geographical and product diversification of the Group's operations helps minimise the risk of serious business interruption or a catastrophic damage to its reputation. Furthermore, the spread of the Group's end-markets is such that it is not reliant on one particular group of clients or sector.

Whilst this review does not consider all of the possible risks that the Group could face, the Directors consider that the approach adopted and the work performed is reasonable in the circumstances of the inherent uncertainty involved and that it allows the Board to confirm that they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period to 31 December 2018.

## CORPORATE RESPONSIBILITY

#### VALUES, STRATEGY AND TONE FROM THE TOP

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CORPORATE RESPONSIBILITY IS INTEGRAL TO THE MORGAN GROUP; IT MEANS A COMMITMENT TO BEHAVING WITH INTEGRITY AND HAVING A POSITIVE IMPACT ON EMPLOYEES, STAKEHOLDERS AND THE COMMUNITIES IN WHICH THE GROUP WORKS.

#### Morgan values

The Core Values Statement is the guiding principle for the Group's global approach to corporate responsibility. This underpins the Group's commitment to doing business in the right way: limiting the impact of its operations on the environment; protecting and developing its people; and supporting the communities in which the Group works.

#### Morgan strategy

This firm commitment to doing business in the right way is integral to the Group in continuing to be one of the world's very best advanced materials companies, where corporate responsibility is a differentiator. The Group's Responsible Business Programme (RBP), Environment, Health and Safety (EHS) programme and the approach to Morgan's people, all support the aim of creating long-term sustainable shareholder value.

#### Tone from the top

The Board is ultimately accountable for corporate responsibility and receives regular reports on RBP, EHS and global talent management.

The senior management team recognises the need to lead by example. The Chief Executive Officer (CEO) takes the lead on doing business in the right way, whilst the Chief Financial Officer (CFO) is responsible for the Group's approach to EHS. They are supported by the Regional executive teams and functional heads with specific responsibility for environment, health and safety, legal compliance and human resources. Tone from the top was demonstrated in 2015 by the attendance of Regional and Group executives, as well as a number of the non-executive Board Directors, at face-to-face RBP training sessions across the Group. "DOING BUSINESS THE RIGHT WAY, ETHICALLY AND SAFELY, IS FUNDAMENTAL TO THE WAY WE DO BUSINESS. IT IS THE TOP PRIORITY FOR THE GROUP."

PETE RABY CHIEF EXECUTIVE OFFICER

### CORPORATE RESPONSIBILITY

#### Doing business in the right way

The RBP is the Group-wide ethics and compliance programme, launched in 2010, providing a policy/compliance framework underpinning the Group's commitment, and ensuring a common approach, to doing business in the right way.

The core elements of the RBP are policies/ guidance, training/education, compliance risk assessments, monitoring and assurance through certifications, internal audit and site compliance visits.

#### **Policies**

The RBP policies are the Ethics, Ethics Hotline, Competition/Anti-Trust, Trade Compliance and Donations and Sponsorships policies.

These and related manuals and guidelines are each available in 13 languages and oblige employees to operate in accordance with applicable laws and regulations, for example to comply with rules and internal reporting requirements relating to gifts and entertainment and donations and sponsorships.

These policies also apply, to the extent appropriate, to Morgan's business partners including agents, joint ventures and third-party representatives. In particular, the Responsible Business Guide for Representatives summarises the ethical principles the Group requires its representatives to adhere to in order to act on behalf of the Group.

All policies, manuals and guidelines are subject to annual review.

#### Training

Raising awareness of and educating employees on the Group compliance policies and the applicable laws and regulations is a fundamental part of the RBP. There are a number of challenges in delivering a programme of this nature across more than 30 countries, including language, culture and logistics.

Feedback is sought from all attendees to ensure that the programme develops year on year and is relevant to each Region and its employees rather than being a 'one size fits all' approach.

Since 2010, annual training has included:

- → eLearning modules for human rights, anti-bribery and ethics, anti-trust and contract risk management, each of which requires a 100% test score in order to pass.
- → 'Train the facilitator' training of local managers and site-based compliance officers and subsequent cascaded sitelevel training.
- → Site level training by the Group RBP team at higher risk sites.

This has been further supplemented by the provision of RBP training in Group induction processes; reinforced in 2015 with revised guidance and materials for HR teams globally to ensure that this is standard practice around the Group.

#### **Risk assessment**

Annual compliance risk assessments across the Group help to identify those businesses which have a higher risk of a compliance breach, often associated with high-risk territories. These high-risk businesses receive additional focus and support including further training, guidance and site visits. During 2015, certain of the Group's businesses in China, Mexico, the UK, the Middle East, Turkey and Guatemala received such support.

#### Implementation How are the policies cascaded?

The RBP policies and procedures are mandated across the Group and apply to all employees.

The Group intranet, MorgaNet, is the primary means of making each of the policies, manuals and guidelines available to employees. It is acknowledged that not all employees can access MorgaNet, so hard copies are also made available locally.

Education on the RBP policies is also built into each of the RBP eLearning modules and all face-to-face materials.

#### How is the training given?

In 2015, 14 face-to-face 'train the facilitator' sessions were held in a number of locations around the world. These were attended by 290 people, including local General Managers, and both Regional and Group executives. Two of the Group's non-executive Directors also attended sessions in Luxembourg and in the UK.

The focus of the training was anti-bribery, competition, contract risk management and trade compliance. All training presentations and supporting materials were provided in 13 languages to facilitate the cascade of core elements of this training to more than 2,000 employees.

#### What have the risk assessments shown?

The Group-wide bribery risk assessments, run since 2013, take into account a number of factors including location of business, location of customers, the market sector and whether third-party agents were used. The results of these assessments at the end of 2014 created internal bribery risk rankings that were used to focus additional support, monitoring and training which was delivered in 2015 to a number of the Group's businesses including those in China and South America. A similar assessment informs the programme going into 2016.

# CORPORATE RESPONSIBILITY continued

#### Effectiveness

#### Annual certification

Regional presidents and all functional heads are required on an annual basis to certify that the businesses/functions they are responsible for have implemented and complied in full with the Group policies or declared any exceptions. The CEO and the CFO then certify to the Board on a Group-wide basis.

This certification forms an integral part of the Group's system of internal controls. No material exceptions were declared in respect of 2015.

This is further supplemented by annual site-level certification, where relevant employees certify that they understand and are compliant with the RBP and related policies and manuals.

#### **Compliance visits**

In 2015 the RBP team made compliance visits to higher risk businesses in Mexico, China, the UK, Turkey, the Middle East and Guatemala, meeting with local management to discuss and assess compliance practices, processes and issues. These visits are a means of monitoring and obtaining assurance on the efficacy of the RBP at business level and provide an opportunity to support the business through local training and face-to-face dialogue. Throughout 2015, nine compliance visits were carried out, with common issues identified including the requirement for (i) RBP induction materials to be used universally around the Group, and (ii) competitor contact reporting requirements to be re-communicated. RBP induction materials were reviewed, revised and re-issued during 2015 and further training on competitor contact awareness and reporting is scheduled to take place in the first quarter of 2016.

#### Internal audit

Internal audit monitors adherence to key RBP processes including completion of site-level training, RBP in induction processes, compliance with key elements of RBP policies and the filing of reporting forms. Internal audit also ensures that the availability of the Ethics Hotline is adequately promoted at site level.

During 2015, internal audit identified a number of immaterial breaches of (i) competitor contact and trade association membership reporting, and (ii) timely completion of RBP induction training by new employees. These matters have been addressed in the compliance visits commentary above.

#### **Ethics Hotline**

The Ethics Hotline, operated by the independent third-party company Expolink, was in place throughout the year. It enables employees who are aware of, or suspect, misconduct, illegal activities, fraud, abuse of Group assets or violations of any Group policy to report these confidentially without fear of retribution should they feel they cannot use a local channel. The Hotline includes local free-phone numbers in each of the countries in which the Group operates, with real-time translators available as necessary.

Issues raised through the Ethics Hotline or via other channels are followed up by the Regional President or the Company Secretary as appropriate. Further investigation may be conducted through the Audit Committee as required. Where appropriate, disciplinary action up to and including dismissal is taken and/or additional guidance and training provided. During 2015, 17 reports were received via the Hotline in respect of 13 matters (compared with 31 reports relating to 14 matters in 2014) from the UK, the US, Germany, Brazil, Venezuela, Mexico and Guatemala. Each of the calls related to local human resource grievances or the style/behaviour of local management. The reports were subject to investigation, with the results and recommendations then presented to the Audit Committee for approval. No material issues were discovered.

The Audit Committee annually monitors and reviews the effectiveness of the Hotline and of the follow-up investigation processes by considering the number of calls, which countries they came from and the results of the investigations; for 2015 it was satisfied that the Hotline and investigation processes were operating effectively, but requested that a review and refresh of the Hotline be carried out in 2016.

#### The RBP going forward

During 2016, the Group plans to further develop the RBP in a number of ways including:

- ightarrow Introduction of new eLearning modules.
- ightarrow Introduction of webinar training updates.
- → Further development of third-party risk management.

### ENVIRONMENT, HEALTH AND SAFETY

MORGAN ADVANCED MATERIALS' ENVIRONMENT, HEALTH AND SAFETY (EHS) POLICY AND IMPLEMENTATION PROGRAMMES SUPPORT THE GROUP'S STRATEGY 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.

#### 2015 highlights

- → Reviewed and updated the Group's EHS strategy, setting out a road map for the Group over the period 2015-17.
- → Rolled out Morgan 'thinkSAFE', the Group's safety performance improvement programme, on a global basis. This top-down behaviour-based safety programme is led by the Chief Executive Officer and the Executive team.
- → Over 98% of Morgan employees and a number of key contractors have attended thinkSAFE training – more than 1,300 senior operational staff and management attended a two-day workshop with a further 8,500 employees attending a one-day training session. These were held in 15 different languages.
- → thinkSAFE 'safety corners' installed at each Group facility to help build a greater awareness of health and safety and to provide an interactive focus for safety information.
- → Adopted a set of safety-related leading indicators to help drive future performance across the Group. These indicators include the monitoring of visible safety leadership activities and near misses.
- > CO<sub>2</sub>e. Carbon Dioxide Equivalent the amount of Carbon Dioxide or the amount of non-CO<sub>2</sub> greenhouse gas with the equivalent global warming potential.

- → Participated in the Carbon Disclosure Project 2015 and achieved a disclosure score of 97 and a third place ranking in the CDP's FTSE 350 Industrial sector. This recognises the depth and quality of the climate change data disclosed by the Group.
- → Health and safety performance improved in the year with a 20% reduction in the number of Lost Time Accidents to 91 and a 17% reduction in the lost time accident frequency rate. The percentage of working time lost due to accidents and work-related ill health was also reduced by 32%. A small number of sites reported a disproportionate number of Lost Time Accidents in the year and Group and local management are already taking action to address these.
- → Environmental performance improved with a 5% reduction in CO<sub>2</sub>e intensity, a 7% reduction in energy intensity, a 5% reduction in water intensity, a 1% reduction in waste intensity and a 2% improvement in the recycling rate from 2014. However, the Group is behind the rate of improvement required to achieve its waste intensity reduction target for 2014-16.

Morgan Advanced Materials is committed to conducting all of its activities in a manner that achieves high standards of health and safety for employees and others affected by its operations. This commitment is reflected in the Group's core health and safety values set out below. They are adopted Group-wide and are available in 17 languages.

- → We are committed to creating a culture and environment that is 'zero harm' with no related accidents or illness due to our activities.
- → We encourage and expect our employees and contractors to be passionate about safety.
- → We are dedicated to creating a positive safety culture based on openness, transparency and responsibility.
- → We support a safe working culture through investment and training.
- → We engage with our people to continuously improve safety knowledge, reporting and performance through our commitment to our thinkSAFE programme.

The Group is also committed to minimising the impact of its business on the environment and maximising the positive environmental benefits of its products. Examples of Morgan's products which help enhance the environment-related performance and efficiency of the products and operations of the Group's customers are included in pages 2 to 3 and 10 to 13 of this Report.

This Report includes a summary of the Group's EHS Policy and its effectiveness as demonstrated through its EHS KPIs and training and other programmes.

Under The Companies Act 2006 (Strategic Report and Directors' report) Regulations 2013, the Group is required to report its annual greenhouse gas emissions for the year in its Directors' report. This information is shown on page 90 and includes the  $CO_2^{>}$  due to energy use which is further analysed in this section, as well as other sources of greenhouse gases.

## CORPORATE RESPONSIBILITY continued

#### **EHS** policy

Morgan's EHS policy applies to all Group businesses worldwide; it forms the basis for Executive and management oversight and implementation and has been communicated across all sites within the Group. The Policy is published on the Group's website.

#### EHS policy implementation

Morgan's EHS governance procedures are centered on its EHS policy, which forms the basis of the Group's EHS management systems and processes. The policy requires high standards of EHS management at all sites. This is implemented through performance monitoring, risk assessment and the management and mitigation of identified risks to help provide continuous improvement in EHS performance in support of the Group's strategic priorities.

The Group is committed to providing effective leadership in pursuit of an injury-free and environmentally responsible work place and the Chief Executive Officer and the operational management team are responsible for EHS performance, with each site having a point of accountability. There are EHS leaders in each region. This global network of specialists reports to their respective regional management team and is responsible for improving the standards of EHS management and performance across the Group's businesses.

As described below, in 2015 the Group again commissioned external assurance on selected EHS data from PricewaterhouseCoopers LLP (PwC). Morgan's Group-level EHS management processes include:

- ightarrow The EHS Compliance Audit Programme, which is carried out by external EHS consultants in all regions worldwide. This programme reviews the EHS management at each site and helps ensure compliance with local regulations and good management practice. The EHS Compliance Audit Programme also covers the EHS management systems and the EHS KPIs reported by each site. All of the Group's manufacturing facilities are reviewed on a three-year rolling cycle. Accordingly, 25 sites were audited during 2015. The audit reports are reviewed by the Director, Environment, Health and Safety and by the Regional Presidents. Action items are tracked through a formal follow-up process.
- → Formal training as an integral part of the implementation of the Group's EHS Policy. This is undertaken at a regional level according to business-specific risks and opportunities, with Group-level support and oversight.
- → Monthly performance reporting to Group and regional executives against the Group KPIs by all Group sites. The data is subject to regular review and challenge at Group level with reporting of performance to the Executive Committee and the Board.

Taking site openings and closures into account, in 2015 environmental management systems were in place at 98 sites worldwide, including 47 sites certified to ISO 14001. Additional certifications were achieved at sites in the USA, Guatemala and Venezuela in 2015. These new certifications are in addition to the ongoing programme of re-certifications. Worldwide, 105 sites have health and safety management systems in place, with 15 sites certified to or working towards OHSAS 18001.

#### EHS policy effectiveness

Morgan Advanced Materials monitors the effectiveness of its EHS policy through the EHS Compliance Audit Programme, the review of performance against a series of Group-wide KPIs, its external assurance programme and by participating in a number of external initiatives as further described below.

The summary charts on pages 27 to 31 represent the Group's EHS performance, covering all production sites during the year.

Environmental intensity KPIs are reported at constant currency and, where necessary, historic EHS data is updated to reflect changes in reporting methodology and to ensure year on year consistency.

In 2015, the independent external assurance performed by PwC covered the Group's lost time accident frequency rate,  $CO_2e$  intensity, energy intensity, waste intensity, water intensity and waste recycling rate. The Assurance Report from PwC is set out on page 32.

The Group participates in a number of external initiatives that help to benchmark policy effectiveness and progress. These include the Carbon Disclosure Project in respect of the Group's climate change-related strategies, risks, management and performance. In 2015, Morgan achieved a score of 97 for disclosure and B for carbon-related performance. This reflects the depth and quality of climate change data the Group has disclosed to investors and the global marketplace through CDP.

Morgan Advanced Materials plc has made filings in respect of the Group's UK facilities under the UK government's Carbon Reduction Commitment (Energy Efficiency) Scheme. The Group has also made submissions to comply with the requirements of Article 8 of the European Union's Energy Efficiency Directive that will apply to certain of the Group's businesses in Europe. In the UK, this is being implemented by the Energy Savings Opportunity Scheme (ESOS) introduced by the UK Government's Department of Energy and Climate Change.

#### Environmental performance

As reported above, the Group is committed to environmental responsibility and works to minimise the impact of its business on the environment and to maximise the positive environmental benefit of its products.

Morgan Advanced Materials plc monitors the impact of its operations on the environment, as measured by its Scope 1  $CO_2e$  and Scope 2  $CO_2$  emissions, energy, waste and water intensity per £million of revenue.

The Group sets two-year targets for the improvement in these environmental metrics and the Group's 2015 performance is an interim report against the current targets for the two-year period 2014-16.

During the year, the Group undertook a series of regional environmental programmes to address key opportunities and risks. These included energy awareness and site-specific environmental target setting. These initiatives are designed to reduce energy use and related  $CO_2$  emissions and to enhance business and environmental performance and competitiveness.

These programmes helped place the Group ahead of plan to achieve its environmental intensity targets for the period 2014-16 in all areas apart from waste intensity. These intensity targets and KPIs relate environmental impacts to revenue and include the impact of the 1.2% decrease in revenue at constant currency compared to 2014, the baseline year for the Group's intensity targets. In absolute terms, total  $CO_2e$  emissions due to energy use in 2015 were 372,700 tonnes, down by 6% from 397,400 tonnes in 2014. Energy use was some 1,222 GWh, down by 8% from 1,333 GWh in 2014.

Taking into account the decrease in the Group's sales at constant currency compared with the baseline year of 2014,  $CO_2e$  intensity<sup>^</sup> was down by 5% versus 2014. Thus the Group's 2015 performance is ahead of the rate required to achieve its target to reduce the  $CO_2e$  emissions intensity due to energy use by 5% over the two-year period 2014-16. Energy intensity<sup>^</sup> in 2015 was down by 7% compared to 2014. All regions achieved their energy intensity targets for 2015.

As shown in the five-year performance charts on this page energy and  $CO_{2}e$  intensity has been reduced since 2011 and the Group continues to have a number of production improvement projects which include energy efficiency programmes. These are planned to help reduce energy intensity in 2016 and beyond and to ensure the Group achieves its improvement targets.

CO2e> DUE TO I Tonnes <sup>†</sup>	ENERGY USE **
2015	372 700

2015	372,700
2014	397,400
2013	383,300
2012	393,900
2011	436,500

#### CO2e> INTENSITY DUE TO ENERGY USE ^\* Tonnes CO2e/£m revenue<sup>†</sup>

2015	409
2014	431
2013	423
2012	395
2011	426

#### ENERGY USE<sup>^‡</sup> GWh<sup>†</sup>

o	
2015	1,222
2014	1,333
2013	1,295
2012	1,319
2011	١,439

#### ENERGY INTENSITY<sup>\*‡</sup> MWh/£m revenue<sup>†</sup>

2015	I,340
2014	I ,445
2013	1,429
2012	1,323
2011	I,403

- The 2011-2015 CO<sub>2</sub>e intensity, energy intensity, water intensity and the 2012-2015 waste intensity and waste recycling rate information has been subject to assurance by PwC. For further details of the assurance provided see the Independent Assurance Report on page 32. Further details of the 2014, 2013, 2012 and 2011 assurance provided are included in the Independent Assurance Reports on page 30 of the 2014 Annual Report, page 31 of the 2013 Annual Report, page 25 of the 2012 Annual Report and page 41 of the 2011 Annual Report.
- Scope I CO<sub>2</sub>e emissions from fossil fuel usage and Scope 2 CO<sub>2</sub> using country-specific electricity factors as O<sub>2</sub>e factors are not consistently available for electricity use in all countries.
- Constant currency basis and updated to reflect changes in reporting methodology.
- ‡ Energy from all sources.
  - $CO_{2e}^{\omega}$ . Carbon Dioxide Equivalent the amount of Carbon Dioxide or the amount of non-CO<sub>2</sub> Greenhouse Gas with the equivalent global warming potential.
    - ANNUAL REPORT 2015 MORGAN ADVANCED MATERIALS

## CORPORATE RESPONSIBILITY continued

2014         44           2013         44,600           2012         48	,300 9,400 ) ,700 ,400
2015         48           2014         49           2013         44,600           2012         48           2011         48           WASTE INTENSITY^§         1	9,400 ) ,700
2014     44       2013     44,600       2012     48       2011     48       WASTE INTENSITY^5     48	9,400 ) ,700
2013         44,600           2012         48           2011         48           WASTE INTENSITY^§         48	) ,700
2012 48 2011 48 WASTE INTENSITY^5	,700
2011 48 WASTE INTENSITY^§	
WASTE INTENSITY^§	,400
2015 52.9	)
2014 53.	6
2013 49.2	
2012 48.8	
2011 47.1	
WATER USE <sup>^&gt;</sup> million m <sup>3†</sup>	
million m <sup>3†</sup> 2015 2.34	
million m <sup>3†</sup> 2015 2.34 2014 2.50	
million m <sup>3†</sup> 2015 2.34 2014 2.50 2013 2.27	
million m <sup>3†</sup> 2015 2.34 2014 2.50	
million m <sup>3†</sup> 2015 2.34 2014 2.50 2013 2.27 2012 2.52	77
million m <sup>3†</sup> 2015 2.34 2014 2.50 2013 2.27 2012 2.52	77
million m <sup>3†</sup> 2015         2.34           2014         2.50           2013         2.27           2012         2.52           2011         2.	777
million m <sup>3†</sup> 2015 2.34 2014 2.50 2013 2.27 2012 2.52 2011 2. WATER INTENSITY^> m <sup>3</sup> /£m revenue <sup>†</sup>	
million m <sup>3†</sup> 2015       2.34         2014       2.50         2013       2.27         2012       2.52         2011       2.         WATER INTENSITY^>>         m³/£m revenue <sup>†</sup> 2015       2,564	
million m <sup>3†</sup> 2015       2.34         2014       2.50         2013       2.27         2012       2.52         2011       2.         WATER INTENSITY^>         m³/£m revenue <sup>†</sup> 2015       2.564         2014       2.71	

Total waste reported in 2015 was 48,300 tonnes, down by 2% from 49,400 tonnes in 2014. Waste intensity^ was down by 1% versus 2014. Thus the Group is behind the planned rate of improvement to achieve its target to reduce waste intensity by 5% over the two-year period 2014-16. Whilst many sites reduced waste and waste intensity during the year, the product mix at a small number of sites shifted towards products that have higher waste intensity. In addition, certain sites increased waste output due to one-off waste disposal projects.

The proportion of total waste which was recycled<sup>^</sup> was 30% in 2015, up by 2 percentage points from 28% in 2014. Thus the Group is on plan to achieve its target which is to increase the proportion of total waste which is recycled over the two years 2014-16.

Total water use in 2015 was 2.34 million m<sup>3</sup>, down 7% from 2.50 million m<sup>3</sup> in 2014. Water use intensity<sup>^</sup> was reduced by 5% versus 2014. This improvement is ahead of the target to reduce water intensity by 5% over the two years 2014-16. The improvements were led by ongoing significant reductions in the water intensity at key sites in the Asia/Rest of World Region, where water is a limited resource.

#### 2016 priorities for environmental

- → Develop the energy awareness and resilience programme for worldwide implementation, focused on the Group's energy intensive operations.
- → Review environmental target setting with a view to increasing ownership and delivery at both site and regional level.
- → Review opportunities to benchmark sites with similar production technologies and set site and business improvement plans accordingly.
- → Focus on specific environmental improvement projects at sites with the biggest environmental impact.

- The 2011-2015 CO<sub>2</sub>e intensity, energy intensity, water intensity and the 2012-2015 waste intensity and waste recycling rate information has been subject to assurance by PwC. For further details of the assurance provided see the Independent Assurance Report on page 32. Further details of the 2014, 2013, 2012 and 2011 assurance provided are included in the Independent Assurance Reports on page 30 of the 2014 Annual Report, page 31 of the 2013 Annual Report, page 25 of the 2012 Annual Report and page 41 of the 2011 Annual Report.
- Constant currency basis and updated to reflect changes in reporting methodology.
- § Hazardous and non-hazardous waste, including recycled material.
- > Water from all sources, including process, irrigation and sanitary use.

### MORGAN thinkSAFE OVERVIEW

### thinkSAFE IS A BEHAVIOURAL BASED PROGRAMME BUILT AROUND MORGAN'S SAFETY VALUES AND FOUR KEY COMPONENTS



MORGAN thinkSAFE is the Group's global safety performance improvement programme. It is a top-down programme that is led by the Chief Executive Officer and the Executive team. It has four key components:

- $\rightarrow$  Behavioural training: this includes two key programmes. The leading thinkSAFE programme (two-day workshop) which covers all leaders, managers and supervisors. The main objectives of this workshop are to enable leaders to play a specific visible safety leadership role and that is to influence the attitude to safety and behaviour of their direct reports and the wider work force. The second programme is the thinkSAFE in action programme (one-day workshop) which is for all the other employees. The main objective of this workshop is to help employees on how they can be a role model for safety and positively contribute to a safer environment.
- → Safety corners: These are installed at every site worldwide and are used to build greater awareness of health and safety, to act as a focal location for safety training, and to promote local initiatives. They contain the Group's safety values and have a screen that provides access to the thinkSAFE Portal.

- → thinkSAFE Portal: is a dedicated area on the Group's intranet providing health and safety information, resources and learning. It is constantly updated with fresh information and has a quarterly safety e-brochure in multiple languages. Every employee is able to access the Portal though the screen in the safety corner at their site.
- → Global Incident Reporting system: where all lost time incidents are reported and shared globally so all employees can learn from them.

Around the world, the regional management teams implemented a series of initiatives to promote and reinforce the Group-wide thinkSAFE programme. These included the third annual Safety Week across the Asia and Rest of World region and a number of region-wide programmes and competitions to proactively identify and promote near-miss reporting, to identify and manage risks and to work towards a zero-harm work place. MORGAN thinkSAFE WILL PROVIDE THE KNOWLEDGE AND SKILLS TO ENABLE EVERY EMPLOYEE TO LOOK AT THEIR OWN BEHAVIOUR AND THAT OF THEIR COLLEAGUES TO ENSURE WE CARRY OUT ALL OUR TASKS IN A SAFE AND CONTROLLED MANNER.

## CORPORATE RESPONSIBILITY continued



assurance by PwC. For further details of the assurance provided see the Independent Assurance Report on page 32. Further details of the 2014 assurance provided are included in the Independent Assurance Report on page 30 of the 2014 Annual Report and further details of the 2013 assurance are on page 31 of the 2013 Annual Report.

#### Health and safety performance

Morgan Advanced Materials plc is committed to adopting and implementing its health and safety core values with the long-term aim of an injury-free workplace and to conducting all its activities in a manner that achieves high standards of health and safety for all employees and others affected by its operations. The Group's long-term objective is 'zero harm' and it seeks to achieve year on year improvements in performance as it progresses towards this objective.

The Group's health and safety policy statements are 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 statements are supported by site-level assessment and monitoring of risks.

In 2015, the Group's accident prevention and training programmes were ongoing, 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 health and safety KPIs and through the EHS Compliance Audit Programme.

The Group's health and safety KPIs include accident frequencies, causes and related lost working time. These are used to monitor the effectiveness of the Group's health and safety policies and related systems on a monthly basis. In 2015, the independent external assurance performed by PwC covered the Group's Lost Time Accident (LTA) frequency rate. The Group's 2015 health and safety performance improved compared to 2014 and so the Group achieved its objective of improving performance compared with the prior year. Aggregating manufacturing sites and sales offices, the Group has over 130 locations worldwide and overall the majority performed well with no LTAs reported during the year. The actions taken in 2015 through roll out of the thinkSAFE programme, supported by a focus on underperformance identified following the adverse safety performance reported for 2014, helped to deliver this improved performance.

In 2015, the Group's LTA frequency<sup>^</sup> was down 17% at 0.45 per 100,000 hours worked (2014: 0.55). The number of LTAs reported was down 20% to 91 (2014: 114<sup>\*</sup>). Several sites had no LTAs and other sites improved on their accident frequency rates from 2014. A small number of sites reported a disproportionate number of LTAs in the year and Group and local management are already taking action to address these.

# The 2014 health and safety report has been revised to include three incidents which subsequently resulted in lost time and/or lost time accidents which were reported to the Group after the 2014 year end.

Reported lost time due to accidents and work-related illnesses as a percentage of working time decreased from 0.13% in 2014 to 0.09% in 2015. As shown in the charts opposite, the number of days lost during 2015 was down by 35%. The number of hours worked decreased by 4%. This performance reflects the fact that the lost time incidents that occur are on average less serious than previously, resulting in the decrease in the number of lost days. This is in part due to the focus on risk and awareness through the increase in near miss reporting Group wide. Accordingly, the reported average number of days lost per LTA reported in the year decreased by 18% from 28.6 to 23.5 days per LTA.

The inquest into the previously reported employee fatality that occurred in 2012 at the Group's site in Ruabon, UK, returned a formal verdict of 'accidental death'. On 13 November 2015, Morgan Technical Ceramics Ltd was fined £180,000 plus £23,000 of costs in relation to this incident.

#### 2016 Priorities for Health and Safety

- → To reinforce the Morgan thinkSAFE programme with visible safety leadership through all levels of the organisation.
- → To further progress the introduction of leading indicators as measures and drivers of future performance.
- → Introduce a new EHS framework with focus on high severity incident causes including working at height, lock out tag out, flammable gas safety, guarding and driving.
- $\rightarrow\,$  Review the audit process for both internal and external auditing.

#### HEALTH AND SAFETY-RELATED LOST TIME Days lost due to LTAs\*

2015	2,135
2014	3,261
2013	2,650
2012	3,174
2011	2,771

### HEALTH AND SAFETY-RELATED LOST TIME % of total working time

2015	0.09%
2014	0.13%
2013	0.10%
2012	0.12%
2011	0.10%

#### LOST TIME PER LTA\*† Days per LTA\*

2015	23.5
2014	28.6
2013	27.3
2012	27.8
2011	21.0

\* Lost Time Accident (LTA): accident or work-related illness which results in one or more days' lost time.

• Total time lost due to health and safety in the year divided by the number of lost time accidents reported in the year.

## INDEPENDENT ASSURANCE REPORT

#### Independent Limited Assurance Report to the Directors of Morgan Advanced Materials plc

The Board of Directors of Morgan Advanced Materials plc (Morgan) engaged us to provide limited assurance on the information described below and set out in Morgan's Annual Report for the year ended 31 December 2015.

#### Our conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Selected Information for the year ended 31 December 2015 has not been prepared, in all material respects, in accordance with the Reporting Criteria.

This conclusion is to be read in the context of what we say in the remainder of our report.

#### Selected information

The scope of our work was limited to assurance over the information marked with the symbol ^ in the Morgan Annual Report for the year ended 31 December 2015 (the 'Selected Information').

The Selected Information and the Reporting Criteria against which it was assessed are summarised below. Our assurance does not extend to information in respect of earlier periods or to any other information included in the Morgan Annual Report for the year ended 31 December 2015.

The Selected Information consists of:

- → CO<sub>2</sub>e and CO<sub>2</sub>e intensity (scope 1 and scope 2 emissions due to energy use);
- $\rightarrow$  Energy and energy intensity;
- $\rightarrow$  Water and water intensity;
- $\rightarrow$  Waste and waste intensity;
- $\rightarrow$  Recycling rate; and
- → Number of lost time accidents and lost time accident frequency rate.

We assessed the Selected Information using Morgan's Reporting Criteria as set out at: http://www.morganadvancedmaterials.com/ responsible-business/environment-health-safety/

### Professional standards applied $^{2}$ and level of assurance $^{3}$

We performed a limited assurance engagement in accordance with ISAE 3000 (Revised) and, in respect of greenhouse gas emissions, in accordance with ISAE 3410.

#### Our Independence and Quality Control

We applied the Institute of Chartered Accountants in England and Wales (ICAEW) Code of Ethics and the International Standard on Quality Control (UK & Ireland) 1<sup>4</sup>. Our work was carried out by an independent team with experience in sustainability reporting and assurance.

### Understanding reporting and measurement methodologies

The Selected Information needs to be read and understood together with the Reporting Criteria, which Morgan is solely responsible for selecting and applying. The absence of a significant body of established practice on which to draw to evaluate and measure non-financial information allows for different, but acceptable, measurement techniques and can affect comparability between entities and over time. The Reporting Criteria used for the reporting of the Selected Information are as at 31 December 2015.

#### Work done

We are required to plan and perform our work in order to consider the risk of material misstatement of the Selected Information. In doing so, we:

- → made enquiries of Morgan'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 analysing 10 sites, and visiting 5 of these, 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 to check that data had been appropriately measured, recorded, collated and reported; and
- ightarrow considered the disclosure and presentation of the Selected Information.

#### Morgan responsibilities

The Directors of Morgan 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 and reporting the Selected Information based on the Reporting Criteria; and
- $\rightarrow$  the content of the Annual Report 2015.

#### 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.

This report, including our conclusions, has been prepared solely for the Board of Directors of Morgan in accordance with the agreement between us, to assist the Directors in reporting Morgan's EHS performance and activities. We permit this report to be disclosed in Annual Report for the year ended 31 December 2015, to assist the Directors in responding to 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 Board of Directors and Morgan for our work or this report except where terms are expressly agreed between us in writing.



#### PricewaterhouseCoopers LLP Chartered Accountants London 23 February 2016

- I The maintenance and integrity of Morgan'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's website.
- Criteria when presented on Morgan's website.
  We have complied with International Standard on Assurance Engagements 3000 (Revised) 'Assurance Engagements other than Audits and Reviews of Historical Financial Information' and, in respect of the greenhouse gas emissions, in accordance with International Standard on Assurance Engagements 3410/Assurance Engagements on Greenhouse Gas Standards', issued by the International Auditing and Assurance Standards Board.
- a A limited assurance engagement is obstantially best in scope than a reasonable assurance engagement is ubstantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.
- 4 We applied the Institute of Chartered Accountants in England and Wales (ICAEW) Code of Ethics which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour. We apply International Standard on Quality Control (UK & Ireland) I and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

## CORPORATE RESPONSIBILITY continued

#### PEOPLE

 TOTAL LOST TIME

 % of working time

 2015
 2.7

 2014
 2.4

 2013
 3.1

 2012
 2.7

 2011
 2.9

EMPLOYEE TURNOVER

2015	13.6%
2014	13.8%
2013	13.8%
2012	13.4%
2011	13.7%

#### TRAINING

Hours per employee

2015	17.8
2014	13.9
2013	15.1
2012	13.3
2011	12.9

Morgan Advanced Materials plc has c8,800 employees, working across the globe in all major markets and regions. The Group's employees are critical to its success and the workforce is built upon people with highly unique skills and abilities. Set out below are the Group's people policies, how they have been implemented, together with a review of their effectiveness.

#### People Policies and their implementation

The Group supports the Universal Declaration of Human Rights, and the Group's human rights policy commits the Group to protect the rights of everyone who works for it and all those who have dealings with it. The principles of the policy cover child labour, forced labour, health and safety, freedom of association, discrimination, discipline, working hours and compensation and the policy is published on the Group's website. Morgan Advanced Materials plc does not unfairly discriminate and respects human rights. Our employee policies are set locally to comply with local law within the overall Group framework. The Morgan Advanced Materials plc Ethics Hotline enables employees who are aware of or suspect issues under the Group's human rights policy to report these confidentially.

#### Talent

One of the Group's key priorities is to recruit, retain and develop our people to build commercial, technical and operational capabilities.

The Group has continued to develop and implement its talent strategy during 2015, building on previous years' achievements. High-quality internal and external appointments have been made during 2015 in business unit leadership teams. These have included appointments in sales, technology innovation, commercial leadership and finance.

Morgan believes it is essential to develop its people in order to grow its business. Talent reviews and action planning, resulting in internal promotions, development opportunities and targeted recruitment are examples of the initiatives taken this year. The Group also continued to prioritise the global graduate development programme. The bi-annual succession and talent review process continues to ensure that planning takes place for succession for key roles and that future strategic and individual needs are assessed. Talent development is also focused to emphasise capability in business development, sales, technology innovation, and commercial leadership.

The Group continues to strengthen existing relationships with leading universities working in materials science, providing information, materials and opportunities for existing Morgan employees as well as undergraduate and postgraduate students. This includes a joint development agreement with The University of Manchester, aimed at scaling up a new process for manufacturing graphene, where a Morgan graduate and another Morgan employee are currently seconded.

#### Recruitment

During 2015, the Group has further developed recruitment channels and processes to recruit the right people in the most effective ways possible. These include developing our online presence and assessment processes. We also continue to use formal assessments at senior levels to help inform recruitment decisionmaking. Whether recruiting internally or externally, selection is based on many factors including relevant education, work experience, competencies, potential, and performance record. The Group does not unfairly discriminate and it respects human rights.

The Group has operated its global graduate programme model for a fourth successive year. Graduates initially join our businesses in Asia, Europe and North America and take part in a common development programme that builds current and future capability, and gives access to international assignments and opportunities. The Chief Executive Officer and other members of the Group Executive personally take part in the development programmes.

The new Chief Executive Officer, Pete Raby, was also appointed in 2015.

# CORPORATE RESPONSIBILITY

#### Training and development

Overall training hours per employee have increased by over 35% to 17.8 hours per person. Substantial investment has been made during 2015 in Morgan's thinkSAFE programme, which is a behavioural safety initiative. It is aimed at making a major shift in how all employees think and act on safety at work, and also includes modules on effective leadership. The Group Executive has been personally involved, including at the beginning of the rollout of the training, which first took place within the Asia region. This has been a significant undertaking in 2015 with over 1,300 leaders, managers and supervisors being trained in addition to train-the-trainer sessions and workshops for operations employees in the year. This programme is covered in further detail in the Environment, Health and Safety section on pages 25 to 32.

Group-wide and regionally-based development programmes are provided where appropriate. For example, in Asia, two development programmes are provided at different levels of management to address specific needs across that Region. Europe has identified the need for specific management skills and has piloted a programme for all European managers of people which is being rolled out across the Region in 2016.

For the Group, the new global Advanced Leadership Programme has been launched, for high-potential and high-performing managers. This programme complements the Senior Leadership Programme, with both being run in conjunction with Cranfield University's Centre for Management Development. Both programmes require participants to undertake cross-functional projects on Group-wide commercial issues. The Responsible Business Programme (RBP) is the Group-wide ethics and compliance programme, launched in 2010, with the core elements comprising policies, training, risk assessments, monitoring and assurance. The training content covers human rights, anti-bribery and ethics, anti-trust and contract risk management and is refreshed on an annual basis. This programme is covered in further detail on pages 22 to 24.

Should existing employees become disabled, the Group's policy is to provide continuing employment and training wherever practicable.

#### Reward, recognition and awards

The Group recognises the accomplishments of its people individually and as teams, and makes awards to acknowledge achievement, loyalty, and innovation. In 2015, recognition awards continued to be made across local businesses as well as to senior management, with awards linked to business performance.

The principle of pay for performance is applied to the Group's compensation approach and the Company sets compensation levels using external benchmarking and relevant commercial considerations that are both competitive in the countries in which they operate and affordable. Morgan Advanced Materials plc offers short-term performance incentives globally to managers, technical and functional experts. Group Executives and senior management also have long-term incentives tied to personal and commercial performance. At plant level, most sites offer incentives to their workforce that result in payments based on meeting locally-set performance targets.

Morgan Advanced Materials plc regularly reviews bonus arrangements and benefits to ensure they encourage and reward commercial and personal performance.

#### Communication

Morgan again ran its Employee Survey in 2015, following the actions planned from the 2014 results. In particular the Regional businesses aimed to improve communication, ensure supervisors more frequently recognise good work and employees received appropriate support to learn new skills. In North America and Europe this is done through a local approach to action planning and each site develops its own plans based on local needs. Asia took a Regional approach, drawing upon feedback and key requirements to develop a Regional plan that also works with the local sites.

As a result, across the Group there have been increased employee briefings and forums covering business results, business strategy, business improvement, safety and employee survey follow-up. Videos, poster campaigns and newsletters have also continued to be a strong feature of communication activity in 2015. These included quarterly newsletters from the Asia Region, which had a particular emphasis on safety, and in North America some local sites now lead meetings with safety focused bulletins.

Morgan Advanced Materials plc continues to have formal and informal consultative arrangements globally, according to local requirements and regulations. The 19th annual European Employee Forum was held in June 2015, and was attended by site employee representatives from France, Germany, Hungary, Italy and the United Kingdom.

#### People policy effectiveness

At the end of the year, Morgan Advanced Materials plc employed c8,800 people. The Group additionally contracted with c850 people on short-term arrangements to provide the flexibility for the Group's businesses to react quickly to changes in market conditions. The Group's employee turnover was 13.6% in 2015, excluding disposals (13.8% in 2014). 1.4% of the workforce was made redundant during the year (1.7% in 2014).

The Group's geographical spread of people is as follows:

Geographical spread		
	2015	2014
USA	30%	29%
UK	14%	14%
China	15%	15%
Other Europe	18%	19%
Other North America	7%	7%
South America	4%	5%
ROW	12%	11%

### Breakdown of staff by gender – at 31 December 2015

Total workforce 8,809		
Male	6,378	
	72%	
Female	2,431	
	28%	
Senior managers – 15		
Male	13	
	87%	
Female	2	
	13%	
Directors – 8		
Male	7	
	87.5%	
Female		
	12.5%	

Lost time as a proportion of total working time increased to 2.7% (2.4% in 2014), with lost time due to accidents in the workplace at 0.09% of total working time (0.1% in 2014).

During the year, 19 employees around the world celebrated 40 years of loyal service with Morgan Advanced Materials plc, with 416 employees celebrating anniversaries of 20, 25 or 30 years' service. The Group is pleased with the number of employees who remain with the Group for significant periods of their careers, and whose experience the Group has retained.

# MORGAN LEADERSHIP PROGRAMMES



# RECOGNITION FOR MORGAN DEVELOPMENT PROGRAMMES PREPARING OUR PEOPLE FOR SUCCESS IN CURRENT AND FUTURE ROLES

One of the areas of focus for the Group's people strategy is on building a pipeline of future leaders for the global business.

We build skills and capabilities that we have recognised are essential for the continued performance of the Group's leaders, we facilitate networking opportunities to build the networks people need to find answers to complex problems and get people working on projects that are genuinely needle-moving for the organisation.

We have focused on supporting the development of graduates and people in the early stages of leadership to accelerate their impact and potential to take on new roles, as well as senior leaders whom we can challenge and move their thinking to new levels.

"I HAVE LEARNT THAT THERE ARE MANY TALENTED AND DRIVEN INDIVIDUALS ACROSS THE MORGAN GROUP. NETWORKING WITH EACH OF THEM HAS BEEN THE BEST PART OF THE PROGRAM."

**DEVIN STAUFFER** SITE MANAGER Our graduates, meeting a minimum standard of qualification which increasingly includes postgraduate or doctorate qualifications, are employed across the world in real jobs which are designed to build on the technical skills they developed at university and expose them to opportunities both to learn and grow and also to deliver real business outcomes.

Middle and senior leaders come from commercial, functional and technical backgrounds and from all across the global Morgan business.

Morgan has won the EEF Regional Award for Talent Management three years in a row and has been recognised by our own graduates in The Job Crowd awards, moving to second in graduate engineering jobs.

# **REVIEW OF OPERATIONS**

# RESEARCH AND DEVELOPMENT



MIKE MURRAY CHIEF TECHNOLOGY OFFICER

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MORGAN IS DEPENDENT ON AND DISTINGUISHED BY ITS ADVANCED MATERIALS SCIENCE AND PROCESSING CAPABILITIES. THESE UNDERPIN THE GROUP'S ABILITY TO ESTABLISH LONG-TERM, COLLABORATIVE RELATIONSHIPS WITH A DISCERNING CUSTOMER BASE. MORGAN'S SIGNIFICANT FOCUS ON AND INVESTMENT IN RESEARCH AND DEVELOPMENT ALLOWS THE GROUP TO MAINTAIN THIS MARKET ADVANTAGE.

## Research and development

The long-term profitable strength of Morgan Advanced Materials plc depends on constantly refreshing the innovation pipeline to anticipate, or respond to, market needs. The Group's research and development activities are headed and co-ordinated by the Chief Technology Officer, Dr Mike Murray, with research and development resource deployed across the globe. Whilst some Regions or businesses may pursue local technology initiatives, the focus is primarily on those things that can be developed at scale to be rolled out across the whole of Morgan's infrastructure and for this reason the Group is presenting the technology review in a single place. One of the key execution priorities identified as part of the review of strategy is to improve the technical leadership of Morgan and to accelerate new product development.

The Group's research and development strategy will continue to be governed by three key underlying principles:

- → Establishing Global Material Centres of Excellence to build critical mass and focused expertise in our core technologies.
- → Using technology as a key promoter for the whole of the Group's product portfolio to the largest or largest potential customers.
- → Driving innovation and sales growth and targeting our chosen markets through the New Business Development Pipeline (NBDP) and our technology roadmaps.

The Group's commitment to technology is demonstrated by the Group's total research and development spend in 2015 of  $\pounds$ 25.4 million equal to 2.8% of sales, representing a significant increase compared to the 2014 spend of  $\pounds$ 21.7 million, 2.3% of sales and the Group anticipates increasing this by a further 1% of sales over the next three to five years.

#### Centres of Excellence

There has been a growing recognition of the benefits of consolidating research and development efforts and this is reflected in the move towards Global Materials Centres of Excellence. The intent is that these Centres will be the acknowledged leaders in the materials science and product development of the Group's key technologies, maintaining Morgan as one of the very best advanced materials companies in the world. Regional management, who are closest to their customers, interact with the Centres to ensure that their efforts and focus retain a very strong commercial direction. The demand placed on the Centres is that they will provide differentiated materials technology that is scaleable across the Morgan Group and that delivers quantifiable benefits and value for the Group's customers.

The largest Global Materials Centre of Excellence is for the Insulating Fibre business and this is based in Bromborough in the UK. In 2015, the Group opened a new Centre for Structural Ceramics that is based at the Stourport-on-Severn facility in the UK. This Centre ensures that Morgan maintains its position at the leading edge of advanced ceramics science and manufacturing technology.

The Insulating Fibre Centre is a state-of-the-art facility employing 25 dedicated scientists focused on the continued development of Morgan's fibre product range. Morgan's market-leading low bio-persistent Superwool<sup>®</sup> fibre technology and product range continue to be developed with patented materials science. Morgan is now extending the operational temperature range, allowing it to provide customers with superior insulation performance, improved fire protection and weight-saving opportunities in more applications. There has been particular success across a range of end-markets such as iron and steel, aluminium processing, automotive and passive fire protection.

The Structural Ceramics Centre in Stourport oversees the major materials science developments for the Group, allowing greater global leverage on major scaleable programmes. The facility will focus on leading-edge ceramic materials developments to support both current and new markets. The initial focus has been on major opportunities that have been identified in the medical, aerospace and environmental sectors, whilst a focus on new emerging markets and technologies also ensures that Morgan Advanced Materials plc stays at the forefront of materials science. This will include enhancing the Group's network of global technology partners to ensure it is positioned to work with the world's best academics and research institutes.

Two more Centres of Excellence are planned, one for Brazing and Joining, in support of the Technical Ceramics business, and one for Carbon science, that will support the Electrical Carbon and Seals and Bearings businesses. The Group will continue to assess the benefits of the formation of more Global Materials Centres of Excellence.

These Centres are supported by the Morgan Technology Advisory Board, which is made up of some the world's leading academics, to help ensure the Group maintains and develops its leading edge in new and emerging materials science around the globe.

# Supporting Morgan's unified approach to its markets

The Group's materials technology is and will remain a unifying feature across its organisation structure. Major technology initiatives are effectively co-ordinated and new products effectively rolled out across the global customer base ensuring that maximum value is derived from the investment made in product and process development. During 2015, many meetings have been held with the Group's major existing and potential customers, where the Group's senior commercial and technology management have successfully presented the Group's product and technology portfolio in a single, consistent way, allowing the full range of the Group's capabilities to be demonstrated. There has been excellent engagement from a number of these customers and this initiative has now effectively been built in to the way the Group does business and is expected to bring further benefits in 2016 and beyond.

## Driving innovation and growth

The Group uses a consistent, systematic process for managing new business development across the whole Morgan Group. This approach allows the Group to identify the largest and most profitable growth opportunities and allows decisions to be effectively made in terms of deployment of resource on those opportunities. As part of the increasing focus on technology and innovation, the Group created a Morgan Technical Advisory Board. The Group identified world-leading academics from around the globe who are recognised as subject-matter experts for a number of Morgan's key technology families. This provides a sounding board for Morgan's plans for technical development of ceramic, carbon and polymer composite products and processes and keeps Morgan Advanced Materials plc abreast of the latest developments in materials science and advises on new areas where there may be opportunities for the Group.

As part of this approach, Morgan is working with the world's best research centres around the globe, ensuring that we maintain and develop our leading edge in materials science in new and emerging applications. One such collaboration was formalised when Morgan Advanced Materials plc announced a new joint development agreement with The University of Manchester, aimed at scaling up a new process for manufacturing graphene - a oneatom thick carbon allotrope first isolated at the university 10 years ago and for which a Nobel Prize was awarded. The world's thinnest material and a potent conductor, graphene is also extremely lightweight, chemically inert and has a large surface area which means, with further research and testing, that it could change the way we think about electrical and chemical engineering.

Some of the specific areas of technology-led success in the Group in 2015 are:

- ightarrow A new high-performance nitrite-bonded silicon carbide material kiln furniture suitable for use at temperatures of up to 1,500°C (2,732°F). The material, known as Halsic-N, combines the properties of proven materials such as silicon carbide (SiC) and silicon nitride (Si3N4) in a microstructure which delivers strength, excellent refractory properties and resistance to oxidation and thermal shock. Thermocouple protection tubes made from Halsic-N are ideal for the melting of non-ferrous metals such as aluminium and magnesium, where its strong metal-repelling characteristics help ensure long service life and optimum performance.
- → The development of its WDS<sup>®</sup> UltraShell<sup>™</sup> microporous insulation, whose superior insulating properties make it ideal for energy sector applications demanding hot piping, including power plants, refineries, and renewable energy facilities. Morgan's Porextherm WDS<sup>®</sup> UltraShell<sup>™</sup> solution enables the construction of smaller, lighter, and more cost-effective double wall 'pipe in pipe' hot piping applications. WDS<sup>®</sup> UltraShell<sup>™</sup>

insulation offers the low thermal conductivity needed in hot piping applications to ensure that materials inside are insulated from ambient conditions, in addition to protecting workers from burns due to contact with non-insulated hot piping.

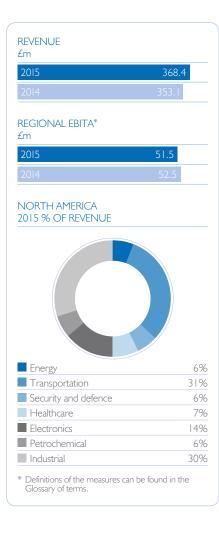
- $\rightarrow$  A new lighter weight metallised current collector strip (pantograph) for rail transportation, which enhances rail system reliability and extends service life by about 35%. The new collector strips boast an arc protection system, which maximises collector strip life, reducing maintenance and running costs for rail contractors. The system also provides improved service for passengers, since the collector strips require less frequent replacement, drastically reducing downtime. The new lighter metallised collector strips are the latest addition to Morgan's line of performance carbon and metallised carbon current collector strips for metro systems, high-speed trains, trams and trolley buses.
- $\rightarrow$  After continued research and development in its technical ceramics manufacturing capabilities, Morgan now has the capability to manufacture balls with a bore diameter of up to 250mm in diameter for severe service valves from its acclaimed Nilcra® Zirconia-based material. Previously, valve balls have only been available in bore diameter sizes of up to 150mm but the trend in process industries to reduce cost by designing systems with larger pipe diameters which require fewer devices overall has led Morgan to create a capability to manufacture balls in this larger size. The product is ideal for use with flow control valves operating in industries such as mineral processing, oil and gas, and pulp and paper. Nilcra<sup>®</sup> delivers exceptional strength and toughness together with erosion and corrosion resistance and is therefore frequently used in place of conventional materials such as metal alloys to provide longer component lifetimes. The material's properties make it ideal for use with slurries generated in mineral processing as well as abrasive rock particles and sand encountered in oil and gas extraction and processing. This, and its ability to withstand high actuation torques applied during valve operation, has led to Nilcra® being regularly specified by the world's five largest valve OEMs for more than 25 years.

# REVIEW OF OPERATIONS continued

#### NORTH AMERICA

#### HIGHLIGHTS

- → The majority of businesses in the Region saw a decline in revenue in the second-half of 2015 having achieved revenue growth in the first-half. For the full year, revenue decreased by 2.3% at constant currency compared to 2014.
- → Region continues to deliver Group-leading mid-teen margins.



#### **Business description**

For Morgan Advanced Materials plc, the North America Region comprises the USA, Canada and Mexico.

The financials of the North America Region comprise those of all the businesses that are located within those countries, including the sales made directly to and profits from third-party customers outside of the Region. Sales made to Morgan companies outside of the Region are not included in North America's reported revenue but the profit made on these inter-Regional sales is included in North America's results.

The North America Region offers the full Morgan product range and the vast majority of revenue is from products made within the Region. North America has a number of important primary processing sites that provide Morgan businesses across the world with base materials, semi-finished and sometimes finished products, particularly in the electrical brush and seals and bearings businesses.

As shown in the chart to the left, North America serves all of the Group's chosen end-markets. Of the three Regions, it currently has the greatest proportion of revenue from the higher margin end-markets such as aerospace, included in transportation, and healthcare.

## Footprint

As at 31 December 2015 the North America Region comprises 23 operating sites employing approximately 3,200 people. The principal manufacturing sites are in the USA, Canada and Mexico. The Mexican operations are used to satisfy both the local market and, more importantly and increasingly, as an effective low-cost point of supply to the USA and to other Morgan businesses across the world. The Region also has a comprehensive network of sales offices allowing immediate access to and facilitating direct working with end-users. Some sales, particularly for the insulating fibre and crucibles product ranges, are made through a well-established distributor network.

#### Performance

Revenue for the North America Region for the year was £368.4 million, representing an increase of 4.3% compared with £353.1 million in 2014. At constant currency, year on year revenue decreased by 2.3%. Revenue in the second-half of 2015 was 6.7% lower than the first-half at constant currency.

EBITA for the Region was  $\pm$ 51.5 million (2014:  $\pm$ 52.5 million) with the margin maintained in the mid-teen range at 14.0% (2014: 14.9%).

#### **Business review**

The North America Region experienced a weak second-half of 2015 across the majority of its businesses compared to the first-half, resulting in a 2.3% decrease in constant currency revenue year on year. Thermal Ceramics for the year was marginally down on 2014 by 1.0%, with the second-half down 9.8% compared to the second-half of 2014. The decline in large project orders coupled with a reduction in orders in automotive, oil and gas and general industrial applications were the major reasons for this decline. The Technical Ceramics business continued to experience a mixed trading landscape with flat revenue half-on-half with some positive growth from consumer electronics offset by declines in other parts of the business. The Certech business, which supplies ceramic cores used in the manufacture of turbine blades, has continued to improve its operational yields in 2015, with EBITA margins improving, however yields and operational performance need to improve further in 2016 in order to achieve acceptable profit levels. Seals and Bearings was negatively impacted by oil and gas in the second-half as well as a general slowdown in trading and a further reduction in body armour revenue to a very low level of business.

The order book in North America has declined each month through the second-half of 2015 with the full-year book-to-bill ratio at December 2015 at 0.98 times.

The North America Region incurred £0.9 million of restructuring costs and other one-off items in the year (2014: £0.8 million) relating to headcount reductions at a number of sites.

During the year there was a review of the carrying value of assets that support the vehicle and personal protection and high-temperature furnace-lining businesses in North America. Both of these businesses saw significant growth and investment in previous years but more recently they have been in decline. The expected future cash flows from these businesses have been compared with the book value of the property, plant and equipment that is dedicated to them and it has been determined that a total impairment charge of £5.9 million is required. An income tax credit of £2.1 million was recognised in respect of the impairment charge. The £5.9 million of impairment loss forms part of the total plant and equipment impairment loss of £6.6 million and has been reported as a specific adjusting item.

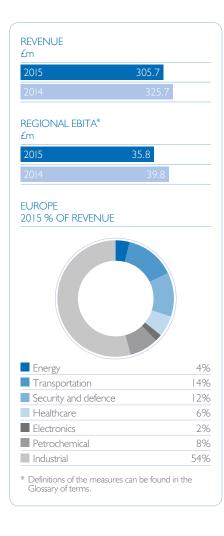
# REVIEW OF OPERATIONS continued

# EUROPE

# HIGHLIGHTS

→ Full-year like-for-like sales growth of 1.7% compared to 2014 despite a weaker second-half of the year.

→ Full-year EBITA margin declined to 11.7% (2014: 12.2%).



#### **Business description**

For Morgan, the Europe Region is defined as the UK, Continental Europe and Russia, but excludes Turkey, which is reported in Asia/ Rest of World. The financials of Europe comprise all of the Morgan Advanced Materials' businesses that are located within the Europe Region. It includes the sales made directly to and profits from third-party customers outside the Region. Sales made to Morgan companies outside the Region are not included in Europe's reported revenue but the profit made on these inter-Regional sales is included in Europe's results.

The Europe Region offers the full Morgan product range and the vast majority of revenue is from products made within the Region. Certain specific grades of material and some finished products are sourced from the North America and Asia/Rest of World Regions.

As shown in the chart to the left, Europe serves all of the Group's chosen end-markets. The Region has a broad spread of end-market exposure. The security and defence revenue is primarily from the Composites and Defence Systems (C&DS) business.

# Footprint

As at 31 December 2015 the Europe Region comprises 25 operating sites and employs approximately 2,700 people. The principal manufacturing sites are in the UK, France, Germany, Luxembourg, Italy and Hungary.

The Region also has a number of sales offices providing Regional coverage and customer proximity, allowing the Region's people to work directly with end-users. Some use is also made of well-established distribution networks.

#### Performance

Revenue for the Europe region for the year was £305.7 million, representing a decrease of 6.1% compared to 2014. At constant currency and adjusting for the impact of acquisitions and exits, the increase was 1.7%.

EBITA for the region decreased to  $\pounds$ 35.8 million (2014:  $\pounds$ 39.8 million), with the full-year margin reduced to 11.7% (2014: 12.2%).

#### **Business review**

The Thermal Ceramics business achieved good organic revenue growth of 10.7% at constant currency compared to 2014, with large project orders from North America and the Middle East the main drivers for this. The other businesses in Europe had a much more mixed performance, as the second-half of 2015 saw declines in demand across many end markets. Revenue growth in Seals and Bearings was close to 2% for the full year but the second-half was marginally weaker than the second-half of 2014, reflecting the impact of oil and gas market declines. The Electrical Carbon business was down 3.5% year on year at constant currency reflecting softer general industrial demand. Technical Ceramics' revenue in the period fell 3.0% at constant currency, with end-market conditions generally soft, but particularly in the piezoceramics product range that serves the aerospace, automotive, marine and medical markets. The C&DS business saw a further decline in second-half revenue with this business continuing to operate in a difficult UK defence market whilst still looking to develop new business to increase its international and wider commercial exposure.

The order book in Europe has declined through the second-half of 2015 with the full-year book-to-bill ratio at December 2015 at 0.98 times.

The Europe Region incurred £1.2 million of restructuring costs and other one-off items in the year (2014: £1.2 million) relating to headcount reductions at a number of sites.

As a result of the continued reduction in demand on C&DS from UK MoD, the review of the carrying value of the remaining intangible assets of C&DS resulted in a further impairment charge of £5.8 million, relating to a full impairment of the customer relationships. Following this impairment charge, the carrying value of the C&DS intangibles was £9.8 million, all in respect of technology and trademarks. This was supported by the current expectations of the future trading performance of the C&DS business. An income tax credit of £1.0 million was recognised in respect of the impairment charge. This has been reported as a specific adjusting item.

In April 2006, the Group acquired a 51% shareholding in Morgan Thermal Ceramics Sukhoy Log Limited Liability Company ('Sukhoy'), a fibre business based near Yekaterinburg, Russia. The results and assets of Sukhoy have previously been consolidated on the basis that the Group was satisfied that it exercised management control. During 2015, there has been a deterioration in the relationship between Morgan and the minority partner. As a result, it became clear to the Group towards the end of 2015 that it no longer had effective control of the business and that it was no longer appropriate to consolidate. Based on the recent financial performance and the Group's view of the future prospects of the retained investment that the Group holds it was concluded that the value of the Group's investment in Sukhoy is nil. As a result the Group has recognised a £2.8 million charge in business exit costs in the 2015 accounts which has been reported as a specific adjusting item.

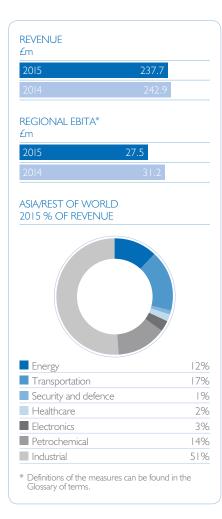
As reported in the 2014 Annual Report and Accounts, in January 2015 the Group completed the sale of a Thermal Ceramics business in Wissembourg, France. The Group incurred a loss on the disposal of £6.1 million in 2015, in addition to the £1.9 million of business exit costs recognised in the 2014 accounts, both of which were reported as specific adjusting items.

# REVIEW OF OPERATIONS continued

#### ASIA/REST OF WORLD

#### HIGHLIGHTS

- → The Region experienced headwinds in trading with revenue down 1.5% on a like-for-like basis. China remained the principal headwind with revenue down 11.2% year on year.
- → EBITA margin at reported rates reduced to 11.6% (2014: 12.8%).



#### **Business description**

For Morgan Advanced Materials plc, the Asia/Rest of World Region comprises Asia, Australasia, India, Africa, the Middle East including Turkey, and South America. The financials of the Region comprise those of all the businesses that are located within those countries, including the sales made directly to and profits from third-party customers outside the Region. Sales made to Morgan companies outside the Region are not included in Asia/ Rest of World's reported revenue but the profit made on these inter-Regional sales is included in Asia/Rest of World's results.

The Asia/Rest of World Region offers the full Morgan product range. The Region has significant manufacturing capability and capacity for insulating fibre, including Superwool<sup>®</sup>, and firebrick and some capacity for electrical brush material, however it does source a large amount of material, semi-finished and finished products from Morgan businesses in North America and Europe, either finishing locally or selling finished products to end customers.

As shown in the chart to the left, the Asia/Rest of World Region serves all the Group's chosen end-markets. The majority of revenue in the Region is currently from industrial markets, but there is a significant opportunity to drive a positive mix shift through increased sales to markets such as aerospace and healthcare.

#### Footprint

As at 31 December 2015 the Asia/Rest of World Region comprised 24 operating sites employing approximately 2,750 people. The principal manufacturing sites are located in China, India, South Korea, Australia, Japan, Brazil and Argentina. These manufacturing sites are supported by a network of sales and application engineers to ensure that customers are well supported across this large Region with the appropriate Morgan resource. Where appropriate, use is also made of third-party distributors.

# Performance

Revenue for the Asia/Rest of World Region for the year was  $\pounds$ 237.7 million, representing a decrease of 2.1% compared with  $\pounds$ 242.9 million in 2014. On a like-for-like basis, revenue decreased by 1.5%.

EBITA for the Region was £27.5 million (2014: £31.2 million), a margin of 11.6% (2014: 12.8%).

#### **Business review**

Trading conditions in the Region have been mixed throughout the year. China revenue fell by 11.2% compared to 2014 on a constant currency basis. The Chinese domestic market has been weak through 2015 across the industrial markets served with large project orders particularly impacted. Indian revenue was down by 3.0%, whilst the first-half of 2015 was encouraging, the second-half saw general weakness across industrial markets. South East Asia, including Korea, continued to achieve revenue growth, up 13.3% year on year on a constant currency basis. Other parts of the Region were mixed, the Middle East flat year on year, while the South American business continued to experience very weak economic conditions. The Molten Metal Systems business with approximately 50% of its revenue in the Region, continued to experience weak demand in Asia offset by improved demand in the Middle East. Lower revenue in China and reduced profitability in South America were the two main contributors to the margin reduction in 2015.

The order book in Asia/Rest of World overall was steady through the second-half of 2015 with the full-year book-to-bill ratio at December 2015 at 1.04 times.

The Region incurred £0.1 million of restructuring costs and other one-off items in the year (2014: £3.6 million) relating to the net of the charge for headcount reductions at a number of sites (£0.6 million) and the gain on the sale of properties (£0.5 million).

The strategic objective to drive the performance of the Electrical Carbon and Seals and Bearings businesses to mid-teen margins and beyond has resulted in the Group undertaking a significant rationalisation of the carbon material footprint. This started in 2014 in Europe with the downsizing of activities at the Swansea, UK site and has continued in 2015 with the decision to and the announcement of the cessation of carbon material manufacturing at the Shanghai, China site. These operations will be consolidated into other Group locations, mainly the USA. This decision has resulted in a charge of £1.5 million in 2015, £0.7 million of which relates to the impairment loss on plant and equipment and the balance to site clean-up costs and other write-offs. £0.4 million is expected to be settled in cash in 2016. An income tax credit of £0.2 million was recognised in respect

of these restructuring costs. These costs have

been reported as specific adjusting items.

# PRIORITIES AND OUTLOOK

As a result of the decision to move to a new organisation structure the priorities and outlook are provided at a Group level rather than by Region.

## **Priorities**

The Group's priorities have been set out in the Chief Executive Officer's review on pages 7 to 9 of this Annual Report. The mediumto longer-term vision is for Morgan Advanced Materials plc to be renowned for world-class materials science, application engineering and customer focus, and for these to underpin the delivery of resilient financial performance and faster growth. The six execution priorities set the immediate focus of Group, Divisional and Global Business Unit management for 2016.

The move to the new global structure has been announced today, but significant planning has taken place and the Group's most immediate priority is to ensure that the transition goes as smoothly as possible and that there is minimal disruption to the Group's day-to-day operations, both in terms of the Group's sites and employees and their interaction with customers and suppliers.

The focus of the Divisional, Global Business Unit and functional management teams will immediately be on the successful execution of the technology, operational, sales and people priorities set out on pages 8 and 9. Whilst these priorities may vary in terms of relative importance across the individual Global Businesses they will provide the key principles for all of Morgan's businesses and management and the metrics against which performance will be measured and assessed.

Attention will also be given to and resource deployed to ensure that the Group is simplified and that the whole of the Morgan portfolio of businesses satisfies the characteristic set out in the Group strategy on pages 8 and 9.

## Outlook

The Group's book-to-bill (ie orders received compared with sales made) was 0.99 times and the Group's outstanding order book at the end of 2015 was approximately 5% lower than at the end of 2014.

The book-to-bill profile has been mixed across the Group's regions and businesses but there has been an underlying trend of softening market conditions through much of the second-half of 2015, though this appears to have flattened out towards the end of the year. The Group remains cautious about the macroeconomic conditions for 2016 and the Group's priorities are heavily focused on realising benefits from operational improvements, whilst ensuring an appropriate level of investment in R&D, sales effectiveness and people development to make the best of the current environment and to position the Group for growth when wider market conditions improve.

# FINANCIAL REVIEW



KEVIN DANGERFIELD CHIEF FINANCIAL OFFICER

# A SOLID SET OF RESULTS IN VERY CHALLENGING MARKET CONDITIONS.

#### Introduction

Reference is made to 'Underlying operating profit' and 'Underlying earnings per share (EPS)'. EPS is defined in the Glossary of terms on page 166. These measures of earnings are shown because the Directors consider that they give a better indication of underlying performance.

In the consolidated income statement the Group presents specific adjusting items totalling £22.1 million and the associated tax credit of £3.3 million separately (2014: £51.9 million and £5.5 million). In the section below results are shown before these specific adjusting items.

### Group revenue and operating profit

Group revenue was £911.8 million (2014: £921.7 million), a decrease of 1.1% on a reported basis compared with 2014.

Group EBITA\* was £109.6 million (2014: £118.0 million) representing a margin of 12.0% (2014: 12.8%).

Group underlying operating profit<sup>\*</sup> was £106.0 million (2014: £112.4 million). Underlying operating profit margin was 11.6%, compared to 12.2% for 2014.

Group operating profit (after specific adjusting items) was £82.9 million (2014: £54.3 million). Operating profit margin was 9.1%, compared to 5.9% for 2014.

Reve	enue	EB	ITA	EBITA	margin
2015 £m	2014 <i>£</i> m	2015 £m	2014 <i>£</i> m	2015	2014
368.4	353.1	51.5	52.5	14.0%	14.9%
305.7	325.7	35.8	39.8	11.7%	12.2%
237.7	242.9	27.5	31.2	11.6%	12.8%
911.8	921.7	114.8	123.5		
		(5.2)	(5.5)		
		109.6	118.0	12.0%	12.8%
		(3.6)	(5.6)		
		106.0	112.4	11.6%	12.2%
	2015 £m 368.4 305.7 237.7	£m         £m           368.4         353.1           305.7         325.7           237.7         242.9	2015 fm         2014 fm         2015 fm           368.4         353.1         51.5           305.7         325.7         35.8           237.7         242.9         27.5           911.8         921.7         114.8           (5.2)         109.6         (3.6)	2015 fm         2014 fm         2015 fm         2014 fm           368.4         353.1         51.5         52.5           305.7         325.7         35.8         39.8           237.7         242.9         27.5         31.2           911.8         921.7         114.8         123.5           (5.2)         (5.5)         (5.5)           (3.6)         (5.6)         (3.6)	2015 fm         2014 fm         2015 fm         2014 fm         2015           368.4         353.1         51.5         52.5         14.0%           305.7         325.7         35.8         39.8         11.7%           237.7         242.9         27.5         31.2         11.6%           911.8         921.7         114.8         123.5         5.5           (5.2)         (5.5)         12.0%         12.0%           (3.6)         (5.6)         12.0%         14.6%

\* Definitions of the measures can be found in the Glossary of terms.

# Restructuring costs and other one-off items

The £3.6 million (2014: £5.6 million) of net restructuring costs and other one-off items relate to a number of rationalisation actions in the second-half of 2015, mainly in Asia and Europe.

# Specific adjusting items

In the consolidated income statement the Group presents specific adjusting items separately. In the judgment of the Directors, due to the nature and value of these items they should be disclosed separately from the underlying results of the Group to allow the reader to obtain a proper understanding of the financial information and the best indication of underlying performance of the Group.

	2015 £m	2014 <i>£</i> m
Specific adjusting items		
Restructuring costs	1.5	16.3
Business exit costs	2.8	1.9
Impairment of property, plant and equipment	5.9	_
Transaction-related costs	-	1.2
Settlement of prior period anti-trust litigation	_	3.6
Impairment of intangible assets	5.8	26.9
Net loss on disposal of business	6.1	2.0
	22.I	51.9
Income tax credit from specific adjusting items	(3.3)	(5.5)
	18.8	46.4

#### Restructuring costs

As reported in 2014, the strategic objective to drive the performance of the Electrical Carbon and Seals and Bearings businesses to mid-teen margins and beyond has resulted in the Group undertaking a significant rationalisation of the carbon material footprint. This started in 2014 with the downsizing of activities at the Swansea, UK site. This footprint rationalisation has continued in 2015 with the decision to and the announcement of the cessation of carbon material manufacturing at the Shanghai, China site. These operations will be consolidated into other Group locations, mainly the USA. This decision has resulted in a charge of £1.5 million in 2015, £0.7 million of which relates to the impairment loss on plant and equipment and the balance to site clean-up costs and other write-offs. £0.4 million is expected to be settled in cash in 2016. An income tax credit of £0.2 million was recognised in respect of these restructuring costs. The £0.7 million of impairment loss forms part of the total plant and equipment impairment loss of  $\pounds$ 6.6 million.

#### Business exit costs

The business exit costs in the year relate to the deconsolidation of Morgan Thermal Ceramics Sukhoy Log Limited Liability Company ('Sukhoy') and the subsequent remeasurement to fair value of the retained investment.

In April 2006 the Group acquired a 51% shareholding in Sukhoy, a fibre business based near Yekaterinburg, Russia. The results and assets of Sukhoy have previously been consolidated on the basis that the Group was satisfied that it exercised management control. During 2015 there has been a deterioration in the relationship between Morgan and the minority partner, exacerbated by the increasingly difficult market conditions in Russia. As a result, it became clear to the Group towards the end of 2015 that it no longer had effective control of the business and that it was no longer appropriate to consolidate. Based on the recent financial performance and the Group's view of the future prospects of the business it was concluded that the value of the Group's investment in Sukhoy is nil. As a result the Group has recognised a £2.8 million charge in business exit costs in the 2015 accounts.

#### Impairment of property, plant and equipment

The impairment of property, plant and equipment for the year ended 31 December 2015 is as a result of a review of the carrying value of assets that support the Group's North America vehicle and personal protection and high-temperature furnace-lining businesses. Both of these businesses saw significant growth and investment in previous years but more recently they have been in decline. The Group has compared its expected future cash flows from these businesses with the book value of the property, plant and equipment that is dedicated to them and determined that a total impairment charge of  $\pounds$ 5.9 million is required. An income tax credit of £2.1 million was recognised in respect of the impairment charge. The £5.9 million of impairment loss forms part of the total plant and equipment impairment loss of £6.6 million.

## Impairment of intangible assets

As a result of the continued reduction in demand on C&DS from UK MoD, the review of the carrying value of the remaining intangible assets of C&DS resulted in a further impairment charge of £5.8 million, relating to a full impairment of the customer relationships. Following this impairment charge, the carrying value of the C&DS intangibles was £9.8 million, all in respect of technology and trademarks. This was supported by the current expectations of the future trading performance of the C&DS business. An income tax credit of £1.0 million was recognised in respect of the impairment charge.

#### Loss on disposal of business

As reported in the 2014 Annual Report and Accounts, on 30 January 2015 the Group completed the sale of a Thermal Ceramics business in Wissembourg, France. This business manufactures low-temperature fibre boards used mainly in the building industry. The Group has incurred a loss on the disposal of this business of £6.1 million in 2015, in addition to the £1.9 million of business exit costs recognised in the 2014 accounts. OVERVIEV

# FINANCIAL REVIEW

# Foreign currency impact

The principal exchange rates used in the translation of the results of overseas subsidiaries were as follows:

	Average rate		Year-end rate		
	2015	2014	2015	2014	
USD	1.5280	1.6476	1.4739	1.5593	
€	1.3772	1.2413	1.3569	1.2886	

The potential impact of changes in foreign exchange rates is given in note 19 on page 128.

#### Amortisation of intangible assets

The Group amortisation charge was £7.1 million (2014: £8.2 million).

#### **Finance costs**

The net finance charge was £18.1 million (2014: £20.8 million), comprising the net bank interest and similar charges of £12.2 million (2014: £15.8 million), gain from financial instruments of £1.0 million (2014: £0.7 million) and the finance charge under IAS 19 (revised), being the interest charge on pension scheme net liabilities, which was £6.9 million (2014: £5.7 million). The impact of potential changes in interest rates on profit or loss is stated in note 19 on page 127.

#### **Taxation**

The Group taxation charge, excluding specific adjusting items, was £24.2 million (2014: £24.7 million). The effective tax rate, excluding specific adjusting items, was 29.8% (2014: 29.6%).

## Earnings per share

Underlying earnings per share was 20.8 pence (2014: 22.1 pence), and basic earnings per share was 11.9 pence (2014: 2.7 pence). Details of these calculations can be found in note 9 on page 113.

## Dividend

The Board is recommending a final dividend, subject to shareholder approval, of 7.0 pence per share on the Ordinary share capital of the Group, payable on 27 May 2016 to Ordinary shareholders on the register at the close of business on 6 May 2016. Together with the interim dividend of 4.0 pence per share paid on 27 November 2015, this final dividend, if approved by shareholders, brings the total distribution for the year to 11.0 pence per share (2014: 10.9 pence).

A five-year summary of the Group's financial results is set out on page 164 of this Report.

## Cash flow

Cash flow from operations was £135.6 million (2014: £120.0 million). Free cash flow before acquisitions and dividends was £26.3 million (2014: £40.1 million). Dividend payments increased to £31.4 million (2014: £30.2 million).

Net debt<sup>\*</sup> at the year end was £216.0 million (2014: £207.0 million), representing a net debt<sup>\*</sup> to EBITDA<sup>\*</sup> ratio of 1.6 times (2014: 1.4 times).

	2015 £m	2014 £m
Cash flow from		
operations	135.6	120.0
Net capital expenditure	(62.7)	(32.5)
Restructuring costs and other one-off items	(5.5)	( 2. )
Net interest paid	(11.2)	(15.3)
Tax paid	(29.9)	(20.0)
Free cash flow		
before acquisitions		
and dividends	26.3	40.1
Cash flows in respect of		
acquisitions/disposals	(1.1)	(22.4)
Dividends paid	(31.4)	(30.2)
Purchase of own shares for share incentive		
schemes	(2.9)	(2.3)
Exchange movement and	~ /	~ /
other items	0.1	(5.7)
Movement in net debt <sup>*</sup>		
in period	(9.0)	(20.5)
Opening net debt <sup>*</sup>	(207.0)	(186.5)
Closing net debt <sup>*</sup>	(216.0)	(207.0)

\* Definitions of the measures can be found in the Glossary of terms.

Commitments for property, plant and equipment and computer software for which no provision has been made are set out in note 24 on page 144.

#### Capital structure

At the year end total equity was £186.4 million (2014: £187.7 million) with closing net debt<sup>\*</sup> of £216.0 million (2014: £207.0 million).

Non-current assets were £501.6 million (2014: £495.0 million) and total assets were £857.0 million (2014: £889.0 million).

Details of undiscounted contracted maturities of financial liabilities and capital management are set out in note 19 on page 126.

There have been no significant post-balance sheet events.

Capital structure is further discussed in note 19 on page 129 under the heading Capital management.

#### Pensions

The Group operates a number of pension schemes throughout the world, the majority of which are of a funded defined benefit type. The largest of these are located in the UK and the USA with the majority of others in Continental Europe.

The IAS 19 (revised) *Employee Benefits* charges are summarised in the table below.

	2015 £m	2014 £m
Operating costs:		
– Service cost	(4.3)	(4.2)
- Administration costs	(2.2)	(1.7)
Total operating costs	(6.5)	(5.9)
Net finance charge	(6.9)	(5.7)
Total IAS 19 charge	(13.4)	(  .6)

The Group pension deficit has decreased by  $\pounds$ 7.3 million since last year end to  $\pounds$ 204.5 million on an IAS 19 (revised) basis. The UK defined benefit pension schemes deficit marginally decreased by  $\pounds$ 1.4 million to  $\pounds$ 117.4 million (2014:  $\pounds$ 118.8 million) and the US deficit decreased by  $\pounds$ 3.7 million to  $\pounds$ 55.1 million (2014:  $\pounds$ 58.8 million).

# Treasury policies

The following policies were implemented and in place across the Group throughout the year. The manager of each business unit is required to confirm compliance as part of the yearend process.

# Financial Risk Management and Treasury Policy

Group Treasury works within a framework of policies and procedures approved by the Audit Committee. It acts as a service to Morgan Advanced Materials' businesses, not as a profit centre, and manages and controls risk in the treasury environment through the establishment of such procedures. Group Treasury seeks to align treasury goals, objectives and philosophy to those of the Group. It is responsible for all of the Group's funding, liquidity, cash management, interest rate risk, foreign exchange risk and other treasury business. As part of the policies and procedures, there is strict control over the use of financial instruments to hedge foreign currencies and interest rates. Speculative trading in derivatives and other financial instruments is not permitted.

## Foreign exchange risks

Due to the international reach of the Group, currency transaction exposures exist. The Group has a policy in place to hedge all material firm commitments and a large proportion of highly probable forecast foreign currency exposures in respect of sales and purchases over the following 12 months, and achieves this through the use of the forward foreign exchange markets. A significant proportion of the forward exchange contracts have maturities of less than one year after the balance sheet date. The Group continues its practice of not hedging income statement translation exposure.

There are exchange control restrictions which affect the ability of a small number of the Group's subsidiaries to transfer funds to the Group. The Group does not believe such restrictions have had or will have any material adverse impact on the Group as a whole or the ability of the Group to meet its cash flow requirements.

Currency translation risks are controlled centrally. To defend against the impact of a permanent reduction in the value of its overseas net assets through currency depreciation, the Group seeks to match the currency of financial liabilities with the currency in which the net assets are denominated. This is achieved by raising funds in different currencies and through the use of hedging instruments such as swaps, and is implemented only to the extent that the Group's gearing covenant under the terms of its loan documents, as well as its facility headroom, are likely to remain comfortably within limits. In this way, the currency of the Group's financial liabilities becomes more aligned to the currency of the trading cash flows that service them.

#### Interest rate risk

The Group seeks to reduce the volatility in its interest charge caused by rate fluctuations. This is achieved through a combination of fixed rate debt and interest rate swaps. The proportions of fixed and floating rate debt are determined having regard to a number of factors, including prevailing market conditions, interest rate cycle, the Group's interest cover and leverage position and any perceived correlation between business performance and rates.

#### Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations. The Group is exposed to credit risk on financial instruments such as liquid assets, derivative assets and trade receivables.

Cash balances held by companies representing over 75% of the Group's revenue are managed centrally through a number of pooling arrangements. Credit risk is managed by investing liquid assets and acquiring derivatives in a diversified way from high-credit-quality financial institutions. Counterparties are reviewed through the use of rating agencies, systemic risk considerations, and through regular review of the financial press. Credit risk is further discussed in note 19 on page 125.

#### Capital investment

The Group has well-established formal procedures for the approval of investment in new businesses and for capital expenditure to ensure appropriate senior management review and sign-off.

#### Tax risks

The Group periodically assesses its liabilities and contingencies for all tax years open to audit based upon the latest information available. The Group records its best estimate of these tax liabilities, including related interest charges. Inherent uncertainties exist in estimates of tax contingencies due to changes in tax laws. Whilst management believes it has adequately provided for the probable outcome of these matters, future results may include favourable or unfavourable adjustments to these estimated tax liabilities in the period the assessments are made, or resolved, or when the statute of limitation lapses. The final outcome of tax examinations may result in a materially different outcome than that assumed in the tax liabilities.

#### Borrowing facilities and liquidity

All of the Group's borrowing facilities are arranged by Group Treasury with Morgan Advanced Materials plc as the principal obligor. In a few cases operating subsidiaries have external borrowings but these are supervised and controlled centrally. Group Treasury seeks to obtain certainty of access to funding in the amounts, diversity of maturities and diversity of counterparties as required to support the Group's medium-term financing requirements and to minimise the impact of poor credit market conditions.

The Group's debt and maturity profile is provided in notes 18 and 19 on pages 123 to 131.

## Going concern

The Group's business activities, together with the factors likely to affect its future development, performance and position are set out in the Strategic Report on pages 7 to 47. The financial position of the Group, its cash flows, liquidity position and borrowing facilities, are described earlier in this Financial review. In addition, note 19 includes the Group's policies and processes for managing financial risk; details of its financial instruments and hedging activities; and its exposures to credit risk and liquidity risk.

The Group meets its day-to-day working capital requirements through local banking arrangements underpinned by the Group's £200 million unsecured multi-currency revolving credit facility maturing October 2019. The Group's forecasts and projections, taking account of reasonably possible changes in trading performance and exchange rates, show the Group operating comfortably within its debt financial covenants for the next 12 months.

The current economic climate continues to have an impact on the Group, its customers and suppliers. The Board fully recognises the challenges that lie ahead but, after making enquiries, and in the absence of any material uncertainties, the Directors have a reasonable expectation that the Company and the Group have adequate resources to continue in operational existence for a period of 18 months from the date of signing of this Annual Report and Accounts. Accordingly, they continue to adopt the going concern basis in preparing the Annual Report and Accounts.

#### KEVIN DANGERFIELD CHIEF FINANCIAL OFFICER

The Strategic Report, as set out on pages 7 to 47, has been approved by the Board. On behalf of the Board

# PAUL BOULTON

COMPANY SECRETARY & GENERAL COUNSEL 23 February 2016

# GOVERNANCE

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# CORPORATE GOVERNANCE

# CHAIRMAN'S LETTER TO SHAREHOLDERS



# Dear Shareholder

As Chairman, I am pleased to comment on some of the significant governance matters that the Board has approved, discussed or overseen during the year as follows:

- → Since August 2015, when he commenced his role, the induction of Pete Raby as Chief Executive Officer. Collectively, the Board has focused on providing support to Pete Raby as he familiarises himself with the business and sets the agenda for the year to come.
- → Supporting the Chief Executive Officer with the strategic review which commenced in the third quarter of 2015. In addition to a full day on strategy at the Board meeting in June 2015, the Board had dedicated discussions on progress with the strategic review at its meetings in November and December 2015 and February 2016.
- → Selection and appointment of Helen Bunch as a non-executive Director. As announced on 22 January, Helen Bunch will be appointed as a non-executive Director with effect from 24 February 2016. Helen Bunch brings particular experience of driving business performance and building businesses in new markets from her roles at ICI and Wates, and will offer the Board a valuable external executive perspective. We look forward to welcoming Helen to the Board. With the changes to the Board over the last three years, progress has been made in ensuring that future refreshment will be planned to ensure continuity of knowledge and experience.
- → Further work on talent and succession planning, an area of focus identified in the 2014 Board evaluation process. The way the Board implemented this recommendation is explained further below in the section on performance evaluation.
- → The Board conducted an externally facilitated Board performance evaluation during 2015. The review provided a number of useful insights to the Board and its Committees on potential areas for improvement in their effectiveness.
- Supporting the Audit Committee's review of internal controls and risk management processes, which is described in more detail in the Report of the Audit Committee.
- Board visits to different sites which afforded Directors a close insight into our businesses. In March 2015, the Board visited the Seals and Bearings site in Capellen, Luxembourg. The meeting in September 2015 was held at the Technical Ceramics site in Southampton, UK. In November 2015, the Board spent two days in the USA and visited the Thermal site in Augusta. These visits were organised around scheduled Board meetings and incorporated a meeting with the local management teams as well as a tour of the operations.

I am looking forward to working with the Directors during 2016 to further develop our effectiveness as a Board.

ANDREW SHILSTON CHAIRMAN

# **BOARD OF DIRECTORS**



ANDREW SHILSTON CHAIRMAN



PETE RABY CHIEF EXECUTIVE OFFICER



KEVIN DANGERFIELD CHIEF FINANCIAL OFFICER

#### ANDREW SHILSTON NON-EXECUTIVE CHAIRMAN (AGED 60)

Appointed: May 2012 (Chairman Designate; August 2012, Chairman).

Career history: Having joined Rolls-Royce Holdings plc in 2002, Andrew was Finance Director from 2003 until his retirement in 2011 and prior to this he was the Finance Director at Enterprise Oil plc. Andrew was previously a non-executive Director of Cairn Energy plc, where he chaired the Audit Committee.

Additional appointments: Senior Independent Director of BP p.I.c.; non-executive Director of Circle Holdings plc.

Committees: Nomination (Chair) and Remuneration.



**Career history**: Pete joined Morgan Advanced Materials in August 2015 as Chief Executive Officer. Before joining Morgan Advanced Materials, Pete was President of the Communications and Connectivity sector of Cobham plc. Pete held a number of senior positions at Cobham over a nine-year period. Prior to Cobham, Pete was a partner at McKinsey & Company, specialising in the aerospace, defence and power and gas sectors. Pete has a PhD in satellite navigation and an M.Eng from the Department of Electronic and Electrical Engineering at the University of Leeds.

Additional appointments: None. Committees: Nomination.

#### KEVIN DANGERFIELD CHIEF FINANCIAL OFFICER (AGED 49)

Appointed: August 2006.

Career history: Kevin joined Morgan Advanced Materials in July 2000 as Deputy Group Financial Controller before being promoted to Group Financial Controller. He was appointed to the Board on becoming Chief Financial Officer in August 2006. Before joining Morgan Advanced Materials, Kevin worked for London International Group plc and Virgin Retail Europe Limited. He qualified as a chartered accountant with PricewaterhouseCoopers.

Additional appointments: Non-executive Director of e2v technologies plc.



DOUGLAS CASTER SENIOR INDEPENDENT DIRECTOR

# DOUGLAS CASTER CBE

SENIOR INDEPENDENT DIRECTOR (AGED 62) Appointed: February 2014.

Conson bistory Principate th

Career history: Bringing to the Board broad experience as an electronics systems engineer and company director, Douglas started his career with the Racal Electronics Group in 1975, before moving to Schlumberger in 1986 and then to Dowty as Engineering Director of Sonar & Communication Systems in 1988. In 1992, he became Managing Director of that business and, after participating in the management buy-out that formed Ultra Electronics, joined the Board in October 1993. In April 2000, he became Managing Director of Ultra's Information & Power Systems division. In April 2004 he was appointed Chief Operating Officer and became Chief Executive in April 2005. He was appointed deputy Chairman in April 2010 and became Chairman of Ultra in April 2011.

Additional appointments: Chairman of Ultra Electronics Holdings plc and Chairman of Metalysis Limited.

Committees: Audit, Nomination and Remuneration (Chair).



ANDREW REYNOLDS SMITH NON-EXECUTIVE DIRECTOR

# ANDREW REYNOLDS SMITH NON-EXECUTIVE DIRECTOR (AGED 49)

Appointed: May 2013.

Career history: Andrew is the Chief Executive of Smiths Group plc, having taken up the position in September 2015. Before joining Smiths Group, Andrew held a number of senior positions at GKN plc across its automotive businesses before becoming Chief Executive, Automotive at GKN plc, having been a member of the Board since 2007. Prior to GKN, he held various general management and functional positions at Ingersoll Rand, Siebe plc. and Delphi Automotive Systems. Andrew is a former Chairman of the CBI Manufacturing Council and a former member of the Ministerial Advisory Group for Manufacturing.

Additional appointments: Chief Executive of Smiths Group plc.

Committees: Audit, Nomination and Remuneration.



ROB ROWLEY NON-EXECUTIVE DIRECTOR

#### ROB ROWLEY NON-EXECUTIVE DIRECTOR (AGED 66) Appointed: February 2014.

**Career history:** Rob joined Reuters in 1978 where he held various senior management positions, including Finance Director from 1990 to 2000. He retired as a director of Reuters Group plc in December 2001. Rob was previously Deputy Chairman of Cable & Wireless plc, and a nonexecutive Director of Intu Properties plc, Prudential plc and Taylor Nelson Sofres plc.

Additional appointments: Non-executive Director, Chairman of the Audit Committee and Senior Independent Director of Taylor Wimpey plc; non-executive Director, Chairman of the Audit Committee and Senior Independent Director of Moneysupermarket.com Group PLC; nonexecutive Director and Senior Independent Director of Greene King plc; non-executive Director and Chairman of Audit and Risk & Security Committee of Camelot UK Lotteries Limited.

Committees: Audit (Chair), Nomination and Remuneration.

# CORPORATE GOVERNANCE

# Statement of compliance with the UK Corporate Governance Code

Throughout the year ended 31 December 2015 the Company has been in compliance with the relevant provisions of the September 2014 version of the UK Corporate Governance Code (the 'Code') which applies to the 2015 financial year, with the exception of the annual bonus plan which does not include malus and clawback provisions. The Remuneration Committee has made a decision to introduce malus and clawback into the annual bonus plan in respect of bonus earned for the 2016 financial year which, subject to the performance measures being met, is due to be paid in March 2017.

As reported in the Report of the Audit Committee on pages 60 to 63, the Group has not put the external audit contract out to tender during the last 10 years in accordance with provision C.3.7 of the Code. The external auditor was last appointed in 2001. The Board has decided to take advantage of the Financial Reporting Council (FRC)'s current guidance on transitional arrangements which allow the Group to defer a formal third-party tender process until at least the end of the current external audit engagement partner's tenure in 2018. Further information on the timing of a competitive tender process is set out on page 63 of the Report of the Audit Committee.

The main principles of the Code focus on Leadership, Effectiveness, Accountability, Remuneration and Relations with Shareholders. This statement describes how the Company has applied the main principles of the Code. It should be read in conjunction with the Strategic Report on pages 7 to 47 and the other sections of the Directors' report on pages 49 to 92.

The Code is published by the FRC and is available on its website **www.frc.org.uk**.

# Leadership

# The role of the Board

The Board is collectively responsible to the Company's shareholders for the long-term success of the Company. The Board is satisfied it has met the Code's requirements for its effective operation. It has set the Company's strategic aims, which were reviewed by the Board at its dedicated strategy meeting in June and are subject to an ongoing in-depth review following the appointment of Pete Raby as Chief Executive Officer, and has ensured that there is a framework of prudent and effective controls which enable risk to be assessed and managed. The Board sets the Company's values and standards, which are contained in the Core Values Statement and Ethics Policy, both of which are referred to on pages 22 to 24 of the Strategic Report.

# Matters reserved

There is a schedule of matters specifically reserved for the Board including setting the Group's strategic aims and objectives, approving significant contractual commitments (including the acquisition or disposal of companies/businesses, and treasury and intellectual property transactions), the review of the effectiveness of risk management processes, major capital expenditure and corporate responsibility. The schedule of matters reserved is available to view on the Company's website. The Board intends to review the schedule of matters reserved and limitations of authority within the Group to ensure they remain appropriate following the strategic review.

#### Delegation of authority

The Board has delegated responsibility for certain matters to three committees, namely the Audit, Nomination and Remuneration Committees. The memberships, roles and activities of these committees are described in separate reports: the Report of the Audit Committee is set out on pages 60 to 63; the Report of the Nomination Committee is set out on pages 64 and 65; and the Remuneration report is set out on pages 66 to 88. The full terms of reference of the Board committees are available upon request and are also available on the Company's website.

The Board delegates the day-to-day management of the Group and operational matters to the Chief Executive Officer and the Chief Financial Officer. The executive Directors together with the Group Human Resources Director, the Company Secretary & General Counsel, the Director of Strategic Programmes, the Chief Technology Officer, the Marketing Director and the Director of Finance form the Executive Committee.

The Board has delegated authority for certain other matters including routine approvals to a General Purposes Committee, which meets as required and at which a non-executive Director must be present.

#### **Board** meetings

In 2015, the Board met formally on eight occasions. An indication of the matters dealt with at these meetings is set out below.

The June 2015 meeting included a dedicated session on Group strategy, which Pete Raby attended prior to the commencement of his employment with the Company, with a specific focus on strategy and the long-term development of the Group. During this extended meeting, the Board assessed the Group's current portfolio of businesses, the performance of each of the technology families and the technology and innovation pipeline. It also considered the key drivers of future organic growth, assessed the competitor landscape and held detailed reviews of certain businesses.

This has been followed by a further in-depth review of strategy which commenced on Pete Raby's appointment in August.

#### Attendance at meetings

The attendance of each Director at Board and Audit, Remuneration and Nomination Committee meetings is set out in the table below.

Should a Director have concerns about the running of the Company or a proposed action which are not resolved, their concerns would be recorded in the Board minutes. An appropriate Directors' and Officers' liability insurance policy is in place.

	Boar	d	Aud	it	Remune	ration	Nomina	ation
Director	Eligible to attend	Attended						
Andrew Shilston*	8	8	_	_	4	4	3	3
Pete Raby†	3	3	_	_	_	_		1
Kevin Dangerfield	8	8	_	_	_	_	_	_
Andrew Hosty~	8	7	_	_	_	_	_	_
Douglas Caster*	8	8	5	5	4	4	3	3
Victoire de Margerie <sup>*#</sup>	8	8	5	3	4	4	3	3
Andrew Reynolds Smith*	8	8	5	5	4	4	3	3
Rob Rowley*^	8	8	5	5	4	3	3	2

\* Indicates a Director deemed by the Board to be independent or, in the case of the Chairman, independent on appointment.

+ Appointed to the Board on 1 August 2015.

 $\sim~$  Andrew Hosty was unable to attend the Board meeting in September 2015 due to illness.

# Victoire de Margerie was unable to attend the June and September Audit Committee meetings due to prior commitments.

^ Rob Rowley was unable to attend the February Nomination Committee and Remuneration Committee meetings due to a prior commitment.

#### Summary of the Board's work during the year:

- $\rightarrow$  Commenced a review of business and future technology strategy
- $\rightarrow$  Approval of the appointment of Pete Raby as Chief Executive Officer
- → Deciding that the role of Chief Operating Officer was no longer required and the termination arrangements for Andrew Hosty
- → Receipt of in-depth business briefings from each of the Regional Presidents
- → Review and approval of the Group's half-year results, trading statements and preliminary announcement of the final results
- → Approval of the 2016 budget
- → Review of Group and Regional business plans with a three-year horizon
- → Approval of major capital expenditure and review of major capital investment projects
- $\rightarrow$  Review of the Group's principal risks
- ightarrow Review of pensions liability position
- → Review of environmental and health and safety performance and monitoring the roll-out of 'thinkSAFE', the behaviour-based safety programme, and introduction of a new online incident reporting system
- → Review of opportunities in the emerging technology of additive manufacturing
- → Review of intellectual property and know-how
- → Consideration of major shareholders' views on the Group's performance and prospects
- ightarrow Review of the senior management talent pipeline
- → Review of the Group's IT strategy and performance, including progress on implementation of an enterprise resource planning system in the USA
- ightarrow Review of the Group's treasury arrangements, including treasury risk
- → Review of outcomes of the Board performance evaluation and agreeing actions for further improvement.

#### Chairman and Chief Executive Officer

The roles of Chairman and Chief Executive Officer are separate, clearly established, set out in writing and agreed by the Board.

The Chairman is responsible for the leadership and effectiveness of the Board, including: setting the Board's agenda and ensuring sufficient time is available for all agenda items, particularly regarding strategic issues; promoting a culture of open debate and constructive challenge; facilitating effective contributions by the non-executive Directors; and ensuring constructive relationships between executive and non-executive Directors. The Chief Executive Officer is responsible for the management of the Group, including the delivery of the Group's business plan, the formulation and implementation of strategy, chairing the Executive Committee and ensuring the implementation of the Group's policies.

Following Mark Robertshaw's departure as Chief Executive Officer on 31 December 2014, Kevin Dangerfield, Chief Financial Officer, additionally served as interim Chief Executive Officer from 1 January 2015 until the recruitment of a replacement. Pete Raby joined as Chief Executive Officer on 1 August 2015 and Kevin Dangerfield resumed his position of Chief Financial Officer only from that time.

On 2 October 2015, it was announced that the Regional Presidents would report with immediate effect directly to the Chief Executive Officer and as a consequence the role of Chief Operating Officer was no longer required. Andrew Hosty remained on the Board and continued to report directly to the Chief Executive Officer, providing advice on a review of business and future technology strategy, until his departure on 8 January 2016.

# CORPORATE GOVERNANCE

#### Chairman

On appointment as Chairman on 1 August 2012, Andrew Shilston met the independence criteria set out in the Code.

#### Non-executive Directors

Non-executive Directors are appointed for a term of three years, subject to annual re-election in accordance with the Code. The independence, commitment and effectiveness of any non-executive Director who has served for two three-year terms is subject to rigorous review prior to reappointment for a further three-year term.

Douglas Caster became Senior Independent Director on 1 January 2015 on the departure of Andrew Given on 31 December 2014.

Victoire de Margerie stepped down from the Board on 4 February 2016 due to other commitments.



# Serving first three-year term 50% Serving second three-year term 33% Serving third three-year term 17%

The Chairman and the non-executive Directors met without the executive Directors present on a number of occasions during the year. In addition, the Senior Independent Director and the other non-executive Directors met without the Chairman present.

## Effectiveness Board balance and independence

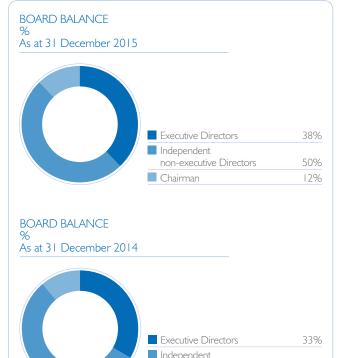
The size, structure and composition of the Board were reviewed during the year, taking into account succession planning and the need to progressively refresh the membership of the Board.

Pete Raby was appointed to the Board as an executive Director on I August 2015. Further information on the process used to appoint the new Chief Executive Officer is included in the Nomination Committee Report on pages 64 and 65.

Mindful of the need to continuously review and update the knowledge, skills and experience on the Board, as announced on 22 January 2016, Helen Bunch will be appointed to the Board as a non-executive Director with effect from 24 February 2016.

As at 23 February 2016, the Board comprises Andrew Shilston, Chairman; Pete Raby, Chief Executive Officer; Kevin Dangerfield, Chief Financial Officer; and three independent non-executive Directors, namely Douglas Caster, Andrew Reynolds Smith and Rob Rowley. Biographies of the Directors in post at the date of this Report, including details of their other main commitments, are set out on pages 50 and 51.

Throughout the year the Company complied with the requirement of the Code that at least half the Board, excluding the Chairman, should comprise non-executive Directors determined by the Board to be independent. In addition to the factors set out in the Code, the Board's assessment of a non-executive Director's independence and effectiveness covers their total number of commitments and any relationships with major suppliers and with charities receiving material support from the Company.



non-executive Directors

Chairman

#### Commitment

Prior to undertaking an additional external role or appointment, the Chairman and the non-executive Directors are asked to confirm that they will continue to have sufficient time to fulfil their commitments to the Company. For example, during the year, Rob Rowley indicated that he wished to accept a non-executive Director role at Camelot UK Lotteries Limited. Prior to accepting the position, he confirmed that he would continue to have sufficient time to dedicate to his role at Morgan Advanced Materials plc and the Board concluded that acceptance would not compromise his independence or impede the time available to carry out his duties for the Company.

There was no change to the Chairman's other significant commitments during the year.

#### Information and support

56%

11%

The Company Secretary, with the Chairman, is responsible for ensuring the Board has full and timely access to all appropriate information to enable it to discharge its duties. Board papers are generally made available electronically five working days before each meeting. Non-executive Directors also receive updates and information between formal Board meetings.

The Directors have access to the advice and services of the Company Secretary who, with the Chairman, is responsible for ensuring that Board procedures are followed and that applicable rules and regulations are observed. A procedure is in place to enable the Directors to seek independent professional advice at the Company's expense in connection with their duties as Directors.

# Induction and professional development

New Directors receive a full, formal and tailored induction on joining the Board. A new Director's experience and background is taken into account in developing a tailored programme. Before and after his appointment to the Board on 1 August 2015, Pete Raby received comprehensive briefings to supplement the information on the Group's business provided during recruitment. The briefing included further information on the business and its products and markets, brokers' reports on the Group, the Company's corporate governance structure and processes and key Group policies. The intensive induction programme included meetings with investors and analysts, briefings from other executives and functional heads on governance, responsible business, key risks, human resources and environment, health and safety, together with numerous visits to operational sites globally and meetings with Regional and operational management and personnel.

The Chairman considers the individual training and development needs of each Director. The Company Secretary keeps the suitability of external courses under review and facilitates the ongoing training and development of all Directors as necessary. During the year Directors received a dedicated briefing on thinkSAFE and two non-executive Directors attended separate Responsible Business Programme training sessions.

Non-executive Directors have access to management and employees at all levels and are encouraged to visit operational sites. In addition to visits by individual Directors and the Chairman, each year at least one Board meeting is held at an operating facility. In 2015 Board visits were made to two overseas sites, in Luxembourg and Augusta, USA, and to the Southampton site in the UK.

# CORPORATE GOVERNANCE

#### Performance evaluation

As anticipated in the 2014 Annual Report, the Board conducted an externally facilitated Board performance evaluation during 2015. Prior to this, the most recent externally facilitated evaluation was in 2011; given the significant Board changes during 2014, the Board had decided to defer the external evaluation to 2015 when Board dynamics had settled and the new members of the Board would have had more time in post and more relevant knowledge and experience with the Company on which to base their contributions to allow a more meaningful evaluation.

The aim of the external evaluation of the Board's performance and that of its Committees and individual Directors was to identify ways to improve effectiveness.

The 2015 process was led by the Chairman and carried out by Jack Telfer of Auxesis Consulting. Jack Telfer is not involved in any other business relationship with the Company and is independent.

The process for the evaluation of the Board as a whole and its Committees was as follows:

- → Completion by all Board members, with the exception of Pete Raby as he had only recently joined the Board, of tailored questionnaires which took into account the output from the 2014 performance evaluation process, the current dynamic of the Board, the work of the Board during 2015 and its areas of focus.
- $\rightarrow$  Report produced summarising the results of the questionnaires.
- → Jack Telfer met with each of the Board members, with the exception of Andrew Hosty who stepped down from the Board on 8 January 2016.
- → Jack Telfer presented the findings to the Chairman initially and then to the full Board which had a full discussion on the results and subsequently agreed an action plan.

The main aspects of the Board's work which the Board believes offer scope for further development relate to driving the Group's strategic review and ensuring that the Board works effectively in a time of significant change, and include:

- → Strategy challenging, supporting and monitoring the development and execution of the ongoing strategic review, with the need to increase the frequency of discussions on strategy and to effectively monitor execution against it.
- → Business leadership an increasing focus on talent management as a fundamental part of executing the Group's strategic priorities.
- → Board dynamics a focus on ensuring that the Board operates effectively, with the right mix of skills, against a background of continuing Board evolution and a period of significant change in the business.

Alongside the Board and Committee evaluation, each Director completed an individual questionnaire which invited them to reflect on their own performance and contribution to the Board. The responses were reviewed by the Chairman and Jack Telfer, with any development needs being discussed with individual Directors.

Actions were taken during the year to implement the recommendations made following the 2014 Board performance review and, in the case of the articulation of strategy and focus on business leadership, the work is ongoing.

# RECOMMENDATION FROM THE 2014 BOARD PERFORMANCE REVIEW AND ACTION IMPLEMENTED DURING 2015

<b>Recommendations from 2014</b> <b>Strategy</b> – The need to better articulate the Group's long-term strategy and sustainable growth drivers externally, whilst using shareholder comments and external views to challenge Board views.	Action taken/progress made during 2015 In 2015, the Board discussed strategy on four separate occasions including at the annual strategy session in June. On his appointment, Pete Raby, supported by executive management, commenced a strategic review. In reviewing the strategy, the Board has considered the views of investors and other relevant third parties. The articulation of strategy forms part of the ongoing review of business and future technology strategy.
<b>Business leadership</b> – There should be a continuing and increasing focus from the Board on business leader succession/ talent management as well as on ensuring the continued development of leaders with the necessary skills to execute the Group's long-term strategy. A greater Board exposure to key Regional executives was required to facilitate this.	The Board considered a summary report on talent at its July meeting and conducted an in-depth review of executive talent and succession planning at its meeting in November 2015. The Board reviewed progress that had been made against targeted improvement in the areas of senior succession strength in both leadership and functional capabilities, talent management and recruitment. The Board will continue to review the talent strategy in line with the broader strategic review. As part of their respective annual presentations to the Board, each of the Regional Presidents gives an account of the talent in their respective organisations. The overseas Board site visits represent an opportunity for the Directors to meet and engage with local executive management. The Board received updates on the Group's new global Advanced Leadership Programme, which complements the existing Senior Leadership Programme and Graduate Programme.
<b>Management reporting</b> – Improvements are required to ensure the Board receives the right balance of information from management, delivered in a clear and concise way.	Executive management has made changes to the formatting of certain papers. The format of Group financial information has been improved and additional narrative incorporated to highlight key points. As a result of the review of internal control and risk management procedures, a number of reports prepared by management for the Audit Committee have been revised, in particular in relation to the reporting of risk and reporting on key judgments made by management when preparing the final and half-year results.

# CORPORATE GOVERNANCE

The non-executive Directors, led by Douglas Caster, the Senior Independent Director, met without the Chairman present to evaluate the Chairman's performance during the year, taking into account the views of the executive Directors.

#### **Conflicts of interest**

The Board has procedures in place to address the requirements of the Companies Act 2006 concerning the duty of the Directors to avoid conflicts of interest. Accordingly the Directors are required to:

- → Disclose proposed outside interests before they are accepted in order to enable a prior assessment of any actual or potential conflict.
- → Disclose without delay any situation which gives rise to an actual or potential conflict.

The Board reviews the outside interests of the Directors and any conflicts disclosed and authorisations annually. Should an actual or potential conflict be identified, the Board considers whether to authorise the situation in accordance with the Company's Articles of Association and, if so, the terms of any authorisation. In the event of an actual conflict arising, the Director concerned is to notify the Chairman (the Chairman would notify the Senior Independent Director) and the Director would be excluded from the relevant information, debate and decision.

Andrew Reynolds Smith, non-executive Director, was appointed CEO of Smiths Group plc in September 2015. As Morgan's Seals and Bearings business is a supplier to John Crane, a division of Smiths Group, there is a conflict of interest. The Board authorised the situational conflict, subject to the Company Secretary ensuring Andrew Reynolds Smith does not receive information relating to the Seals and Bearings business and that he is excluded from any discussion or decision relating to Seals and Bearings.

## Accountability

#### Financial reporting

In its reporting to shareholders, the Board is satisfied that the Annual Report and Accounts, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy as required by the Code.

A summary of the statement of Directors' responsibilities in respect of the Annual Report and the Financial statements is set out on pages 91 and 92 and the going concern statement is set out in the Strategic Report on page 47.

### Business model and strategy

Details of the Group's business model, how it is working to generate and sustain long-term value and details of the Board's strategy for ensuring the Group meets its objectives are set out in the Strategic Report on pages 7 to 47.

#### Internal control

The Board has overall responsibility for establishing and maintaining a sound system of internal control to safeguard shareholders' investment and the Group's assets and for reviewing the effectiveness of this system. The Group's system of internal control has been in place for the year under review and up to the date of approval of the Annual Report.

Through the Audit Committee, the Board reviews the effectiveness of the internal control system annually and did so during the year. The system of internal control accords with the FRC's guidance on the internal control requirements of the Code (formerly known as the 'Turnbull guidance'). This review covered all material controls, including financial, operational and compliance controls, and risk management systems. The Audit Committee and Board receive regular risk management reports covering the full range of risks faced by the Group and together they ensure there are adequate systems in place and that they are effective.

The Directors believe that the Group's system of internal financial controls provides reasonable, but not absolute, assurance in the following areas: that the assets of the Group are safeguarded; that transactions are authorised and recorded in a correct and timely manner; and that such controls would prevent and detect, within a timely period, material errors or irregularities. The system is designed to manage, rather than eliminate, risk and to address key business and financial risks. The internal control framework complements the Group's management structure.

The main features of the Group's systems for internal control and for assessing the potential risks to which the Group is exposed are summarised as follows:

#### $\rightarrow$ Control environment

The Group's management processes include delegated authorities and the segregation of duties with documented policies and manuals. These cover financial procedures, environmental, health and safety practice and other areas. In addition, there is a schedule of matters reserved for the Board. The Group's Core Values Statement, Ethics Policy and other supporting policies and procedures set out the Group's commitment to the highest standards of corporate and individual behaviour and provide guidance for employees. The Group's Responsible Business Programme includes relevant training and reporting and is part of the control framework. The Ethics Hotline is available to employees in this regard. The Regional Presidents and other senior operational and functional management make an annual statement of compliance to the Board confirming that, for each of the businesses for which they are responsible, the financial statements are fairly presented in all material respects, appropriate systems of internal controls have been developed and maintained and the businesses comply with Group policies and procedures. In addition, the Audit Committee receives an annual presentation on internal controls from each of the Regional Finance Directors.

# ightarrow Financial reporting

Risk management systems and internal controls are in place in relation to the Group's financial reporting processes and the process for preparing consolidated accounts. These include policies and procedures which require the maintenance of records which accurately and fairly reflect transactions and dispositions of assets, provide reasonable assurance that transactions are recorded as necessary to allow the preparation of financial statements in accordance with International Financial Reporting Standards (IFRS), and the review and reconciliation of reported data. As noted above, representatives of the business are required to certify that their reported information gives a true and fair view of the state of affairs of the business and its results for the period. The Audit Committee is responsible for monitoring these risk management systems and internal controls.

#### $\rightarrow$ Performance monitoring

There are regular meetings of the Board and of the Executive Committee. A comparison of forecast and actual results is considered, including cash flows and comparisons against budget and the prior year. Regional management teams also meet regularly to review performance. In addition, regular site visits are made by members of the Executive Committee.

#### $\rightarrow$ Risk management

The Board has undertaken a robust annual assessment of the Group's principal risks. The identification, assessment and reporting of risks is an ongoing process carried out in conjunction with operating management and steps are taken to mitigate and manage all material risks including those relating to the Group's business model, solvency and liquidity. The Board, either directly or through the Audit Committee, receives updates on risks from both Regional and Group perspectives. Both the Group Executive Committee and Regional Executive Committees additionally cover risk issues at their meetings. The Group's risk management system, as set out in the Risk management section on pages 18 to 21, supports the going concern statement on page 47 and the viability statement on page 21.

## $\rightarrow$ Risk factors

The Group's businesses are affected by a number of factors, many of which are influenced by macro-economic trends and are therefore outside the Company's immediate control, although, as described above and in the Strategic Report, the identification and management of such risks is carried out systematically. These are further discussed in the Risk management section on pages 18 to 21.

#### $\rightarrow$ Internal audit

The Group's internal audit function reviews internal control and risk management processes. The Audit Committee approves the plans for internal audit reviews and receives reports accordingly. Actions resulting from internal audit reviews are agreed with management and the Audit Committee monitors progress against outstanding actions. The Internal Auditor has direct access to the Chairman of the Audit Committee.

# Relations with shareholders

During 2015, the Chairman and other non-executive Directors attended results presentations and other investor events. This provided the opportunity to meet institutional shareholders and other attendees and to develop an understanding of their views.

Following the announcement of the Group's results and after other significant statements and presentations, investor opinion is canvassed and any feedback is made available to the Board. In addition, the Board is provided with brokers' reports and feedback from any shareholder meetings on a regular basis.

The Remuneration Committee consulted shareholders in January 2016 on changes to the Directors' remuneration policy due to be introduced during 2016.

To help facilitate dialogue with shareholders, the Investors section of the Company's website includes details of Regulatory News announcements, press releases, presentations, webcasts and other relevant Company and shareholder information.

## Constructive use of the AGM

The AGM is normally attended by all members of the Board and by a representative of the external auditor. At the AGM held in May 2015, the Interim Chief Executive Officer and Chief Financial Officer made a short business presentation. Shareholders are invited to ask questions during the meeting and have the opportunity to meet the Directors and other members of senior management before and after the formal meeting. The results of the proxy voting on all resolutions are released to the London Stock Exchange and published on the Group's website as soon as practicable after the meeting. Noting the vote on the Annual Report on Remuneration was 57.36% in favour at the 2015 AGM, the Remuneration Committee contacted major shareholders to identify their concerns, and the Board then considered how best to address them.

### Information on share capital and other matters

The information about share capital required to be included in this statement can be found on pages 90 and 91 in the Other disclosures section.

# REPORT OF THE AUDIT COMMITTEE



ROB ROWLEY COMMITTEE CHAIRMAN

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THIS REPORT GIVES AN OVERVIEW OF THE RESPONSIBILITIES OF THE AUDIT COMMITTEE AND HOW IT DISCHARGED THESE DURING 2015, TOGETHER WITH INFORMATION ON ITS MEMBERSHIP AND GOVERNANCE.

# COMMITTEE MEMBERS

Rob Rowley (Chairman) Douglas Caster Victoire de Margerie\* Andrew Reynolds Smith

\* Stepped down from the Committee on resignation as a Director on 4 February 2016.

All members of the Committee are independent non-executive Directors and Rob Rowley, the Chairman of the Committee, has the requisite financial experience.

#### Chairman's introduction

I am pleased to present the report of the Audit Committee for 2015. It has been a busy year for the Committee as we respond to the continuing challenges of ensuring consistent and robust financial controls across a global business and address the changes in governance and reporting requirements, most notably this year the introduction of the viability statement as set out on page 21 of this Report and the adoption of FRS 101 'Reduced Disclosure Framework' in respect of the Company Balance Sheet as set out on page 146.

The main purpose of the Audit Committee continues to be to assist the Board in effectively discharging its responsibilities for financial reporting and corporate control. I would like to highlight a number of key areas of focus for the Committee in 2015, as follows:

- → During 2015, we continued to monitor our internal controls closely and received a series of presentations from the Regions on their internal controls and risk management, more latterly in a new proforma presentation format which facilitates ease of comparison across Regions. The presentations were delivered by the Regional Finance Directors, accompanied by their respective Regional President, which gave the Committee the opportunity to ask questions face-to-face and gain a real insight into the internal control environment and risk management approach of each Region. Where issues were reported the Committee gave full consideration to the cause, potential or actual impact and the response by management.
- → The Committee monitored the implementation of the changes required by provisions in the UK Corporate Governance Code (the Code) which applied to the 2015 financial year on the robust assessment of risk including solvency and liquidity, ongoing monitoring of systems, the new going concern and material uncertainties disclosure and the business viability statement. The Committee considered the control framework and processes required to enable the Board to make the relevant statements in the 2015 Annual Report.
- → Throughout 2015, the Committee received progress updates on a review by management of the Group's approach to risk management and internal controls. The review resulted in implementation of certain changes to the control framework and processes and will continue to evolve as changes are embedded into the businesses.
- → Reviewed the key accounting judgments made by executive management, taking into account the views of the external auditor. The key areas of significant judgment were in respect of specific adjusting items, goodwill impairment testing, provisions and contingent liabilities and tax balances, and further details on these in relation to the 2015 Financial statements are set out on page 62 of this Report.

I continue to be satisfied that the Committee is working well, is contributing effectively to the governance framework and is properly discharging its responsibilities.

ROB ROWLEY COMMITTEE CHAIRMAN

# Meetings

The Audit Committee met five times during the year. At the end of most meetings the non-executive Directors who are members of the Committee also meet the external auditor, the Head of Internal Audit and the Responsible Business Programme & Risk Manager without the executive Directors or other members of management present. Between meetings the Chairman of the Audit Committee keeps in contact with the Chairman of the Board, the Chief Executive Officer, the Chief Financial Officer, the external auditor and the Head of Internal Audit as necessary.

#### Information and support

The Committee may request the attendance at meetings of any Director or employee as may be considered appropriate by the Committee.

The Committee identifies and ensures that it receives the information it needs to enable it to fulfil its responsibilities. This is complemented by annual presentations made by the Regional Presidents and Regional Finance Directors on the internal control environment and risk management within their respective Regions. Training and development information is made available to the members of the Audit Committee when appropriate.

#### Audit Committee terms of reference

The Audit Committee has a clear set of responsibilities and these are set out in its terms of reference and agreed by the Board. These terms of reference were reviewed and updated as necessary during the year to ensure that they are wholly compliant with the September 2014 version of the UK Corporate Governance Code which applied to the 2015 financial year. They are available on the Company's website and are summarised below:

- → Monitoring and making appropriate recommendations to the Board with regard to the financial reporting process, the integrity of the Financial statements of the Group, preliminary announcements of results, half-year reports and any formal announcements relating to the Group's financial performance, and reviewing significant financial reporting judgments contained in them.
- → Reviewing accounting policies used by the Group and their consistent application across the Group.
- → Reviewing whether the Group has followed appropriate accounting standards and made appropriate estimates and judgments, taking into account the views of the external auditor.
- → Reviewing, prior to approval by the Board, the assessment of whether it is appropriate to adopt the going concern basis of accounting in preparing the financial statements and the identification of material uncertainties to the ability to do so over a period of at least 12 months from the date of approval.
- → Reviewing the content of the Annual Report and Accounts and advising the Board on whether, taken as a whole, it is fair, balanced and understandable and provides the information necessary for shareholders to assess the Company's position and performance, business model and strategy.
- → Agreeing the processes to enable the ongoing monitoring and review of the scope, adequacy and effectiveness of the Group's internal controls and risk management systems.
- → Carrying out, at least annually, a review of the Group's internal controls and risk management systems, including procedures for identifying and assessing principal risks to the Group's business and the management and mitigation of those risks.
- → Reviewing, prior to approval by the Board, the assessment of whether there is a reasonable expectation, taking the Group's position and principal risks into account, that the Group will be

able to continue in operation and meet its liabilities as they fall due over the period covered by that assessment, prior to approval by the Board.

- → Reviewing and monitoring the Group's whistleblowing arrangements and systems and controls for the prevention of bribery.
- → Monitoring and reviewing the effectiveness of the Group's internal audit function, approving the remit of the function and ensuring it has adequate standing and is free from management or other restrictions.
- → Making recommendations to the Board, for it to put to shareholders for their approval at the AGM, in relation to the appointment, reappointment and removal of the external auditor and the approval of the remuneration and terms of engagement of the external auditor.
- → Subject to the current transitional provisions, ensuring that the audit services contract is put out to competitive tender every 10 years and supervising any such process and overseeing the selection process for a new auditor.
- → Reviewing and monitoring the external auditor's independence and objectivity.
- → Reviewing the effectiveness of the process for the statutory audit of the annual consolidated accounts, taking into consideration relevant UK professional and regulatory requirements.
- → Developing and implementing the policy on the engagement of the external auditor to supply non-audit services, taking into account relevant ethical guidance regarding the provision of non-audit services by the external auditor.
- → Reporting to the Board, identifying any matters in respect of which it considers that action or improvement is needed and making recommendations as to the steps to be taken.

The Committee has the authority, in accordance with its terms of reference, to investigate any matters and may obtain external advice at the cost of the Company, but did not do so during the year.

## Main areas of work in 2015

During 2015, in addition to the areas of work outlined in the Chairman's letter above, the Committee:

- → Reviewed the Group's 2015 half-year and full-year statements prior to Board approval.
- → Made a recommendation to the Board that it is appropriate to prepare the accounts for the year on a going concern basis.
- → Reviewed the new requirements in relation to the viability statement (see statement on page 21 of the Strategic Report) and agreed an appropriate time period for that statement and a reasonable financial 'base case' for that period, together with an in-depth evaluation of the risks affecting the financial viability of the Company over that timeframe, all for recommendation to the Board.
- → Reviewed the scope of the external audit, and confirmed the external auditor's terms of engagement and fee structure.
- → Assessed the effectiveness of the external audit process and all aspects of the service provided by the external auditor.
- → Monitored the level of non-audit work of the external auditor, which in 2015 included services amounting to £0.3 million, mainly in connection with tax services.
- → Reviewed the controls and assurance processes that are in place to mitigate the Group's key risks.
- → Reviewed the effectiveness of, and received reports from management on, the Group's internal audit and risk management systems and updates to the Group's governance, risk and compliance plans.

# REPORT OF THE AUDIT COMMITTEE continued

- → Reviewed and approved the plans, work and overall effectiveness of the internal audit function, monitored its progress against the plan and ensured that the appropriate resource was deployed within the function.
- $\rightarrow\,$  Reviewed the systems of internal controls of, and risks managed in, the Regions.
- → Reviewed the Group's whistleblowing process and related procedures and policies.
- $\rightarrow$  Reviewed material litigation.
- → Reviewed compliance with and implementation of the Group's policies.
- $\rightarrow\,$  Reviewed the status of the Group's export controls compliance programme.
- → Considered the alternatives to and the impact of FRS 101 'Reduced Disclosure Framework' before endorsing the decision to adopt it.
- → Reviewed implementation of major new operational and accounting software in North America.

# **Public reporting**

The Committee, as requested by the Board, considered the Code requirement for the Board to make a statement on whether the Annual Report and Accounts is fair, balanced and understandable. The Committee approached this as follows:

- → Considered the questions which need to be answered in order to evaluate whether the Annual Report and Accounts meets the fair, balanced and understandable test.
- → Reviewed the methodology used to construct the narrative sections of the Annual Report.
- → Reviewed the disclosure judgments made by the authors of each section and considered the balance of good and bad news in the Annual Report.
- → Received confirmation from external advisers that all regulatory requirements are satisfied.
- → Received confirmation of verification of content from the authors of each section.
- → Received confirmation from the Chief Financial Officer that the narrative reports and Financial statements are consistent.
- → Reviewed a first draft of the Annual Report and Accounts prior to the financial year end.
- → Made a recommendation to the Board to assist the Board in determining whether it is able to make the statement on whether the Annual Report and Accounts is fair, balanced and understandable.

The significant areas of judgment considered by the Committee in relation to the 2015 Financial statements, and how these were addressed, were as follows:

## ightarrow Specific adjusting items

In the Consolidated Income Statement the Group has again presented specific adjusting items separately in order to provide the best indication of the underlying performance of the Group, and details of the nature and quantum of the individual items are provided in note 6 to the Financial statements. The Audit Committee fully considered this principle and the individual items and, taking into account guidelines issued by the FRC and peer group disclosure of similar items, concluded that it is the best way to present the Group's results.

# ightarrow Intangible asset impairment testing

Specific attention was again given to the intangible asset carrying value of the Composites and Defence Systems (C&DS) cashgenerating unit. Based on the performance of the business during 2015 and latest expectations for the future, which were particularly informed by the reduced demand from the UK MoD, it was considered appropriate and prudent to record an impairment charge of £5.8 million against the customer relationship intangible asset, which has been reported as a specific adjusting item. The latest financial projections and other assumptions support the valuation of the remaining intangible assets. Further information on the goodwill generally and the sensitivities associated with the impairment calculations are given in note 11.

# $\rightarrow$ Provisions and contingent liabilities

The level of provisioning for known and contingent liabilities, including those arising from trading, environmental issues and litigation, is an issue where management and third-party judgments are important. These are addressed through the Committee and the Board discussing with various members of senior management the key judgments made, supported, where appropriate, by relevant external advice. KPMG LLP also reports regularly on all material provisions and contingent liabilities. The Group recorded redundancy and restructuring provisions in the ordinary course of business totalling £4.1 million, which are charged against underlying earnings but are disclosed separately to provide investors with additional information to assist in their assessment of the Group's performance.

## $\rightarrow$ Tax balances

Accounting for current and deferred tax involves a range of judgments. The Committee and the Board address these issues through reporting from the Chief Financial Officer and the Director of Group Tax, supported as necessary by external professional advice.

The Committee reviewed the content of the Annual Report and Accounts and advised the Board on whether, taken as a whole, it is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy.

#### Audit Committee and the external auditor

The Audit Committee has received confirmation from KPMG LLP that its general procedures and practices support the auditor's independence and objectivity in relation to non-audit services. After considering such procedures the opinion of the Audit Committee was that the auditor's objectivity and independence were safeguarded despite the provision of non-audit services by KPMG LLP.

To help ensure the objectivity and independence of the external auditor, the policy implemented by the Committee for the provision of non-audit services by the external auditor is in summary as follows:

- → Certain non-audit services may not be provided by the external auditor, including: the review of their own work; they may not make management decisions; their work must not create a mutuality of interest; and they may not put themselves in the position of advocate.
- → Any permissible non-audit work proposed to be placed with the external auditor with a fee between £50,000 and £200,000 must be approved in advance by the Chairman of the Audit Committee. Projects in excess of £200,000 must be approved in advance by the Audit Committee. Work which includes multiple phases is treated as a single project for approval purposes.
- → The prior approval of the Audit Committee is required for any nonaudit work which, when added to the fees paid for other non-audit work, would total more than 80% of the audit fee.

During the year the proportion of the auditor's fees for non-audit work relative to the audit fee was 16% (2014: 20%).

The Committee's policy is to undertake an annual review of the effectiveness of the audit process and of all aspects of the external auditor's performance and independence before determining whether to undertake a formal review of the auditor including a re-tender presentation, or whether to put the Group's audit work out to full third-party tender.

The external auditor has processes in place to safeguard its independence and has written to the Committee confirming that, in its opinion, it is independent. The Group last changed its auditor in late 2001. The external auditor rotated the partner responsible for the Group's audit work in 2008 and 2013. The Code requires that FTSE 350 companies should put the external audit contract out to tender at least every 10 years. The Company notes the guidance issued by the FRC on transitional arrangements on tendering which permit KPMG LLP to continue in office until 2018 without an audit tender. Having reviewed the effectiveness of the audit process and all aspects of the service provided by the auditor, and taking account of the assurance given by the auditor as to its independence, the Committee recommended to the Board that the Group's external audit work should be put out to third-party tender no earlier than 2018 when the current audit engagement partner is due to rotate and no later than 2023, which is the latest date by which the Company must change its auditor as permitted by the EU Audit Regulation's transitional arrangements. The Company has complied with the provisions of the Competition & Markets Authority's Order on statutory audit services.

# REPORT OF THE NOMINATION COMMITTEE



ANDREW SHILSTON COMMITTEE CHAIRMAN

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THE MAIN ROLE OF THE NOMINATION COMMITTEE IS TO LEAD THE PROCESS FOR BOARD APPOINTMENTS AND TO MAKE RECOMMENDATIONS TO THE BOARD ON THE APPOINTMENT OF NEW DIRECTORS.

# COMMITTEE MEMBERS

Andrew Shilston (Chairman) Douglas Caster Victoire de Margerie\* Pete Raby\*\* Andrew Reynolds Smith Rob Rowley

- \* Stepped down from the Committee on resignation as a Director on 4 February 2016.
- \*\* Joined the Committee on appointment as a Director on 1 August 2015.

A majority of members of the Committee are independent non-executive Directors.

#### Chairman's introduction

2015 was once again an important year for the Committee with a number of changes to the Board.

In January 2015, the Committee concluded the search for a new Chief Executive Officer following Mark Robertshaw's departure at the end of 2014, with the announcement that Pete Raby would be joining Morgan as Chief Executive Officer on 1 August 2015.

Recognising the importance of ongoing refreshment of the Board and continual review of the skills and experience on the Board to meet the needs of the Company, and following the experience of 2014 when three long-serving non-executive Directors stepped down from the Board, the Committee commenced a process to recruit an additional non-executive Director. The search concluded with the appointment, announced on 22 January 2016, of Helen Bunch as non-executive Director with effect from 24 February 2016.

The Committee has spent a great deal of its time during 2015 evaluating the Board's succession needs, working closely with executive search agents to evaluate the skills and experience required to balance the Board and, following the creation of a candidate specification, reviewing long- and short-lists of candidates.

Looking ahead, the Nomination Committee will continue to review skills requirements against long-term strategy, and take into account the outcomes of the strategic review.

There is a formal, rigorous and transparent procedure for appointments to the Board which is described in more detail below. Appointments are made on merit and against objective criteria, having due regard for diversity, including gender.

#### ANDREW SHILSTON COMMITTEE CHAIRMAN

#### Meetings

The Committee met formally three times during 2015. In addition, a number of working groups of members of the Committee met between scheduled meetings to progress the recruitment of the Chief Executive Officer and to recruit a new non-executive Director.

#### Information and support

The Committee has the power to request the attendance of any other Director or member of management, for all or part of any meeting, as may be considered appropriate by the Committee.

#### Nomination Committee terms of reference

The Committee's terms of reference were reviewed during the year. The terms of reference are available to view on the Company's website.

# Main areas of work during 2015

The Nomination Committee reviews the balance of skills, knowledge and experience on the Board, succession planning and the leadership needs of the Group. The work of the Committee in discharging those responsibilities in respect of 2015 included:

- → Concluding the selection process in relation to the appointment of a new Chief Executive Officer.
- → Led the search for a new non-executive Director, resulting in the selection and recommended appointment of Helen Bunch as announced on 22 January 2016 and who will be appointed to the Board with effect from 24 February 2016.
- → Considering the reappointment of the non-executive Directors at the conclusion of their specified time in office and the Directors' annual re-election at the 2015 AGM.
- → Reviewing, for recommendation to the Board, the Board's policy on diversity.

## Appointments to the Board

The Board discussed the Group's approach to talent management and succession planning at senior levels in July and November 2015 and noted progress to date in increasing succession strength. Succession planning for appointments to the Board and for senior management will be a continued area of focus for the Committee in 2016.

The process to recruit Pete Raby, Chief Executive Officer, is described below:

- → The skills and attributes required of an incoming Chief Executive Officer were discussed and a job specification was agreed.
- → Following a selection exercise in which a number of external search agents were considered and three firms were interviewed, Spencer Stuart was appointed and briefed. Spencer Stuart has signed up to the voluntary code of conduct for executive search firms which includes provisions on diversity. Spencer Stuart has no other connection with the Company other than conducting psychometric testing for senior executives in 2013.
- → The Committee agreed that the Chairman of the Committee, the Senior Independent Director and Victoire de Margerie should continue to progress the search between formal meetings of the Committee.
- → The search was conducted globally and a long-list of candidates was considered, including external and internal, international and female candidates. The search agent travelled to meet candidates outside the UK.
- → Short-listed candidates were then interviewed by all members of the Nomination Committee. Spencer Stuart then conducted an independent assessment and references were taken up before the decision was made and announced on 30 January 2015 to appoint Pete Raby as Chief Executive Officer, commencing his role on I August 2015.

The process for appointing Helen Bunch as a non-executive Director is described below:

- → Following consideration of a number of leading firms, the Committee appointed Spencer Stuart as external search agent. Spencer Stuart has signed up to the voluntary code of conduct for executive search firms which includes provisions on diversity. As mentioned previously, Spencer Stuart has no other connection with the Company other than conducting psychometric testing for senior executives in 2013.
- → In the light of its discussions on the balance of skills, knowledge, experience and diversity on the Board, the Committee considered and formulated a candidate specification for the role.

- $\rightarrow\,$  The external search agent produced a long-list of candidates for the role.
- → Interviews were held with a short-list of candidates and members of the Nomination Committee participated in interviews with the preferred candidates.
- $\rightarrow\,$  The Committee selected its preferred candidate based on objective criteria and recommended their appointment to the Board.

The terms and conditions of appointment of non-executive Directors are available for inspection. Non-executive Directors, including the Chairman, are asked to undertake that they will have sufficient time to meet their commitments to the Company and their other significant commitments are disclosed to the Board before appointment, with an indication of the time involved. The Board is informed of any subsequent changes with additional commitments disclosed before they are accepted. The terms of appointment for non-executive Directors do not include a notice period.

# **Board Diversity Policy**

The Board firmly believes in the value of diversity of perspective, including background, nationality, experience and gender, at all levels of the Company as well as on the Board. As is not unusual in engineering or manufacturing businesses, diversity in gender is the hardest to achieve.

It is very gratifying, however, to see that at the graduate recruitment level the Group is now having great success in attracting good candidates of both sexes and many nationalities. In 2015, 41% of the graduate intake (2014: 32%) were female. At the senior level, 13% (2014: 5%) of senior managers and one of the Board Directors are female.

New appointments to the Board are made on merit, with a focus on international and industrial experience, but diversity of perspective and the mix of skills around the Board table are also taken into account when selecting potential candidates. During the selection process for new non-executive Directors, the Committee has, and will, continue to use a search agent who has signed up to the voluntary code of conduct which ensures that diversity is considered when developing a candidate pool. The brief to the search agent is to put forward a long-list of candidates from a wide range of backgrounds to ensure that the best candidate is selected.

When monitoring the development of leadership and considering the succession planning for executive management, the Board will take into account the need for talented leaders with the skills needed to lead a global company with a growing presence in the key world economies and manage the associated macro economic challenges.

The Board will continue to monitor whether it is taking diversity into account when planning executive succession and appointing new Board members, with the Board effectiveness evaluation process also addressing diversity.

The Board has discussed whether a quota for female Directors should be introduced by a certain date, but feels this is unrealistic given the current gender composition of senior executives, the nature of the business and the competition for female non-executive Directors.

# REMUNERATION REPORT

# A STATEMENT TO SHAREHOLDERS FROM THE CHAIRMAN OF THE REMUNERATION COMMITTEE

I am pleased to present the Remuneration report for the year ended 3I December 2015. In last year's report, my first as Chairman of the Remuneration Committee, I said that I was keen to ensure that the remuneration policy would be appropriate and relevant throughout the range of market conditions the Group faces, and that the remuneration policy and performance targets must ensure proper incentivisation of management to achieve Group strategies for growth whilst being aligned with the short- and long-term interests of shareholders. The Committee has also been mindful of shareholder feedback on the simplification of remuneration generally, and on the use of share matching plans more specifically.

With this in mind I wrote to our largest shareholders in January 2016 to consult on proposed changes to the remuneration policy, approval for which will be sought at the 2016 Annual General Meeting (AGM). I also wrote to consult on 2016 incentive targets. The Group has a new Chief Executive Officer (CEO) who is taking a critical look at the Company's portfolio and strategy, and the Remuneration Committee is therefore seeking to develop a remuneration policy that will offer incentives to support strategy development and execution, to maximise returns to shareholders. The feedback we have received on our overall proposals at the time of writing has been generally positive.

In summary, the proposals are as follows:

- → The Bonus Deferral Share Matching Plan (BDSMP) will no longer be offered. This scheme offered up to a 3x match on up to 50% of earned bonus (ie a maximum opportunity of 150% of salary) based on earnings per share (EPS) performance over a three-year period. We will continue to disclose our bonus targets at the end of the relevant financial year (to the extent they are no longer deemed to be commercially sensitive) consistent with best practice.
- → Malus and clawback will also apply to both the cash and share component of bonus awards for the 2016 financial year onwards.
- → Going forward, the annual bonus opportunity will be increased from 100% to 150% of salary, but executive Directors will be required to defer 33% of any bonus earned into Company shares for a further three-year period.
- → The normal annual award opportunity under the Long-Term Incentive Plan (LTIP), which will be the sole long-term incentive, will also be increased from 100% to 150% of salary (the maximum annual award limit will be increased from 200% to 250% of salary), but the vesting outcome at threshold performance will be reduced to 25% (formerly 30%).
- → Executive Directors' minimum shareholding guideline will be increased to 200% of salary.

As a result of these changes, the overall fair value of the proposed package for executive Directors is broadly similar to the package under the current remuneration policy.

At the time of writing, the Group has also announced a consultation with the members of the senior section of the defined benefit pension scheme on proposals for its closure to future accrual. One of the two executive Directors will be impacted by this if the proposals are approved.



In reviewing 2015, some bonus will be paid for 2015 performance due to the good performance on cash generation and the good progress made on personal objectives (especially on technology roadmaps) which have provided a sound foundation for the strategic review. However, the 2013 LTIP awards will lapse in early 2016. The relative total shareholder return (TSR) component of the LTIP has not vested for each of the last four cycles, despite Morgan's strong absolute TSR performance over the past seven years (c16% pa).

The Committee decided that, considering the overall performance of the Group in 2015, there should be no base pay increases for the CEO and Chief Financial Officer (CFO), and there will also be no increase to the 2016 fees for the Chairman and nonexecutive Directors.

The difficult market conditions and the achievability of incentive targets have again caused us to reflect on their motivational impact on retaining and attracting key executive talent. We have therefore reconsidered performance measures and incentive targets to ensure they are aligned with our strategic aims, motivate and reward management for delivering sustainable above-peer performance, and support retention.

For the 2016 cycle, it is proposed that the return on capital employed (ROCE) performance range remains unchanged (27-33%). To help ensure the relative TSR element of the LTIP balances relevance and robustness, it is proposed to split the TSR element equally between two comparator benchmarks: the constituents of the FTSE All-Share Industrials Index, as currently, and a tailored group of international sector comparators. The constituents of this sector benchmark are shown on page 82 of this Remuneration report.

Following a review of the EPS performance range against multiple relevant reference points (including the Group's strategic plan, external market factors and broker forecasts), we propose revising the EPS performance range to 4%-11% pa, which we consider to be appropriately stretching for this 2016 cycle.

Over the last 12 months, we have engaged with our shareholders, and we value the views and feedback we have received. As mentioned above I have consulted with those with the largest shareholdings about our remuneration policy and annual incentive arrangements. I have also followed up with those of the largest shareholders who voted against the Annual Report on Remuneration last year. During the year, the Committee met four times, and its activities included:

- → A review of the Group's overall remuneration policy to support the Group's business strategy.
- → A review of external benchmarking of executive remuneration packages.
- → Determination of the remuneration packages for the executive Directors and other Group executives, including for Pete Raby, the new CEO, and in relation to Andrew Hosty's cessation of employment.
- → A review of whether the measures for the bonus and share incentive schemes remain appropriate.
- → Determination of appropriate performance targets for bonus and share incentive schemes.
- → Determination of whether targets for the bonus and share incentive schemes were achieved.
- → A review of proposed arrangements should the senior section of the defined benefit pension scheme be closed to future accrual.

This Report is intended to be consistent with the current reporting regulations for executive remuneration. I hope we have been successful in achieving the clarity and transparency that will be of help to our shareholders.

#### DOUGLAS CASTER CHAIRMAN OF THE REMUNERATION COMMITTEE

STRATEGIC REPORT

OVERVIEW

## Compliance statement

This Report covers the period 1 January 2015 to 31 December 2015 and provides details of the Remuneration Committee and remuneration policy of Morgan Advanced Materials plc.

The Company has complied with the principles and provisions relating to Directors' remuneration in the UK Corporate Governance Code with one exception, and this Remuneration report has been prepared in accordance with Schedule 8 of the Large & Medium-sized Companies and Groups (Accounts and Reports) (Amendment) Regulations 2013. The one exception is that the annual bonus plan does not currently include malus and clawback provisions. However, the Remuneration Committee has approved the introduction of malus and clawback provisions for the 2016 financial year and onwards. The Directors' remuneration policy has been updated as set out in this Report, and these changes are proposed to take effect from the date this policy is approved. Therefore, in accordance with Section 439A of the Companies Act, both a binding resolution on the remuneration policy and an advisory resolution to approve the Annual Report on Remuneration will be proposed at the AGM on 6 May 2016.

## **Remuneration Committee**

The Remuneration Committee determines and agrees with the Board the framework or broad policy for the remuneration, including pension rights and any compensation payments, of the Group's executive Directors and the Chairman. The Committee's terms of reference are available on the Group's website.

The Remuneration Committee consults the CEO and invites him to attend meetings when appropriate. The Director of Human Resources attends meetings of the Committee by invitation. The Committee also had access to advice from the CFO. The Company Secretary acts as secretary to the Committee. No executive Director or other attendee is present when his own remuneration is being discussed.

Membership of the Committee is shown on page 75.

# I. POLICY REPORT

## Key principles of the executive Directors' remuneration policy

The Remuneration Committee aims to ensure that all the remuneration packages offered are competitive and designed to promote the long-term success of the Company by ensuring that we are able to attract, retain and motivate executive Directors and senior executives of the right calibre to create value for shareholders.

The policy of the Committee is to ensure that a significant proportion of the total remuneration opportunity is performance-related, with an appropriate balance between short- and long-term performance, and is based on the achievement of measurable targets that are relevant to and support the business strategy.

The Remuneration Committee will keep remuneration policy under periodic review to ensure it remains aligned with the Group's strategy, and in line with the principles set out in the UK Corporate Governance Code in relation to Directors' remuneration. This includes ensuring that performance-related elements are transparent, stretching and rigorously applied, as well as reflecting the guidance of institutional investors and their representative bodies.

# REMUNERATION REPORT

# Summary of Morgan Advanced Materials plc's remuneration policy for executive Directors

This section of the Report sets out a revised remuneration policy for executive Directors and non-executive Directors. This policy is subject to a binding vote at the 2016 AGM and, if approved at the AGM, will come into effect on that date. The policy will be put to shareholders again no later than the 2019 AGM. A summary of the key changes from the policy approved at the 2014 AGM (which was and which has been in operation since that date) is set out in the notes to the future remuneration policy table on page 70.

PURPOSE AND LINK TO STRATEGY	OPERATION	OPPORTUNITY	PERFORMANCE METRICS
Fixed pay			
Base salary Provides the fixed element of the remuneration package. Set at competitive levels against the market.	Base salaries are generally reviewed each January, with reference to the salary levels at companies of similar sector, size and complexity. The Committee also considers individual contribution and the range of salary increases applying across the Group when determining increases.	Base salary increases are applied in line with the outcome of the annual review. Salaries in respect of the year under review (and for the following year) are disclosed in the Annual Report on Remuneration. Salary increases for executive Directors will normally be within the range of increases for the general employee population over the period of this policy. Where increases are awarded in excess of those for the wider employee population, for example in instances of sustained strong individual performance, if there is a material change in the responsibility, size or complexity of the role, or if an individual was intentionally appointed on a below-market salary, the Committee will provide the rationale in the relevant year's Annual Report on Remuneration.	Not applicable.
Pension Provides post-retirement benefits for participants in a cost-efficient manner.	Defined benefit scheme subject to a notional earnings cap with an above-the-cap allowance for executive Directors who joined the Company before I August 2011. Defined contribution scheme (and/ or a cash allowance in lieu thereof) for executive Directors who joined the Company after I August 2011.	Opportunities vary depending on the scheme in which an executive Director participates. Details are set out in the Annual Report on Remuneration on page 78. Above-the-cap pension allowances will be established in line with our principle to be broadly cost-neutral. For new hires, defined contributions	Not applicable.
		(or cash in lieu thereof) will be up to 20% of salary.	
Benefits Designed to be competitive in the market in which the individual is employed.	Can include company car/car allowance, health insurance and, where appropriate, relocation allowances and other expenses.	Benefits values vary by role and are reviewed periodically relative to market. It is not anticipated that the cost of benefits provided will change materially year on year over the period for which this policy will apply. The Committee retains the discretion to approve a higher cost in exceptional circumstances (er elocation expenses	Not applicable.
		circumstances (eg relocation expenses, expatriation allowances etc) or in circumstances where factors outside the Group's control have changed materially (eg market increases in insurance costs). Benefits in respect of the year under review are disclosed in the Annual Report on Remuneration.	

PURPOSE AND LINK TO STRATEGY	OPERATION	OPPORTUNITY	PERFORMANCE METRICS
Variable pay			
Annual bonus Incentivises the achievement of specific goals over the short term that are also aligned to the long-term business strategy.	Performance measures are set by the Committee at the start of the year and are weighted to reflect a balance of financial and strategic objectives. At the end of the year, the Remuneration Committee determines the extent to which these have been achieved. To the extent that the performance criteria have been met, up to 67% of the earned annual bonus is paid in cash. The remaining balance is deferred into shares and released after a further period of three years, subject to continued employment only. Cash and deferred share bonuses awarded for performance in 2016 onwards will be subject to malus and clawback for a period of three years from the end of the relevant performance year. Further details of our clawback policy are set out at the end of this table.	Up to 150% of salary. The payout for threshold performance may vary year on year, but will not exceed 25% of the maximum opportunity.	Bonuses for the executive Directors may be based on a combination of financial and non-financial measures. The weighting of non-financial performance will be capped at 30% of the maximum opportunity. Further details are set out in the Annual Report on Remuneration on pages 76, 77 and 81.
Long-Term Incentive Plan (LTIP) Aligns the interests of executives and shareholders by delivering shares to executive Directors and other senior executives as a reward for outstanding long-term performance.	The Remuneration Committee has the ability each year to grant an award under the LTIP. The award levels and performance conditions on which vesting depends are reviewed prior to the start of each award cycle to ensure they remain appropriate. For awards made in 2016 onwards, vested shares may also be subject to a post-vesting holding period. Details of any such holding period will be disclosed in the Annual Report on Remuneration for the year in which the relevant award is made. Awards are subject to malus and/or clawback for a period of five years from the date of grant. Further details of our clawback policy are set out at the end of this table.	The LTIP provides for a conditional award of shares up to an annual limit of 250% of salary. 25% of an award vests for achievement of the threshold level of performance.	<ul> <li>The vesting of awards is usually subject to:</li> <li>continued employment.</li> <li>the Group's performance over a three-year performance period, currently a combination of TSR, EPS and ROCE.</li> <li>The Committee has discretion to extend the performance period and adjust the measures, their weighting, and performance targets prior to the start of each cycle to ensure they continue to align with the Group's strategy.</li> <li>Further details of the measures attached to the LTIP awarded in the year under review (and the coming year) are set out in the Annual Report on Remuneration on pages 80 and 82.</li> </ul>
Sharesave A voluntary scheme open to all UK employees which aligns the interests of participants with those of shareholders through any growth in the value of shares.	An HMRC-approved scheme where employees may save up to a monthly savings limit out of their own pay towards options granted at up to a 20% discount. Options may not be exercised for three years.	Up to the savings limit as determined by HMRC from time to time, across all Sharesave schemes in which an individual has enrolled.	None.

ANNUAL REPORT 2015 MORGAN ADVANCED MATERIALS

# REMUNERATION REPORT

# Malus and clawback policy

Malus and clawback will apply on the annual bonus and LTIP (as set out on page 69) in cases of misconduct or material misstatement in the published results of the Group or where, as a result of an appropriate review of accountability, a participant has been deemed to have caused in full or in part a material loss for the Group as a result of reckless, negligent or wilful actions or inappropriate values or behaviour. Cash bonuses will be subject to clawback, with deferred shares subject to malus over the deferral period. LTIP awards will be subject to malus over the vesting period and clawback from the vesting date to the fifth anniversary of grant.

#### Changes from the 2014 shareholder-approved remuneration policy for executive Directors

The changes from the previous policy are as summarised in the table below:

Element	Proposed 2016 policy	2014 policy
Annual bonus	Maximum opportunity of 150% of salary.	Maximum opportunity of 100% of salary.
	Mandatory deferral of at least 33% of earned bonus into shares for three years.	Voluntary deferral of up to 50% (75% in exceptiona circumstances) of earned bonus into shares for three years (and with a matching opportunity under
	Policy on clawback incorporated into policy.	the BDSMP).
Long-Term Incentive Plan (LTIP)	Maximum award limit: 250% of salary.	Maximum award limit: 200% of salary.
()	25% of an award vests at threshold.	30% of an award vests at threshold.
	Performance period of at least three years.	Performance period of three years.
	Flexibility to introduce a holding period in future years.	No holding period.
	Policy on clawback incorporated into policy.	
Bonus Deferral Share Matching Plan (BDSMP)	No new awards will be made under this Plan, but outstanding awards will vest in accordance with the BDSMP Rules and subject to the performance conditions.	Deferred shares eligible for up to a maximum 3-for-I matching opportunity subject to three-year EPS compound annual growth rate (CAGR) exceeding 20% pa.

## Payments under existing awards

The Company will honour any commitment entered into, and Directors will be eligible to receive payment from any award granted, prior to the approval and implementation of the remuneration policy detailed in this Report (ie before 6 May 2016), even if these commitments and/or awards fall outside the above policy. The Company will also honour any commitment entered into at a time prior to an individual becoming a Director if, in the opinion of the Committee, the payment was not in consideration for the individual becoming a Director of the Company. Details of these awards are, and will be, disclosed in the Annual Report on Remuneration.

## Difference in policy between executive Directors and other employees

The remuneration policy for other employees is based on principles broadly consistent with those described in this Report for the executive Directors. Annual salary reviews across the Group take into account business performance, local pay and market conditions, and salary levels for similar roles in comparable companies. All executives are eligible to participate in an annual bonus scheme. Opportunities and performance measures vary by organisational level, geographical region and an individual's role. Other senior executives participate in the LTIP on similar terms to the executive Directors, although award sizes may vary according to each individual, and by organisational level. Below this level, executives are eligible to participate in the LTIP and other share-based incentives, by annual invitation.

## Use of discretion

To ensure fairness and align executive Director remuneration with underlying individual and Group performance, the Committee may exercise its discretion to adjust, upwards or downwards, the outcome of any short- or long-term incentive plan payment (within the limits of the relevant Plan Rules) for corporate or exceptional events including, but not limited to: corporate transactions, changes in the Group's accounting policies, minor or administrative matters, internal promotions, external recruitment, terminations, etc. Any adjustments in light of corporate events will be made on a neutral basis, ie to not be to the benefit or detriment of participants.

Any use of discretion by the Committee during the financial year will be detailed in the relevant Annual Report on Remuneration.

#### Performance measure selection

The Committee considers carefully the selection of performance measures at the start of each performance cycle, taking into consideration the macro-economic environment as well as specific Group strategic objectives.

Annual bonus measures are selected to closely reinforce the Group's short-term KPIs. Because these can change from year to year (in line with the remuneration policy), the rationale for the selection of bonus measures for each year has been moved to the Annual Report on Remuneration.

LTIP performance measures are reviewed periodically to ensure they continue to align with the Company's strategy, as well as provide an appropriate balance between growth and returns, internal and external performance, and absolute and relative performance.

For 2016 awards, the TSR element of the LTIP will be split into two parts. One half of the TSR element will vest subject to the Group's performance relative to the existing TSR benchmark comprising the c110 constituents of the FTSE All-Share Industrials Index. This benchmark is robust to M&A activity and comprises companies that are subject to the same market influences as Morgan Advanced Materials plc. The remaining half of the TSR element will vest subject to Morgan's performance relative to a TSR benchmark comprising 17 listed international carbon, ceramics and other materials companies. This benchmark was selected to complement the FTSE All-Share Industrials Index with a group of companies that better reflect Morgan's business, the markets in which Morgan operates and the geographical footprint of the Group. For each part of the TSR award, the vesting performance range is calibrated to be stretching and in line with common market practice for FTSE TSR-based long-term incentives.

EPS targets are set taking account of multiple relevant reference points, including internal forecasts, external expectations for future EPS performance at both Morgan Advanced Materials plc and its closest sector peers, and typical EPS performance ranges at other FTSE 350 companies. LTIP EPS performance ranges are set to represent demanding and challenging performance targets over the three-year performance period.

ROCE targets are set using a similar approach referring to external reference points and reflecting the returns required to meet and exceed the Group's internal strategic plan.

#### Share ownership guidelines

In order to encourage alignment with shareholders, individual shareholding guidelines are operated for executive Directors. Under such guidelines, executive Directors are encouraged to build and maintain over time a shareholding in the Company equivalent to at least 200% of basic salary (previously 150% for the CEO and 100% for other executive Directors).

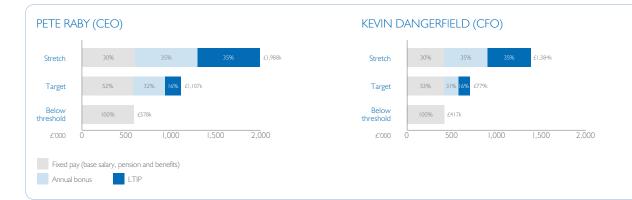
Current executive Director shareholdings are set out in the Annual Report on Remuneration on page 84.

#### External appointments

With the approval of the Board in each case, and subject to the overriding requirements of the Group, executive Directors may accept external appointments as non-executive Directors of other companies and retain any fees received. Details of external directorships held by executive Directors along with fees retained are provided on page 81.

#### Pay-for-performance: scenario analysis

The graphs below provide detailed illustrations of the potential future reward opportunity for executive Directors, and the potential mix between the different elements of remuneration under three different performance scenarios; 'Below threshold', 'Target' and 'Stretch'. These have been updated to illustrate the potential opportunity under the 2016 packages proposed for executive Directors.



Potential reward opportunities illustrated above are based on the policy which is proposed to apply in 2016, applied to the annual base salary in force at 1 January 2016. For the annual bonus, the amounts illustrated are those potentially receivable in respect of performance for 2016 (before mandatory deferral into shares). The LTIP is based on the face value of awards to be granted in 2016 (150% of salary). It should be noted that any awards granted under the LTIP in a year do not normally vest until the third anniversary of the date of grant. This illustration is intended to provide further information to shareholders on the relationship between executive pay and performance. The value of the LTIP assumes no increase in the underlying value of the shares, and actual amounts delivered will be further influenced by changes in factors such as the Company's share price and the value of dividends paid. The following assumptions have been made in compiling the above charts:

Scenario	Annual bonus	LTIP	Fixed pay		
Stretch Maximum annual bonus.		Performance warrants full vesting (100% of the award).	Latest disclosed		
Target	get On-target annual bonus. Performa vesting (2.		base salary, pension and benefits.		
Below threshold	No annual bonus payable.	Nil vesting.	—		

#### Details of executive Directors' service contracts

The executive Directors are employed under contracts of employment with Morgan Advanced Materials plc. Contracts may be terminated on 12 months' notice given by the Company or on six months' notice given by the executive Director concerned. Kevin Dangerfield's contract ends on his anticipated normal retirement date. The following table shows the date of the contract for each executive Director who served during the year:

			Date of service	Notice period		
Executive Director	Position	Date of appointment	agreement	From employer	From employee	
Pete Raby	CEO	I August 2015	30 January 2015	12 months	6 months	
Kevin Dangerfield	CFO	4 August 2006	15 August 2008	12 months	6 months	
Andrew Hosty*	COO	28 July 2010	17 August 2010	12 months	6 months	

\* Andrew Hosty left the Group on 8 January 2016.

#### Exit payments policy

The Group's policy is to limit severance payments on termination to pre-established contractual arrangements comprising base salary and any other statutory payments only. In the event that the employment of an executive Director is terminated, any compensation payable will be determined in accordance with the terms of the service contract between the Company and the employee, as well as the rules of any incentive plans.

The Group may terminate the employment of an executive Director by making a payment in lieu of notice equal to base salary, together with the fair value of any other benefits to which the executive is contractually entitled under his service agreement, for the duration of the notice period.

The Remuneration Committee will exercise discretion in making appropriate payments in the context of outplacement, settling legal claims or potential legal claims by the departing executive Director, including any other amounts reasonably due to the executive Director, for example, to meet the legal fees incurred by the executive Director in connection with the termination of employment, where the Company wishes to enter into a settlement agreement and the individual must seek independent legal advice.

On termination of an executive Director's service contract, the Remuneration Committee will consider the departing Director's duty to mitigate his loss when determining the timing of when any payment in lieu of notice will be made. There is no automatic entitlement to bonus or the vesting of long-term incentives on termination. However, the table on the following page summarises the policy on how awards under the annual bonus, LTIP and BDSMP will normally be treated in specific circumstances, with the final treatment remaining subject to Committee discretion:

#### Treatment of awards on cessation of employment and a change of control

Reason for cessation	Calculation of vesting/payment	Time of vesting			
	Annual bonus				
All reasons	The Committee may determine that a bonus is payable on cessation of employment, and the Committee retains discretion to determine that the bonus should be paid wholly in cash. The amount of bonus payable will be determined in the context of the time served during the performance year, the performance of the Group and of the individual over the relevant period, and the circumstances of the Director's loss of office. If Group or individual performance has been poor, or if the individual's employment has been terminated in circumstances amounting to misconduct, no bonus will be payable.				
	Mandatory deferred bonus share awards				
njury, disability, death, edundancy, retirement, or other such event as the Committee determines		At the normal vesting date, unless the Committee decides that awards should vest earlier (eg in the event of death).			
Change of control	Awards will normally vest in full (ie not pro-rated for time). Awards may alternatively be exchanged for equivalent replacement awards, where appropriate.	On change of control.			
All other reasons	Awards normally lapse.	Not applicable.			
	LTIP awards and BDSMP matching awards				
Injury, disability, death, redundancy, retirement, or other such event as the Committee determines	Awards will normally be pro-rated for time and will vest based on performance over the original performance period (unless the Committee decides to measure performance to the date of cessation).	At the normal vesting date, unless the Committee decides that awards should vest earlier (eg in the event of death).			
Change of control	LTIP awards will be pro-rated for time and will vest subject to performance over the performance period to the change of control.	On change of control.			
	LTIP awards may alternatively be exchanged for equivalent replacement awards, where appropriate.				
	BDSMP matching awards will normally vest subject to performance over the performance period to the change of control and will be pro-rated for time.				
All other reasons	Awards normally lapse.	Not applicable.			

The Remuneration Committee retains discretion, where permitted by the scheme rules, to alter these default provisions on a case-by-case basis, following a review of circumstances and to ensure fairness for both shareholders and participants.

#### Approach to recruitment remuneration

#### External appointment

In cases of hiring or appointing a new executive Director from outside the Group, the Committee may make use of all existing components of remuneration, as follows:

Pay element	Policy on recruitment	Maximum
Salary	current market pay levels for comparable roles; the candidate's experience; implications for total remuneration; internal relativities; and the candidate's current salary.	
Pension	Option to join the defined contribution scheme, and/or to receive a cash allowance.	_
Benefits	As described in the policy table and may include, but are not limited to, car, medical insurance, and relocation expenses and/or allowances.	-
Sharesave	New appointees will be eligible to participate on identical terms to all other UK employees.	In line with HMRC limits.
Annual bonus	As described in the policy table and typically pro-rated for proportion of year served; performance measures may include strategic and operational objectives tailored to the individual in the financial year of joining.	150% of salary.
LTIP	New appointees may be granted awards under the LTIP on similar terms to other executives.	250% of salary.
Other	The Remuneration Committee may make an award under a different structure under the relevant Listing Rule to replace incentive arrangements forfeited on leaving a previous employer. Any such award would have a fair value no higher than that of the awards forfeited, taking into account relevant factors including performance conditions, the likelihood of those conditions being met and the proportion of the vesting period remaining. Details of any such award will be disclosed in the first Annual Report on Remuneration following its grant.	_

#### Internal promotion to the Board

In cases of appointing a new executive Director by way of internal promotion, the policy will be consistent with that for external appointees detailed above. Where an individual has contractual commitments made prior to their promotion to executive Director, the Company will continue to honour these arrangements even if there are instances where they would not otherwise be consistent with the prevailing executive Director remuneration policy at the time of promotion.

#### Chairman and non-executive Directors' remuneration policy

Purpose and link to strategy	Operation	Opportunity	Performance metrics
Annual fee To attract and retain high-calibre non-executive Directors.	Annual fees paid to the Chairman and non-executive Directors are reviewed periodically. An additional fee is payable for the Senior Independent Director, and also in respect of Committee chairmanship.	Annual fees are applied in line with the outcome of the review.	None.
	Currently paid 100% in cash.		

None of the non-executive Directors has a service contract with the Company. They do have letters of appointment. The non-executive Directors do not participate in any of the incentive, share or share option plans. The dates relating to the appointments of the Chairman and non-executive Directors who served during the reporting period are as follows:

Non-executive Director	Position	Date of appointment	Date of letter of appointment	Date of re-election
Andrew Shilston	Chairman	8 May 2012	30 March 2012	8 May 2015
Douglas Caster	Non-executive Director	14 February 2014	15 January 2014	8 May 2015
Victoire de Margerie*	Non-executive Director	8 May 2012	March 2012	8 May 2015
Andrew Reynolds Smith	Non-executive Director	10 May 2013	14 February 2013	8 May 2015
Rob Rowley	Non-executive Director	14 February 2014	15 January 2014	8 May 2015

\* Victoire de Margerie stepped down from the Board on 4 February 2016.

#### Consideration of employment conditions

The Group seeks to promote and maintain good relations with employee representative bodies – including trade unions and works councils – as part of its broader employee engagement strategy, and consults on matters affecting employees and business performance as required in each case by law and regulation in the jurisdictions in which the Group operates. In making remuneration decisions, the Remuneration Committee also considers the pay and employment conditions elsewhere in the Group, but the Committee does not currently consult with employees specifically on executive remuneration policy and framework. Prior to the annual salary review, the Remuneration Committee is briefed by the Director of Human Resources about pay increase data that individual business units will consider when deciding local pay awards for their specific businesses and countries. This also forms part of the considerations for determining executive Director remuneration.

#### Consideration of shareholder views

The Committee considers shareholder views received during the year and at the AGM each year, as well as guidance from investor representative bodies more broadly, in shaping remuneration policy. The Committee keeps the remuneration policy under regular review, to ensure it continues to reinforce the Group's long-term strategy, and aligns executive Directors with shareholders' interests. It is the Remuneration Committee's policy to consult with major shareholders prior to any major changes to its executive remuneration policy.

#### 2. ANNUAL REPORT ON REMUNERATION

The following section provides details of how the remuneration policy was implemented during the year.

#### Remuneration Committee membership in 2015

The Remuneration Committee is currently composed of four non-executive Directors. Each of the non-executive Directors is regarded by the Board as independent, except the Chairman of the Company who was considered independent upon appointment. The Remuneration Committee met four times during the year. Attendance at meetings by individual members is detailed in the Corporate governance report on page 53.

<b>Committee members:</b> Douglas Caster (Chairman)	
Andrew Shilston	Rob Rowley
Victoire de Margerie*	Andrew Reynolds Smith

\* Victoire de Margerie stepped down from the Board on 4 February 2016.

#### Summary of shareholder voting at the AGM

The following table shows the results of the latest binding vote on the remuneration policy (at the 2014 AGM) and advisory vote on the 2014 Annual Report on Remuneration (at the 2015 AGM).

Resolution	For	Against	Withheld*
Remuneration report (at 2015 AGM)	57.36%	42.64%	2,226,102
Remuneration policy (at 2014 AGM)	97.84%	2.16%	421,245

\* Votes 'withheld' are not votes in law and, therefore, have not been included in the calculation of the proportion of votes 'for' or 'against' the resolution.

The Company has always been proactive in engaging with its major shareholders, as well as discussing and considering issues raised by shareholders at its AGMs. Noting the outcome of the vote on the Remuneration report at the 2015 AGM, the Remuneration Committee contacted major shareholders to discuss their concerns, which included the 'good leaver' treatment of the previous CEO and the continued use of the BDSMP. Following a review of remuneration in light of these comments, the Board has been consulting major shareholders in early 2016 on proposed changes to the package (as set out in the Policy report) to address this feedback.

#### Single total figure of remuneration for executive Directors

The auditors are required to report on the information in this table.

The table below sets out a single figure for the total remuneration received by each executive Director for the year ended 31 December 2015 and the prior year.

	Pete	Pete Raby		Kevin Dangerfield		Hosty*
	2015	2014	2015	2014	2015	2014
I. Salary	£195,833	-	£403,438	£315,000	£380,833	£346,800
2. Benefits	£5,531	_	£12,641	£12,562	£12,676	£12,562
3. Bonus	£97,721	_	£197,281	£205,380	£186,227	£224,380
4. BDSMP	-	_	-	-	-	—
5. LTIP	-	-	-	-	-	_
6. Pension	£39,167	_	£81,373	£92,220	£81,228	£94,883
7. Other	£450,000	-	_	£1,800	-	£1,440
Total	£788,252	-	£694,733	£626,962	£660,964	£ 680,065

\* Andrew Hosty left the Group on 8 January 2016.

The figures have been calculated as follows:

- 1. Base salary: amount earned for the year. Pete Raby joined Morgan Advanced Materials plc on 1 August 2015. For Kevin Dangerfield and Andrew Hosty, salary includes base pay plus an additional temporary allowance paid between January 2015 and July 2015 prior to the new CEO commencing employment (as disclosed in the 2014 Annual Report on Remuneration).
- 2. Benefits: the taxable value of benefits received in the year. Includes private medical insurance and a company car (or car allowance).
- 3. Annual bonus: the total bonus earned on performance during the year. The maximum opportunity in 2015 for each executive Director was 100% of the total salary earned during the 2015 year.
- 4. BDSMP: the estimated value on 31 December 2015 of 2013 BDSMP matching shares (and dividend equivalents) vesting in 2016 subject to performance over the three-year period ended 31 December 2015. The 2014 value represents the actual value (including dividend equivalents) of 2012 BDSMP matching shares at vesting (on 21 March 2015).
- 5. LTIP: the estimated value on 31 December 2015 of 2013 LTIP shares vesting in 2016 subject to performance over the three-year period ended 31 December 2015. The 2014 value represents the actual value of 2012 LTIP shares at vesting (on 27 February 2015).
- 6. Pension: in respect of Pete Raby, the figure is a cash allowance in lieu of pension. In respect of Kevin Dangerfield and Andrew Hosty, the figure is 20x the increase in the value of their accrued benefit (net of inflation) over the year, less Directors' contributions, plus the value of any Company contribution.
- 7. Other: for Kevin Dangerfield and Andrew Hosty, comprises the value of Sharesave options granted in the year, based on the embedded value at grant (20% of the grant-date share price multiplied by the number of options granted). Full details of executive Director Sharesave options are available on pages 86 to 88 of the Annual Report on Remuneration.

For Pete Raby in 2015, reflects the value at grant of the one-off awards on recruitment disclosed in the 2014 Annual Report on Remuneration. This value comprises a one-off cash award of £50,000 and a restricted share award with a face value on grant of £400,000. Please see page 80 for further details of this award.

#### Incentive outcomes for the year ended 31 December 2015 Annual bonus in respect of 2015 performance

Targets for the annual bonus are set by the Remuneration Committee, taking into account the short- and long-term requirements of the Group. Challenging goals are set, which must be met before any bonus is paid. This approach is intended to align executive reward with shareholder return by rewarding the achievement of 'stretch' targets.

For 2015, the bonus targets for the CEO, CFO and COO were split between Group EBITA before restructuring (weighted 40%), cash generation (weighted 40%) and individual strategic personal objectives (weighted 20%). The targets were set to incentivise the executive Directors to deliver stretching profit and cash performance for the Group.

In addition to the achievement of the targets set, in considering any awards to be made, the Committee also takes into account the quality of the overall performance of the Group.

The table on the following page sets out retrospectively the assessment of performance relative to the 2015 bonus targets for the CEO, CFO and COO. Actual bonus payments are shown in the single total figure of remuneration table above.

#### Annual bonus in respect of 2015 performance continued

		Performan	ice range			
Performance measure		Threshold Maximum (0% payout) (100% payout)		Actual performance outcome	% payout of element	% salary earned
				Below		
Group EBITA	40%	£115.4m	£126.0m	threshold	0%	0%
Cash generation	40%	£136.0m	£150.0m	£146.8m	77.1%	30.9%
Personal objectives						
Pete Raby	20%	Please see narrative below			95.0%	19.0%
Kevin Dangerfield	20%	for further	details on objec	tives and	90.0%	18.0%
Andrew Hosty	20%	perfor	mance against t	hese	90.0%	18.0%
		%	6 of salary earned			
Overall outcome	 Maximum bonus (% salary)	Group EBITA	Cash generation	Personal	Total outcome	Total payable
Pete Raby	100%	0%	30.9%	19.0%	<b>49.9</b> %	£97,721
Kevin Dangerfield	100%	0%	30.9%	18.0%	<b>48.9%</b>	£197,281
Andrew Hosty	100%	0%	30.9%	18.0%	<b>48.9%</b>	£186,227

Note: For both the EBITA and cash generation metrics, there was a straight-line payout between the threshold and maximum figures and all figures were calculated using 2015 budgeted exchange rates.

Pete Raby's personal objectives after joining in the third quarter of 2015 included developing a forward vision for the Group as a basis for the strategic review, achieving the implementation of the Group-wide safety programme against agreed targets, completing an initial review of leadership capability and implementing agreed changes.

Kevin Dangerfield's personal objectives, as acting CEO and as CFO, were: to deliver a sound half-year financial performance; to develop technology roadmaps for all the Group's major technology areas; to achieve the implementation of the Group-wide safety programme against agreed targets; and to deliver organic growth against agreed targets. His objectives as CFO for the fourth quarter were also to support the strategic review of the Group. The organic growth target was not met.

Andrew Hosty's personal objectives were: to deliver the benefits of the restructuring of the carbon portfolio; to review, agree and implement plans for the ongoing RCF to Superwool<sup>®</sup> product transition; to make improvements to the operating effectiveness and reorganization of specified business units; and to deliver organic growth against agreed targets. From the third quarter, his objectives were to advise the new CEO on future technology strategy and its implications for the strategic review. The organic growth target was not met.

#### 2013 BDSMP award vesting

The performance period for the 2013 BDSMP (in which Andrew Hosty was the only executive Director to participate) ended on 31 December 2015. Over the period, Morgan Advanced Materials plc's EPS growth was below the threshold annual growth rate of 8% pa. Accordingly, Andrew Hosty's matching share award of 22,422 shares (and any associated matching dividend shares) will lapse in full on 25 March 2016.

Director	Investment shares*	Maximum potential matching shares	Matching dividend shares	Match earned	Matching shares released	Matching dividend shares released	Matching shares lapsed	Matching dividend shares lapsed	Date of vesting
Andrew Hosty†	7,474	22,422	_	-	_	_	22,422	-	25 March 2016

\* Calculated using the award price of £2.8640 (the market value of one Morgan Advanced Materials plc Ordinary share on 22 March 2013, the dealing day immediately preceding the grant date). Shares in this table are stated on a pre-tax basis. Shares awarded on a pre-tax basis are subject to tax when sold.

† Andrew Hosty left the Group on 8 January 2016.

OVERVIEW

#### 2013 LTIP award vesting

Awards granted to executive Directors in 2013 were subject to relative TSR performance, EPS growth and Group average ROCE over a three-year period ended 31 December 2015. The EPS target (applying to one-third of each award) required three-year EPS growth of 8% pa for 30% of that element to vest, rising to full vesting for EPS growth of 15% pa or higher. Over the period Morgan Advanced Materials plc's actual EPS growth was below threshold and accordingly none of the award will vest under this criterion.

The TSR target (applying to one-third of each award) required Morgan Advanced Materials plc's three-year TSR performance to rank at median against constituents of the FTSE All-Share Industrials Index for 30% of that element to vest, rising to full vesting if Morgan Advanced Materials plc's TSR ranked at or above the upper quartile against this Index. Morgan Advanced Materials plc's TSR was 16.9%, which was below median versus the FTSE All-Share Industrials Index. Accordingly, none of the award will vest under this criterion.

The Group average ROCE target (applying to the remaining one-third of each award) required three-year Group average ROCE of 33% for 30% of that element to vest, rising to full vesting for Group average ROCE of 37% or higher. Morgan Advanced Materials plc's Group average ROCE was 27.4%, which was below the 33% threshold for this part of the award, and therefore none of the award will vest under this criterion.

This combined performance resulted in none of the 2013 LTIP awards vesting and these will lapse in full. Details of the awards to executive Directors are set out in the table below:

Director	Maximum potential LTIP award <sup>*</sup>	Maximum potential LTIP-CSOP award	LTIP award vested	LTIP-CSOP award vested	LTIP-CSOP award exercised <sup>†</sup>	Date of vesting
Kevin Dangerfield	100,147	1,981	_	_	_	20 May 2016
Andrew Hosty	101,233	10,750	-	_	_	20 May 2016

\* Calculated using the award price of £2.7906 (the average share price over the five dealing days from 13 May 2013 to 17 May 2013).

+ From the vesting date, participants have seven years to exercise LTIP-CSOP awards.

The interest in the 2013 LTIP retained by Mark Robertshaw (who left the Company on 31 December 2014) will not vest and will lapse in full.

#### Pension

In the year under review, two of the three executive Directors participated in the Morgan Group Senior Staff Pension and Life Assurance Scheme (the Senior Scheme) which is a contributory, HMRC-registered, defined benefit, funded occupational pension scheme. With effect from 6 April 2006 the basis of the scheme switched from final salary to career average and the normal pension age increased by five years. Its main features are now:

- $\rightarrow$  A normal pension age of 65.
- Pension at normal pension age based on two-thirds of career average pensionable salary, for those with at least 20 years' (26 years and eight months for joiners since 2006) potential service to age 65 on joining.
- $\rightarrow$  Life assurance of four times basic salary.
- $\rightarrow$  Dependants' pension on death.

Pensionable salary in the Senior Scheme is the member's basic salary restricted to an earnings cap of £117,375 for Kevin Dangerfield and £128,200 for Andrew Hosty.

The auditors are required to report on the information in this table.

			Additional information		
Executive Director	2015 Value of increase in scheme benefit less Directors' contributions £000	2014 Value of increase in scheme benefit less Directors' contributions £000	Accrued pension 31 December 2015 £000 pa	Accrued pension 31 December 2014 £000 pa	
Kevin Dangerfield	27	41	49	46	
Andrew Hosty	23	39	62	59	

Pete Raby joined the Company on 1 August 2015 and is not accruing benefits within the Senior Scheme. He receives a cash allowance in lieu of pension of 20% of basic salary.

#### Single total figure of remuneration for non-executive Directors

The auditors are required to report on the information in this table.

The table below sets out a single figure for the total remuneration received by each non-executive Director for the year ended 31 December 2015 and the prior year.

	A Shi	lston	D Ca	ster>
	2015	2014	2015	2014
I. Fee	£178,500	£175,000	£63,000	£46,333
2. Benefits	-	_	-	_
3. Pension	-	—	-	—
4. Bonus	-	—	-	—
5. BDSMP	-	—	-	—
6. LTIP	-	—	-	—
7. Other	-	—	-	_
Total	£178,500	£175,000	£63,000	£46,333

	V de M	V de Margerie		lds Smith	R Rowley		
	2015	2014	2015	2014	2015	2014	
I. Fee	£46,196	£46,000	£47,000	£48,715	£55,000	£44,681	
2. Benefits	-	-	-	_	-	-	
3. Pension	-	_	-	_	-	-	
4. Bonus	-	_	-	_	-	-	
5. BDSMP	-	_	-	_	-	-	
6. LTIP	-	-	-	_	-	-	
7. Other	£5,329*	—	-	_	_	-	
Total	£51,525	£46,000	£47,000	£48,715	£55,000	£44,681	

> Appointed Senior Independent Director in January 2015.
 \* Payments made on behalf of Victoire de Margerie by the

\* Payments made on behalf of Victoire de Margerie by the Company in respect of UK tax filings.

### Scheme interests awarded in 2015 2015 BDSMP awards

In March 2015, Kevin Dangerfield deferred 25% of his 2014 bonus into shares under the BDSMP, which was equivalent to 16.3% of 2014 salary and was granted a maximum matching award of shares under the BDSMP equivalent to three times his investment. The three-year performance period over which EPS performance will be measured began on 1 January 2015 and will end on 31 December 2017. This award will normally be eligible to vest on 23 March 2018.

	Investment sh	ares	Matching	shares	
		as % 2014			
Executive Director	Number	bonus	Number	Face value	Earliest date of vesting
Kevin Dangerfield	14,775*	25%*	44,325	£154,030	23 March 2018

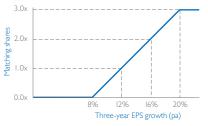
\* Calculated using the award price of £3.475 (the market value of one Morgan Advanced Materials plc Ordinary share on 20 March 2015, the dealing day immediately preceding the grant date).

The performance conditions attached to this award are as follows:

EPS performance (compound annual growth)	Vesting of matching shares (as a multiple of investment shares)	
20% pa	3x match	
16% pa	2x match	
12% pa	Ix match	
≤ 8% pa	Zero	

Awards will vest on a straight-line basis between these points.

#### **BDSMP** matching shares



#### 2015 LTIP awards

In 2015, Pete Raby, Kevin Dangerfield and Andrew Hosty were granted awards as follows:

		Number of	Value of awards at grant		
Executive Director	Number of LTIP shares granted	LTIP-CSOP shares granted	£	as % of salary	Date of vesting
Pete Raby	127,543*	8,696*	470,000	100%†	3 August 2018
Kevin Dangerfield	95,715‡	—	315,000	100%~	27 February 2018
Andrew Hosty	95,715‡	_	315,000	90.83%~	27 February 2018

\* Calculated using the award price of £3.4498 (the average share price over the five dealing days from 27 to 31 July 2015).

+ Based on annualized salary on recruitment

+ Calculated using the award price of £3.291 (the average share price over the five dealing days from 20 to 26 February 2015).

~ Calculated using 2014 salary.

The Committee discusses and reviews the performance criteria for new three-year LTIP awards before they are granted. For the awards granted in 2015, the Committee considered the balance of measures in light of the Group's business plan and shareholder feedback, and decided to maintain the equal (one-third) weighting of the three performance criteria introduced in 2012. The following targets were agreed:

TSR against FTSE All-Share Industrials Index	% of award that vests	EPS growth	% of award that vests	Group ROCE	% of award that vests
Upper quartile	33.33%	15% pa	33.33%	33%	33.33%
Median	10%	6% pa	10%	27%	10%
Below median	Nil	< 6% pa	Nil	< 27%	Nil

#### 2015 recruitment award to Pete Raby

On 3 August 2015, an award over 114,351 Ordinary shares in the Company (valued on the date of award at £400,000, calculated using the share price on 3 August 2015 of £3.4980) was made to Pete Raby. This award was granted in accordance with Morgan's policy on recruitment, and was made in recognition of the fair value of incentive awards which he forfeited on leaving his former employer. The award will vest in two tranches, on the dates given below, subject to Pete Raby not having resigned or been dismissed in specified circumstances. There are no performance conditions attaching to this award. The structure of this recruitment award broadly mirrors that of the award forfeited on his joining Morgan.

Number of shares	
subject to award	Vesting date
57,176	31 December 2016
57,175	31 December 2017

Pete Raby was also paid a one-off cash sum of  $\pounds$ 50,000 on 3 August 2015, to reflect the fair value of the bonus opportunity forfeited on leaving his former employer and the cost of his relocation. No further relocation allowances will be payable.

#### Exit payments made in year

The auditors are required to report on this information.

No exit payments were made to Directors in the year under review.

#### Terms of Andrew Hosty's redundancy

Andrew Hosty left the Group on 8 January 2016 as a result of the role of COO being made redundant. Details of payments due to him on cessation of employment were published on 2 October 2015. In accordance with the terms of his service agreement, the Company agreed to make three equal payments to Andrew Hosty in lieu of notice for the remainder of his contractual notice period, comprising base salary, the cash equivalent of pension contributions and other benefits. The first of these payments was made on his termination date and the last will be made no later than September 2016. If Andrew Hosty obtains an alternative remunerated position prior to 1 October 2016 the Company will be entitled to make a corresponding reduction to these payments. The Company paid overall outplacement fees of £39,000 on Andrew Hosty's behalf. Andrew Hosty's gross payment in lieu of notice was therefore reduced by £19,000 in response to the fact that the Company incurred outplacement fees in excess of the amount of £20,000 previously agreed with Andrew Hosty. Because his termination was as a result of redundancy, the Committee agreed to apply the good leaver provisions set out in the remuneration policy (pro-rated for time, and subject to performance measures, as approved by shareholders) for his retained share awards. Details of these unvested awards are shown in the corresponding tables on page 87.

#### Payments to past Directors

The auditors are required to report on this information.

No payments were made to past Directors in the year, other than the cash settlement of the bonus for the 2014 financial year (paid to Mark Robertshaw in March 2015) previously disclosed in the 2014 Annual Report on Remuneration.

#### External appointments

Details of external appointments held by executive Directors and the fees retained in 2015 are provided in the table below:

Executive Director	Company	Role	Fees retained
Kevin Dangerfield	e2v Technologies plc	Non-executive Director	£47,500
Andrew Hosty	Consort Medical plc	Non-executive Director	£38,500
	British Ceramic Research Ltd <sup>+</sup>	Non-executive Director	£4,000

+ Andrew Hosty resigned from his post as non-executive Director of British Ceramic Research Ltd in June 2015.

#### Implementation of remuneration policy for 2016

#### Base salary

Executive Directors' salaries will not be increased in 2016. The table below shows the base salaries in 2015, and which will continue to apply from 1 January 2016:

		Base salary at:				
Executive Director	Position	l January 2016	l January 2015	Increase		
Pete Raby	CEO	£470,000	£470,000*	0%		
Kevin Dangerfield	CFO	£322,500	£322,500	0%		
Andrew Hosty†	COO	£354,000	£354,000	0%		

\* Effective from appointment on 1 August 2015.

† Andrew Hosty left the Group on 8 January 2016.

The Committee wishes to draw shareholders' attention to Pete Raby's salary. Although we believe that this appropriately reflects his recent appointment as CEO, we are committed to rewarding future performance and potential. The Committee may therefore wish to increase his salary in future years – by more than the average increase for the general employee population, if necessary – to reflect his performance in the role (and in line with our remuneration policy).

#### Annual bonus in respect of 2016 performance

The maximum bonus opportunity has been increased to 150% of salary. In addition, 33% of any bonus earned will be deferred into shares for a further three-year period.

The bonus measures are unchanged from 2015. For 2016, cash generation will be weighted at 40% of the total bonus opportunity. Cash generation is defined as EBITA plus depreciation and adjusted for the impact of working capital movements. The EBITA measure will also be weighted at 40%, with the remaining 20% of the bonus opportunity continuing to be based on strategic personal objectives. The Committee believes that the cash generation target incentivises management to maintain focus on operating efficiency in difficult markets, as generating cash continues to be an important aspect of Group performance. The equal weighting with profit helps reinforce the Board's strategy of targeting sustainable, steady profit growth over the medium to long term.

The actual performance targets set at the beginning of the performance period are not disclosed as they are considered commercially sensitive at this time, given the close link between performance measures and the Group's longer-term strategy. This is particularly relevant in the context of some of the Group's close and unlisted competitors who are not required to disclose such information, and for whom the assumptions in our targets would provide valuable information in the current trading year. We will disclose these targets retrospectively, a practice we have implemented since 2013, at such time as these targets have become less commercially sensitive, and within three years of the end of the performance year.

#### 2016 LTIP awards

The Committee intends to grant LTIP awards shortly after the 2016 AGM under the proposed future remuneration policy, which is subject to shareholder approval at that meeting. If approved by shareholders, it is proposed that awards with face values of 150% of salary be made to the executive Directors, which will vest subject to the achievement of three-year performance targets. The performance measures and their weightings will remain unchanged from those attached to the 2015 LTIP awards (see pages 71 and 80) although, as explained in the introduction to this Report, some changes to the target ranges are proposed:

- → The EPS performance range to be 4%-11% pa, to align with the Group's long-term strategic plan, analyst forecasts and external expectations for the performance of markets in which Morgan operates and competes. This range, set taking into account Morgan's strategic plan as well as broker forecasts for Morgan and its peers, is considered by the Committee to be appropriate, but still very stretching, in the prevailing macro-economic environment.
- To help ensure the relative TSR element of the LTIP balances relevance and robustness, it is proposed to split the TSR element equally between two comparator benchmarks: the constituents of the FTSE All-Share Industrials Index, as currently, and the following tailored group of international sector comparators: BASF, British Polythene Industries, Carborundum, Ibiden, Imerys, Krosaki Harima, LyondellBasell, Magnesita, Mersen, Minerals Technologies, RHI, SGL Carbon, Sumitomo Chemical, Toyo Tanso, Worley Parsons, Vesuvius and Victrex. Each TSR element will operate independently, with vesting determined based on Morgan's TSR rank relative to constituents of each TSR benchmark. The performance range will remain median to upper quartile.
- The ROCE performance range remains unchanged at 27%-33%, to support the Group's strategy for sustainable long-term growth over the next three years whilst continuing to represent an appropriately demanding target.
- For all three measures, awards will continue to vest on a straight-line basis between threshold and maximum, with 25% of each element (2015 awards: 30%) vesting at threshold.

#### Pension

At the time of preparing this Report, the Company is consulting with members of the Morgan Group Senior Staff Pension and Life Assurance Scheme (the Senior Scheme) on proposals to close the Senior Scheme to future accrual. Pete Raby is not impacted by these proposals, as he is in receipt of a pension cash allowance only. Kevin Dangerfield is a member of the Senior Scheme. Any decisions taken by the Board following the consultation and any consequent implications for Kevin Dangerfield's pension arrangements will be set out in the 2016 Annual Report on Remuneration.

#### Chairman and non-executive Director fees

The Chairman's and non-executive Directors' fees were reviewed in December 2015. There will be no change to these fees for 2016. Fees will be reviewed again in December 2016. The following fees will again apply in 2016:

Role	Fee pa
Chairman	£178,500
Non-executive Director	£47,000
Committee chairman (additional fee)	£8,000
Senior Independent Director (additional fee)	£8,000

#### Percentage change in CEO remuneration

The table below shows the percentage change in CEO remuneration (2015 on 2014) compared to the average percentage change in remuneration for other UK-based employees. The UK employee workforce was chosen as a suitable comparator group as the CEO is based in the UK (albeit with a global role and responsibilities) and pay changes across the Group vary widely depending on local market conditions. Although similar remuneration principles apply across the wider Group, pay decisions for this subset are impacted by similar external market forces (eg wage inflation, local practice with respect to the provision of benefits, etc).

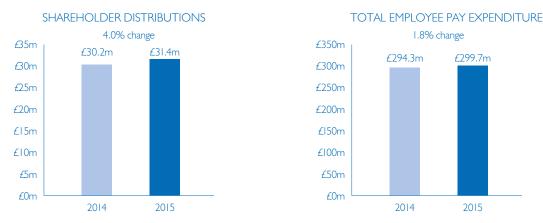
		CEO		% change in 2015 (vs 2014) for other employees	
Elements of remuneration	2015*				
Base salary received during the year	£470,000	£ 507,500	-7.4%	1.5%	
Taxable benefits (excluding pension)	£13,274	£13,462	-1.4%	-3.7%	
Annual bonus	£234,530	£330,890	-29.1%	-23.2%	

\* Pete Raby commenced employment on 1 August 2015. The above figures have been annualized.

† The figures for 2014 relate to Mark Robertshaw, the previous CEO. Mark Robertshaw left the Group on 31 December 2014.

#### Relative importance of spend on pay

The graphs below show shareholder distributions (ie dividends and share buybacks) and total employee pay expenditure for the financial years ended 31 December 2014 and 31 December 2015, and the percentage change year on year.



#### Advisers

Kepler was appointed by the Committee in 2010 as its executive remuneration adviser and was retained during the most recent financial year. In 2015, Kepler, now a brand of Mercer, provided independent advice on performance measurement, the setting of incentive targets, TSR analysis and the structure of long-term incentives, and provided market data in respect of senior executive remuneration and non-executive Director fees. Kepler reports directly to the Chairman of the Remuneration Committee and does not provide any other material services to the Group (nor does Kepler's parent company, Mercer), and is considered to be independent. The Committee also received remuneration advice from Aon Hewitt New Bridge Street in relation to the appointment of the new CEO.

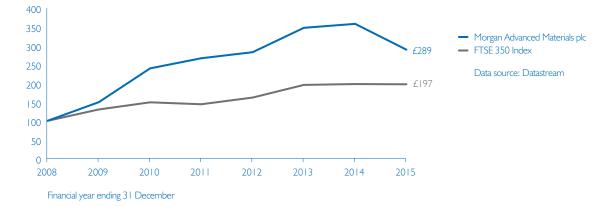
Kepler and Aon Hewitt New Bridge Street are signatories to the Code of Conduct for Remuneration Consultants.

Fees paid during the year to advisers for advice to the Remuneration Committee, charged on a time and materials basis, were as follows:

Adviser	Fees (incl. expenses, excl. VAT)
Kepler	£61,405
Aon Hewitt New Bridge Street	£3,500

#### Comparison of Company performance

The graph below shows the value, at 31 December 2015, of  $\pm$ 100 invested in Morgan Advanced Materials plc's shares on 31 December 2008 compared with the current value of the same amount invested in the FTSE 350 Index. The FTSE 350 Index – of which the Company is a constituent – has been chosen to replace the FTSE All-Share Industrials Index going forward because it is more widely followed by the UK's investment community and more easily tracked over time.



The table below details the CEO's 'single figure' of remuneration over the same seven-year period.

	2009	2010	2011	2012	2013	2014	2015
CEO	M Robertshaw 1	M Robertshaw I	M Robertshaw	M Robertshaw	M Robertshaw	M Robertshaw	P Raby
CEO single figure	£676,512	£1,045,984	£3,371,302	£1,285,556	£648,932	£ 1,001,448	£788,252
Annual bonus (% max)	20%	100%	100%	0%	0%	65%	50%
BDSMP vesting (% max)	n/a	0%	60%	100%	0%	0%	n/a
LTIP vesting (% max)	n/a	0%	100%	50%	0%	0%	n/a

#### Directors' interests in shares

#### Shares owned outright

The auditors are required to report on the information in this table.

The shares held by each person who was a Director of Morgan Advanced Materials plc as at 31 December 2015 (together with shares held by their connected persons) in the Ordinary share capital of the Company:

	As at I January 2015 or date of joining	As at 31 December 2015	As at 23 February 2016 <sup>*</sup>
Executive Directors			
Pete Raby†	_	10,928	10,928
Kevin Dangerfield	273,306	289,933	289,933
Andrew Hosty>	144,988	138,368	n/a
Non-executive Directors			
Andrew Shilston	30,000	70,000	70,000
Douglas Caster	_~	_~	_~
Victoire de Margerie**	2,000	2,000	n/a
Andrew Reynolds Smith	5,000	5,000	5,000
Rob Rowley	_~	5,000	5,000

\* The date of this Report.

+ Pete Raby joined the Board on | August 2015.

> Andrew Hosty stepped down from the Board on 8 January 2016.

~ Directors' qualifying shareholding requirement removed when the Company's current Articles of Association were approved by shareholders at the 2013 AGM.

\*\* Victoire de Margerie stepped down from the Board on 4 February 2016.

As at 7 March 2016, Douglas Caster's holding was 18,000 shares. Helen Bunch, appointed non-executive Director on 24 February 2016, does not hold shares in Morgan Advanced Materials plc.

#### Executive Directors' shareholding guidelines

The table below shows the shareholding of each executive Director against their respective shareholding guideline as at 31 December 2015.

	Shareholding guideline (% 2015 salary)	Shares owned outright	Shares subject to performance*	Performance- tested but unvested shares <sup>†</sup>	Shares subject to BDSMP deferral <sup>‡</sup>	Options vested but unexercised <sup>§</sup> (	Current shareholding (% 2015 salary) <sup>&gt;</sup>	Guideline met?
Pete Raby**	150%	10,928	136,239	114,351	—	—	6%	Building
Kevin Dangerfield	100%	289,933	228,708	102,128	7,830	3,515	228%	Yes
Andrew Hosty	100%	138,368	188,816	134,405	3,961	3,653	100%	Yes

\* 2014 and 2015 LTIP and LTIP-CSOP awards and 2014 and 2015 BDSMP matching awards.

2013 LTIP and LTIP-CSOP awards and 2013 BDSMP matching awards for the three-year performance period ended 31 December 2015. The 2013 LTIP will lapse on 20 May 2016 and the 2013 BDSMP will lapse on 25 March 2016.

‡ Estimated net number of shares voluntarily deferred under the BDSMP.

§ Options granted under the Sharesave scheme for Kevin Dangerfield and Andrew Hosty.
 > Based on an executive Director's 2015 salary and the share price at 31 December 2015, comprising shares owned outright and shares subject to deferral (estimated net number of shares voluntarily deferred under the BDSMP).

\*\* Pete Raby joined the Board on 1 August 2015. His performance-tested but unvested share award relates to the recruitment share award made on 3 August 2015.

Unless otherwise stated, figures given in the tables on pages 85 to 87 are for shares or interests in shares.

#### Pete Raby\*

The auditors are required to report on the information in this table.

LTIP									
Status at 31 December 2015	Plan	As at I August 2015 <sup>*</sup>	Allocations during the year	Released during the year	Lapsed during 3 the year	As at I December 2015	Market price at date of allocation	Market price on date of release	Performance period
	2015	_	127,543	_	_	127,543	344.98p	_	01.01.15 - 31.12.17
	2015 Funding	_	8,696	_	_	8,696	344.98p	_	01.01.15 – 31.12.17
Share options									
Status at 31 December 2015	Plan	As at I August 2015 <sup>*</sup>	Allocations during the year	Released during the year	Lapsed during 3 the year	As at I December 2015	Market price at date of allocation	Market price on date of release	Performance period
Subject to performance conditions	2015 LTIP- CSOP	_	8,696		_	8,696	344.98p	_	01.01.15 - 31.12.17
Recruitment award									
Status at 31 December 2015	Plan	As at I August 2015*	Allocations during the year	Released during the year	Lapsed during 3 the year	As at I December 2015	Market price at date of allocation	Market price on date of release	Performance period
Subject to continued service only	2015	_	4,35	_	_	4,35	349.80p	_	=
Total interests in share pl	ans								
	As at 17	August 2015 <sup>*</sup>			As at 31 Dec	ember 2015			

Pete Raby joined the Board on 1 August 2015.
 Includes a funding award of 8,696 shares to be used to the extent required to pay the exercise price arising on exercise of the CSOP and therefore not transferable to Pete Raby.

259,286>

## **REMUNERATION REPORT** continued

#### Kevin Dangerfield

The auditors are required to report on the information in this table.

#### LTIP

Status at 31 December 2015	Plan	As at I January 2015	Allocations during the year	Released during the year	Lapsed during 3 the year	As at 1 December 2015	Market price at date of allocation	Market price on date of release	Performance period
No further performance conditions, lapsed	2012	80,101	_	_	80,101	_	355.80p	_	02.01.12 - 31.12.14
No further performance	2013#	100,147	_	_	_	100,147	279.06p	_	01.01.13 - 31.12.15
conditions, not yet released	2013 Funding <sup>#</sup>	1,981	_	_	_	1,981	279.06p	_	01.01.13 - 31.12.15
	2014	81,436	_	_	_	81,436	338.34p	-	01.01.14 - 31.12.16
Subject to performance conditions	2014 Funding	7,232	_	_	_	7,232	338.34p	_	01.01.14 - 31.12.16
	2015	_	95,715	_	_	95,715	329.10p	_	01.01.15 - 31.12.17

#### Bonus Deferral Share Matching Plan

Status at 31 December 2015	Plan	As at I January 2015	Allocations during the year	Released during the year	Lapsed during 3 the year	As at 31 December 2015	Market price at date of allocation	Market price on date of release	Performance period	
No further performance conditions, released/	2012 Investment	11,346	-	11,346	_	_	330.50p	329.90p		
	2012 Matching	34,038	-	_	34,038	_	330.50p	-	02.01.12 - 31.12.14	
lapsed	2012 Dividend <sup>†</sup>	_	1,199	1,199	_	_	Various‡	329.90p		
Subject to performance	2015 Investment	_	14,775	_	_	14,775	347.50p	_		
conditions	2015 Matching	_	44,325	—	_	44,325	347.50p	_	01.01.15 – 31.12.17	

#### Share options

Status at 31 December 2015	Plan	As at I January 2015	Allocations during the year	Released during the year	Lapsed during 31 [ the year		Market price at date of allocation	Market price on date of release	Performance period
Subject to performance	2013 LTIP- CSOP#	1,981	_	_	_	1,981	279.06p	_	01.01.13 - 31.12.15
conditions	2014 LTIP- CSOP	7,232	_	_	-	7,232	338.34p	_	01.01.14 - 31.12.16
Subject to continued service only	2014 Sharesave	3,515	_	_	_	3,515	256.00p	_	01.12.14 - 30.11.17

#### Total interests in share plans

As at 1 January 2015	As at 31 December 2015	
329,009>	358,339>	

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The 2013 LTIP will not vest and will lapse in full. Dividend shares received on 2012 Investment shares. The price used for BDSMP dividend shares is the closing share price of one Morgan Advanced Materials plc Ordinary share trading on the London Stock Exchange on the dividend ŧ

payment date. > Includes a funding award of 9,213 shares to be used to the extent required to pay the exercise price arising on exercise of the CSOP and therefore not transferable to Kevin Dangerfield.

#### Andrew Hosty

The auditors are required to report on the information in this table.

#### LTIP

Status at 31 December 2015	Plan	As at I January 2015	Allocations during the year	Released during the year	Lapsed during 3 the year	As at I December 2015	Market price at date of allocation		Performance period
No further performance conditions, lapsed	2012	87,830	_	_	87,830	-	355.80p	_	02.01.12 - 31.12.14
No further performance	2013#	101,233		-	_	101,233	279.06p	_	01.01.13 - 31.12.15
conditions, not yet released	2013 Funding <sup>#</sup>	10,750		_	_	10,750	279.06p	_	01.01.13 - 31.12.15
Subject to performance	2014	93,101	_	-	_	93,101	338.34p	_	01.01.14 - 31.12.16
conditions	2015	_	95,715	_	_	95,715	329.10p	—	01.01.15 - 31.12.17

#### Bonus Deferral Share Matching Plan

Status at 31 December 2015	Plan	As at I January 2015	Allocations during the year	Released during the year	Lapsed during 31 the year	As at December 2015	Market price at date of allocation	Market price on date of release	Performance period
No further performance conditions, released/	2012 Investment	44,988	_	44,988	_	_	330.50p	345.75p	
	2012 Matching	134,964	_	_	134,964	_	330.50p	_	02.01.12 - 31.12.14
lapsed	2012 Dividend†	_	4,766	4,766	_	_	Various‡	345.75p	
No further performance	2013 Investment	7,474	_	_	_	7,474	286.40p	_	
conditions, not yet released	2013 Matching#	22,422		_	_	22,422	286.40p		01.01.13 – 31.12.15

#### Share options

Status at 31 December 2015	Plan	As at I January 2015	Allocations during the year	Released during the year	Lapsed during 31 the year	As at December 2015	Market price at date of allocation	Market price on date of release	Performance period
No further performance conditions, not yet released	2013 LTIP- CSOP#	10,750	_	_	_	10,750	279.06p	_	01.01.13 - 31.12.15
	2011 Sharesave	3,380	_	3,380	_	_	213.00p	349.00p	01.12.11 – 30.11.14
Subject to continued service only	2012 Sharesave	841	_	_	_	841	214.00p	_	01.12.12 – 30.11.15
	2014 Sharesave	2,812	_		_	2,812	256.00p	_	01.12.14 - 30.11.17

#### Total interests in share plans

As at 1 January 2015	As at 31 December 2014
520,545>	345,098>

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† ‡

The 2013 LTIP and 2013 BDSMP matching share award will not vest and both will lapse in full. Dividend shares received on 2012 Investment shares. The price used for BDSMP dividend shares is the closing share price of one Morgan Advanced Materials plc Ordinary share trading on the London Stock Exchange on the dividend payment date.

> Includes a funding award of 10,750 shares to be used to the extent required to pay the exercise price arising on exercise of the CSOP and therefore not transferable to Andrew Hosty.

### Details of plans

LTIP	
Plan	Details
2013 – 2015	Awards granted to executive Directors in 2013 and 2014 are subject to relative TSR, EPS and ROCE. The EPS target (applying to a third of each award) requires three-year EPS growth above a threshold of 8% pa of that element to vest, commencing at 30% vesting for that element, and rising to full vesting for EPS growth of 15% pa or higher. The TSR target (applying to another third of each award) requires Morgan Advanced Materials' three-year TSR performance to rank at median against the FTSE All-Share Industrials Index for 30% of that element to vest, rising to full vesting if Morgan Advanced Materials' TSR ranks at or above the upper quartile against the companies in this Index. For the 2013 and 2014 awards, the ROCE element has been set for a 33-37% pa range, vesting on a straight-line basis, with 30% of the measure vesting at the 33% threshold. ROCE is measured as the average annual ROCE over the three-year performance period for the 2013 cycle, and as the ROCE in the final year of the performance period for the 2014 cycle. The 2015 awards were on the same basis as the 2014 awards described above, except that the EPS target range was 6%-15% pa and the ROCE target range was 27%-33% in the final year of the performance period.
Bonus Deferral M	atching Plan
Plan	Details
2013 – 2015	Deferral of bonus on a gross basis. Matching awards granted to executive Directors in 2013, 2014 and 2015 are subject to three-year EPS growth. The EPS target requires three-year EPS growth above a threshold of 8% pa before any matching, 12% pa for a 1x match, 16% pa for a 2x match, and 20% pa or higher for a 3x match.
	There is straight-line vesting between these points.
Share options	
Plan	Details
LTIP – CSOP	LTIP 2013: For the CFO and former COO, awards were structured as an Approved Performance Share Plan (APSP) and comprise three elements: (i) HMRC-approved options (CSOP) over shares to the value of up to £30,000 with an exercise price of 279.06 pence per share; (ii) an LTIP award in the form of a conditional award of free shares to the value of the remainder of the award above this limit; and (iii) a funding award, also in the form of a conditional award of free shares, over such numbers of shares whose value at exercise at the approved option equals up to £30,000. For the CEO, the 2013 award was structured as an LTIP award in the form of a conditional award of free shares.
	funding awards were not transferable to the participant. LTIP 2014: The CFO's award was structured as an APSP as described above. For the former COO, the 2014 award was structured as an LTIP award in the form of a conditional award of free shares.
	LTIP 2015: The CEO's award was structured as an APSP as described above. For the CFO and former COO, the 2015 award was structured as an LTIP award in the form of a conditional award of free shares.
2013 Sharesave 2014 Sharesave 2015 Sharesave	HMRC-approved all-employee Sharesave scheme. Exercise price set at 20% discount to share price on date of grant. Options vest after three years of continuous service and must be exercised within six months of vesting. Details of options held by Directors under Sharesave are outlined in the individual Director shareholding tables above.

Other transactions involving Directors are set out in note 26 (Related Parties) to the Financial statements.

This Report was approved by the Board on 23 February 2016.

Signed on behalf of the Board

#### DOUGLAS CASTER

CHAIRMAN OF THE REMUNERATION COMMITTEE

# OTHER DISCLOSURES

The Directors' Report is required to be produced by law. The UKLA's Disclosure and Transparency Rules (DTRs) and Listing Rules (LRs) also require the Company to make certain disclosures.

Pages 48 to 92 inclusive (together with the sections of the Annual Report incorporated by reference) constitute a Directors' Report that has been drawn up and presented in accordance with applicable law, and the liabilities of the Directors in connection with that Report are subject to the limitations and restrictions provided by that law.

#### The Company

#### Legal form of the Company

Morgan Advanced Materials plc is a company incorporated in England and Wales with company number 286773.

#### Name change

The Company changed its name to Morgan Advanced Materials plc (from The Morgan Crucible Company plc) on 27 March 2013.

#### Annual General Meeting

The Company's 2016 AGM will be held on Friday 6 May 2016 at The Lincoln Centre, 18 Lincoln's Inn Fields, London WC2A 3ED. A Circular incorporating the Notice of AGM accompanies this Annual Report.

#### Statutory disclosures

#### Amendment of the Articles of Association

The Company's constitution, known as the Articles of Association (Articles), is essentially a contract between the Company and its shareholders, governing many aspects of the management of the Company. It deals with matters such as the rights of shareholders, the appointment and removal of directors, the conduct of the board and general meetings and communications by the Company. The Articles may be amended by special resolution of the Company's shareholders and are available on the Company's website at www.morganadvancedmaterials.com.

#### Appointment and replacement of Directors

The Articles provide that the Company may by ordinary resolution at general meeting appoint any person to act as a Director, provided that notice is given of the resolution identifying the proposed person by name and that the Company receives written confirmation of that person's willingness to act as Director if he has not been recommended by the Board. The Articles also empower the Board to appoint as a Director any person who is willing to act as such. The maximum possible number of Directors under the Articles is 15. The Articles provide that the Company may by special resolution, or by ordinary resolution of which special notice is given, remove any Director before the expiration of his period of office. The Articles also set out the circumstances in which a Director shall vacate office. The Articles require that at each annual general meeting any Director who was appointed after the previous annual general meeting must be proposed for election by the shareholders. Additionally, any other Director who has not been elected or re-elected at one of the previous two annual general meetings must be proposed for re-election by the shareholders. The Articles also allow the Board to select any other Director to be proposed for re-election. In each case, the rules apply to Directors who were acting as Directors on a specific date selected by the Board. This is a date not more than 14 days before, and no later than, the date of the notice of the annual general meeting.

Notwithstanding the provisions of the Articles, all the Directors will stand for election or re-election on an annual basis in compliance with the provisions of the UK Corporate Governance Code. Details of the

career history of Directors in post as at the date of this Report, and the Board Committees on which they serve, can be found on pages 50 and 51.

#### Results and dividends

The total profit (profit attributable to owners of the parent and non-controlling interests) for the year ended 31 December 2015 was £38.1 million (2014: £12.3 million). Profit before taxation for the same period was £59.0 million (2014: £31.5 million). Revenue was £911.8 million (2014: £921.7 million) and operating profit was £82.9 million (2014: £54.3 million). Basic earnings per share from continuing operations was 11.9 pence (2014: 2.7 pence). Capital and reserves at the end of the year were £186.4 million (2014: £187.7 million). The total profit of £38.1 million will be transferred to equity.

The Directors recommend the payment of a final dividend at the rate of 7.0 pence per share on the Ordinary share capital of the Company, payable on 27 May 2016 to shareholders on the register at the close of business on 6 May 2016. Together with the interim dividend of 4.0 pence per share paid on 27 November 2015, this final dividend, if approved by shareholders, brings the total distribution for the year to 11.0 pence per share (2014: 10.9 pence).

#### Directors

All those who served as Directors at any time during the year under review are listed on pages 50 and 51, with the exception of Andrew Hosty and Victoire de Margerie, who resigned from the Board on 8 January 2016 and 4 February 2016 respectively.

#### Powers of the Directors

Subject to the Company's Articles, UK legislation and any directions given by special resolution, the business of the Company is managed by the Board, which may exercise all the powers of the Company.

#### Directors' interests

Details of Directors' interests (and their connected persons' beneficial interests) in the share capital of the Company are listed on page 84.

#### Directors' indemnities

The Company has entered into separate indemnity deeds with each Director containing qualifying indemnity provisions, as defined in Section 236 of the Companies Act 2006, under which the Company has agreed to indemnify each Director in respect of certain liabilities which may attach to each of them as a Director or as a former Director of the Company or any of its subsidiaries. The indemnity deeds were in force during the financial year to which this Directors' Report relates and are in force as at the date of approval of the Directors' Report.

#### Information required by LR 9.8.4R

Information required to be disclosed under LR 9.8.4R is as follows. On 3 August 2015, an award over 114,351 Ordinary shares in the Company (value at date of award of £400,000, calculated using the share price on 3 August 2015 of £3.4980) was made to Pete Raby. This award was granted in accordance with Listing Rule 9.4.2(2) and was made in recognition of the loss of incentive awards which he forfeited on leaving his former employer. The award will vest in two tranches, on the dates given below, subject to Pete Raby not having resigned or been dismissed in specified circumstances. There are no performance conditions attaching to this award.

Number of shares subject to award	Vesting date
57,176	31 December 2016
57,175	31 December 2017

## **OTHER DISCLOSURES** continued

#### Human resources

Details of the Group's human resources policies and employee involvement are set out on pages 33 to 35.

There are no agreements between the Company and its Directors or employees providing for compensation for loss of office or employment (whether through resignation, purported redundancy or otherwise) that occurs because of a takeover bid.

#### Research and development

During the year, the Group invested £25.4 million (2014: £21.7 million) in research and development. The Group did not capitalise any development costs in 2015 (2014: nil).

Details of the Group's research and development during the year are set out on pages 36 and 37.

#### Greenhouse gas emissions

Under the Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013 (the Regulations) the Group is required to report its annual greenhouse gas emissions in tonnes of carbon dioxide equivalent (CO<sub>2</sub>e) in its Directors' Report.

Morgan has published information on its emissions due to the combustion of fossil fuels and the electricity purchased by the Company for its own use in its annual EHS report since 2004 and in its Annual Report since 2005. Since 2011 the Group's CO<sub>2</sub>e emissions due to energy consumption have been externally assured by PwC (see PwC's 2015 Assurance Report on page 32). The Group has participated in the Carbon Disclosure Project (CDP) since 2006 and in 2015 achieved a score of 97B, reflecting the depth and quality of climate change data Morgan has disclosed to investors and the global marketplace through the CDP.

The Regulations require the Group to disclose its emissions due to the combustion of biomass and due to process and fugitive emissions which are in addition to the emissions due to energy use reported on page 27 in the Corporate responsibility section of this Annual Report.

		0.01.1
	2015	2014
	Tonnes CO <sub>2</sub> e	Tonnes CO₂e
Emissions from combustion of fuels and operation of facilities <sup>*</sup>		
Combustion of fossil fuels^	133,100	152,900
Operation of facilities, including process emissions <sup>†</sup>	30,200	35,900
Electricity, heat, steam and cooling purchased for own consumption <sup>‡</sup>		
Purchased electricity^+	239,600	244,500
Intensity measurement§		
Tonnes CO2e due to fossil fuels and		
purchased electricity per £m revenue^	409	431
Tonnes GHGs per £m revenue	447	473

 $CO_2e$  is the amount of  $CO_2$  and the amount of non- $CO_2$  greenhouse gas with the equivalent global warming potential.

Data is rounded to the nearest 100 tonnes of CO2e.

- Excludes emissions from Company-owned and leased vehicles estimated at approx. 2,200 tonnes CO2e in 2015 (2014: 2,300).
- ^ The 2015 and 2014 information regarding CO₂e due to energy use has been subject to assurance by PwC. See the Independent Assurance Report on page 32 of this Annual Report and on page 30 of the 2014 Annual Report for further details.
- Electricity from renewable sources at zero tonnes CO2 per kWh. Emissions increase by 4,400 tonnes at grid-average rates (2014: 3,100 tonnes). Excludes steam supplied by third parties to two sites in China and one in Europe.
- § Constant currency basis and updated to reflect changes in reporting methodology.

As required under the Regulations, the above report includes the material emission sources from the operations and activities covered by the Group's Financial statements. As noted, the reports exclude emissions from Company-owned and leased vehicles and emissions relating to steam supplied by third parties to two sites in China and one in Europe, which are in total estimated to account for less than 1% of total emissions. The Directors consider that these sources of emissions are not material to the total of the emissions.

The Group's reporting methodology is based on the Greenhouse Gas Protocol with emission factors for standard grid electricity by country and year from the International Energy Agency together with other factors as published by the UK Department of Environment, Food and Rural Affairs in order to calculate the CO<sub>2</sub>e emissions included in this Report.

#### **Political donations**

No political donations have been made. Morgan Advanced Materials plc has a policy of not making donations to any political party, representative or candidate in any part of the world.

#### **Financial instruments**

Details of the Group's use of financial instruments, together with information on policies and exposure to price, liquidity, cash flow, credit, interest rate and currency risks, can be found in note 19 on pages 124 to 131. All information detailed in this note is incorporated into the Directors' Report by reference and is deemed to form part of the Directors' Report.

#### Share capital and related matters Share capital

The Company's share capital as at 31 December 2015 is set out in note 17 on pages 121 to 123. The Company's Ordinary shares represent 99.85% of the total issued share capital, with the 5.5% Cumulative First Preference shares representing 0.04% and the 5.0% Cumulative Second Preference shares representing 0.11%. The rights and obligations attaching to the Company's Ordinary shares, and restrictions on the transfer of shares in the Company, are set out in the Articles.

#### Shareholders' rights

The holders of Ordinary shares are entitled: to receive dividends, when declared; to receive the Company's reports and accounts; to attend and speak at general meetings of the Company; to appoint proxies; and to exercise voting rights.

Details of the structure of the Company's Preference share capital and the rights attaching to the Company's Preference shares are set out in note 17 on pages 122 and 123.

No person holds securities in the Company carrying special rights with regard to control of the Company. The Company is not aware of any agreements between holders of securities that may result in restrictions on the transfer of securities or on voting rights.

#### Share allotment and repurchase authorities

The Directors were granted authority at the 2015 AGM to allot shares in the Company and to grant rights to subscribe for or convert any securities into shares in the Company up to (a) a nominal amount of £23,780,832 and (b) a nominal amount of £47,561,664 in connection with a rights issue (such amount to be reduced by any shares allotted under (a)). This authority is due to lapse at the 2016 AGM. At the 2016 AGM, shareholders will be asked to grant a similar allotment authority.

A special resolution will also be proposed to renew the Directors' powers to make non pre-emptive issues for cash up to an aggregate nominal amount representing approximately 10% of the issued share capital as at the last practicable date before the publication of the 2016 Notice of AGM, of which up to 5% of the issued share capital would be for use only in connection with acquisitions and specified capital investments.

The Directors did not seek an authority at the 2015 AGM to repurchase shares in the capital of the Company. As at 31 December 2015, there was no such authority in place. The Directors do not intend to seek an authority to repurchase shares at the 2016 AGM.

#### Employee share and share option schemes

The Company operates a number of employee share and share option schemes. Ninety-six employees hold awards under the Morgan Advanced Materials plc Long-Term Incentive Plan, including share options held under the Approved Performance Share Plan, 17 employees hold awards under the Morgan Advanced Materials Bonus Deferral Share Matching Plan and 592 employees participate in the Company's UK Sharesave scheme. Details of outstanding share awards and share options are given in note 20 on page 137.

All the Company's share schemes contain provisions relating to a change of control. Outstanding options and awards would normally vest and become exercisable on a change of control, subject to being pro-rated for time and to the satisfaction of any performance conditions at that time.

The Trustees of The Morgan General Employee Benefit Trust (the Trust) have absolute and unfettered discretion in relation to voting any shares held in the Trust at any general meeting. Their policy is not to vote the shares. If any offer is made to shareholders to acquire their shares, the Trustees will have absolute and unfettered discretion on whether to accept or reject the offer in respect of any shares held by them.

#### Major shareholdings

As at 31 December 2015, the Company had been notified of the following, in accordance with DTR 5, from holders of notifiable interests representing 3% or more of the issued Ordinary share capital of the Company:

	Number of Ordinary shares	%*
Prudential Plc group of companies (M&G)	31,389,883	10.99
AXA Investment Managers SA	23,560,970	8.63
Ameriprise Financial Inc., and its group	17,271,161	6.05
Harris Associates	14,410,180	5.04
Black Creek Investment Managers Inc.	14,320,390	5.01
FIL Limited	14,065,279	4.92
Schroders plc	12,304,156	4.31

Percentages are shown as a percentage of the Company's issued share capital as at 31 December 2015, with the exception of AXA Investment Managers SA which is shown as a percentage of the Company's issued share capital at the time the holding was disclosed.

Note: As at 7 March 2016, there were no changes to the substantial shareholdings shown in the above table, with the exception of Black Creek Investment Management Inc. which notified the Company on 13 January 2016 that it had increased its interest to 17,325,087 shares representing 6.07% of the issued share capital.

#### Transactions, contractual arrangements and post-balance sheet events

#### Significant agreements – change of control

The Group has a number of borrowing facilities provided by various financial institutions. These facility agreements generally include change of control provisions which, in the event of a change in ownership of the Company, could result in renegotiation or withdrawal of these facilities.

The most significant of such agreements are the UK £200 million multi-currency revolving facility agreement, which was signed on 17 October 2014, and the privately placed Note Purchase and Guarantee Agreements signed on 15 December 2007 and 30 June 2010, for which the outstanding loan amounts are USD250 million and €20 million respectively.

There are a number of other agreements that take effect, alter or terminate upon a change of control of the Company following a takeover bid, such as commercial contracts and joint venture agreements. No such individual contract is considered to be significant in terms of its potential impact on the business of the Group as a whole.

#### Post-balance sheet events

There have been no material events since the year end.

#### Reporting, accountability and audit Statement of Directors' responsibilities

The Directors are responsible for preparing the Annual Report and the Group and parent Company Financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare Group and parent Company Financial statements for each financial year. Under that law they are required to prepare the Group Financial statements in accordance with IFRSs as adopted by the EU and applicable law and have elected to prepare the parent Company Financial statements in accordance with UK Accounting Standards and applicable law (UK Generally Accepted Accounting Practice).

A new UK GAAP accounting framework introduced by the Financial Reporting Council (FRC) became mandatorily effective for the financial statements of UK companies in 2015. Under this new framework, the Company is required to prepare parent Company Financial statements for the financial year ended 31 December 2015 on one of the new bases permitted by the FRC.

The Company has chosen to adopt FRS 101 'Reduced Disclosure Framework', which enables the Company to take advantage of the permitted election to utilise the disclosure exemptions allowed under FRS 101. The consolidated Financial statements of the Group on pages 97 to 145 are prepared in accordance with EU-adopted International Financial Accounting Standards (IFRSs) and are unaffected by this new accounting framework. The Company proposes to continue to adopt the reduced disclosure framework of FRS 101 in its future Financial statements.

Under Company law the Directors must not approve the Financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and parent Company and of their profit or loss for that period.

# OTHER DISCLOSURES

In preparing each of the Group and parent Company Financial statements, the Directors are required to:

- ightarrow Select suitable accounting policies and then apply them consistently.
- $\rightarrow$  Make judgments and estimates that are reasonable and prudent.
- → For the Group Financial statements, state whether they have been prepared in accordance with IFRSs as adopted by the EU.
- → For the parent Company Financial statements, state whether applicable UK Accounting Standards have been followed, subject to any material departures disclosed and explained in the parent Company Financial statements.
- → Prepare the Financial statements on the going concern basis unless it is inappropriate to presume that the Group and the parent Company will continue in business.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the parent Company's transactions and disclose with reasonable accuracy at any time the financial position of the parent Company and enable them to ensure that its Financial statements comply with the Companies Act 2006. They have general responsibility for taking such steps as are reasonably open to them to safeguard the assets of the Group and to prevent and detect fraud and other irregularities.

Under applicable law and regulations, the Directors are also responsible for preparing a Strategic Report, Directors' Report, Remuneration Report and Corporate Governance Statement that comply with that law and those regulations.

The Directors are responsible for the maintenance and integrity of the corporate and financial information included on the Company's website. Legislation in the UK governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

The Directors as at the date of this report, whose names and functions are set out on pages 50 and 51, confirm that, to the best of their knowledge:

- → The Group's Financial statements, which have been prepared in accordance with IFRSs as adopted by the EU, give a true and fair view of the assets, liabilities, financial position and profit of the Group; and
- → The management report (comprising the Directors' Report and the Strategic Report) includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal risks and uncertainties that it faces.

#### Scope of the reporting in this Annual Report

The Board has prepared a Strategic Report which provides an overview of the development and performance of the Group's business in the year ended 31 December 2015.

For the purposes of DTR 4.1.5R(2) and DTR 4.1.8, this Directors' Report on pages 49 to 92 and the Strategic Report on pages 7 to 47 comprise the management report, including the sections of the Annual Report and Financial statements incorporated by reference.

Each Director holding office at the date of approval of this Directors' Report confirms that, so far as he is aware, there is no relevant audit information of which the Company's auditor is unaware, and that he has taken all steps that he ought to have taken as a Director to make himself aware of any relevant audit information and to establish that the Company's auditor is aware of that information.

The Strategic Report, the Directors' Report and the Remuneration Report were approved by the Board on 23 February 2016.

For and on behalf of the Board

#### PAUL BOULTON

COMPANY SECRETARY & GENERAL COUNSEL 23 February 2016

Morgan Advanced Materials plc Quadrant, 55-57 High Street, Windsor, Berkshire SL4 ILP Registered in England, No. 286773

## INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF MORGAN ADVANCED MATERIALS PLC ONLY

# OPINIONS AND CONCLUSIONS ARISING FROM OUR AUDIT

#### I. Our opinion on the financial statements is unmodified

We have audited the financial statements of Morgan Advanced Materials plc for the year ended 31 December 2015 which comprise the Consolidated Income Statement, the Consolidated Statement of Comprehensive Income, the Consolidated Statement of Changes in Equity, the Consolidated Balance Sheet, the Consolidated Statement of Cash Flows, the parent company Balance Sheet and the related notes. In our opinion:

- → the financial statements give a true and fair view of the state of the Group's and of the parent company's affairs as at 31 December 2015 and of the Group's profit for the year then ended;
- → the Group financial statements have been properly prepared in accordance with International Financial Reporting Standards as adopted by the European Union (IFRSs as adopted by the EU);
- → the parent company financial statements have been properly prepared in accordance with UK Accounting Standards, including FRS 101 Reduced Disclosure Framework; and
- → the financial statements have been prepared in accordance with the requirements of the Companies Act 2006 and, as regards the Group financial statements, Article 4 of the IAS Regulation.

#### 2. Our assessment of risks of material misstatement

In arriving at our audit opinion above on the financial statements, the risks of material misstatement that had the greatest effect on our audit were:

#### → Impairment assessment of Intangible assets (Customer Relationship £30.5 million, Technology £12.9 million)

Refer to page 62 (Audit Committee report), pages 102 to 105 (accounting policy note) and pages 115 to 117 (financial disclosures)

The risk: The Group has generated significant intangible assets on acquisitions, whose recoverability is dependent on the ability of the businesses to which it relates to generate sufficient future economic benefits. There is a risk that this will not be the case which would result in an impairment being required. The most significant risks of impairment in this category relate to certain customer relationships within the Group balance (£30.5 million) and technology assets in Composites and Defence Systems (C&DS) (£9.7 million). The C&DS customer relationship asset (£5.8m) has been impaired in full in the year reflecting a level of decline in sales and orders from the UK MoD customer. The carrying value of the technology intangible, which has not been impaired in the year, is dependent on the business being able to generate additional revenue outside of its traditional customer base. The risk associated with the carrying value of the remaining customer relationship which has not been impaired in the year is dependent on the Group retaining its customer base.

Impairment reviews are performed by the Group when there is an indication that the carrying values may not be supported. The impairment reviews are based on discounted cash flow projections reflecting a number of assumptions and estimates which require judgment and are inherently uncertain.

Our response: Our audit procedures included testing of the controls designed and applied to provide assurance that the projected future economic benefits are sufficient to support intangible asset carrying values. Our challenge of the key assumptions (relating to operating cashflows during the projection period, long term growth rates and discount rates) in the impairment calculations were based on our assessment of the historical accuracy of the Group's impairment calculations. We compared the Group's assumptions regarding key inputs such as projected economic growth, competition, cost inflation

and discount rates to externally derived data as well as our own assessments. We tested the principles and mathematical integrity of the Group's discounted cash flow model and assessed the sensitivity of the impairment calculations to changes in the key assumptions. We also assessed the adequacy of the Group's disclosures relating to the intangible asset including the impairment charge recognised in the period.

→ Recognition of provisions and contingent liabilities (£12.0 million) Refer to page 62 (Audit Committee report), pages 102 to 105 (accounting policy note) and page 143 (financial disclosures)

The risk: Provisions are held in respect of closure and restructuring costs, environmental issues and other matters including the settlement of European class actions. The application of accounting standards to determine whether a provision should be recorded and, if so, the amount, is inherently subjective.

Our response: Our audit procedures included a critical assessment of the extent to which the Group's estimates are a balanced assessment of the latest available information and the accuracy and reliability of the sources of that information. We considered the appropriateness of the assumptions by reference to third party confirmations and legal advice, where available, and considered whether our understanding of the business gained throughout the audit process corroborated the provisions recorded, or indicated that further challenge was warranted. We considered the adequacy of the Group's disclosures in respect of provisions and contingent liabilities. We also assessed whether the Group's disclosures about provisions and the treatment of movements on provisions in the income statement for the year were appropriate.

#### ightarrow Measurement of tax balances and contingencies (£12.3 million)

Refer to page 62 (Audit Committee report), pages 102 to 105 (accounting policy note) and pages 118 to 119 (financial disclosures)

The risk: The Group is subject to income taxes in a large number of jurisdictions. The level of current tax and deferred tax recognised requires judgments as to the likely outcome of decisions to be made by the tax authorities in the various tax jurisdictions around the world in which the Group operates. There is a risk that the Group's judgments do not adequately reflect the latest available, reliable information or an appropriate application of relevant tax legislation, and are either under or overstated as a result.

Our response: Our audit procedures included challenging the appropriateness of the Group's assumptions and estimates in relation to tax assets and liabilities, by critically assessing the range of possible amounts that may be assessed under tax laws, likely settlements based on the latest correspondence with the relevant tax authorities and the complexity of the relevant tax legislation. We involved our tax specialists in analysing and challenging the assumptions used to determine tax provisions because they have relevant experience of the application of the international and local legislation by the relevant authorities and courts. We also assessed whether the Group's tax disclosures are appropriate and in accordance with relevant accounting standards.

#### ightarrow Presentation of specific adjusting items (£22.1 million pre-tax)

Refer to page 62 (Audit Committee report), pages 102 to 105 (accounting policy note) and pages 109 to 111 (financial disclosures)

The risk: The Group separately presents certain income and expenditure as 'specific adjusting items' on the face of the income statement. 'Specific adjusting items' are not defined by IFRSs, as adopted by the European Union, and therefore judgment is required by the directors to identify such items as 'specific adjusting items' in accordance with the Group's accounting policy on a consistent basis. Failure to disclose clearly the nature and impact of material 'specific adjusting items' may distort the reader's view of the financial result in the year.

Our response: Our audit procedures included making enquiries of the directors. We inspected and challenged the nature of items included within 'specific adjusting items' and agreed their respective amounts to supporting documentation, and to third party correspondence where appropriate. We assessed the consistency of the items classified as 'specific adjusting items' year on year and in accordance with the Group's accounting policy; and we considered the adequacy of the Group's disclosures about the items included within this caption in note 6 (specific adjusting items) and the related accounting policies for these categories on pages 102 to 105.

## 3. Our application of materiality and an overview of the scope of our audit

The materiality for the Group financial statements as a whole was set at  $\pm 3.5$  million, determined with reference to a benchmark of Group profit before taxation, normalised to exclude this year's specific adjusting items as disclosed in note 6 of  $\pm 22.1$  million, of which it represents 4.3%.

We report to the Audit Committee any corrected and uncorrected misstatements exceeding £0.175 million, in addition to other audit misstatements below that threshold that we believe warranted reporting on qualitative grounds.

Of the Group's 88 reporting components, we subjected 26 to audits for Group reporting purposes and 18 to specified risk-focused audit procedures. Audits for Group reporting purposes were performed by component auditors at the key reporting components in the following countries: UK, USA, China, South Korea, France, and Italy and by the Group audit team in the UK. In addition, specified audit procedures were performed by component auditors in selected geographic locations such as USA, India, Germany and Brazil.

The components within the scope of our work accounted for the following percentages of the group's results:

	Group revenue	Group operating profit	Group total assets
Audits for Group			
reporting purposes	56%	71%	54%
Audit procedures over			
significant accounts	27%	22%	28%
Total	83%	93%	82%

The Group audit team instructed component auditors as to the significant areas to be covered, including the relevant risks detailed above and the information to be reported back. The Group audit team approved the component materialities, which ranged from  $\pm 0.1$  million to  $\pm 3.5$  million, having regard to the size and risk profile of each component. The work on 43 of the 44 components was performed by component auditors and the rest by the Group audit team.

The Group audit team visited the following locations: UK, USA, Germany, China and Brazil. Telephone meetings were also held with the auditors and local management at these locations and the majority of the other locations that were not physically visited. At these visits and meetings, the findings reported to the Group audit team were discussed in more detail, and any further work required by the Group audit team was then performed by the component auditor.

## 4. Our opinion on other matters prescribed by the Companies Act 2006

In our opinion:

- → the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the Companies Act 2006; and
- → the information given in the Strategic Report and Directors' Report for the financial year for which the financial statements are prepared is consistent with the financial statements.

## 5. We have nothing to report on the disclosures of principal risks

Based on the knowledge we acquired during our audit, we have nothing material to add or draw attention to in relation to:

- → the directors' viability statement page 21, concerning the principal risks, their management, and, based on that, the directors' assessment and expectations of the group's continuing in operation over the three years to 2018; or
- $\rightarrow\,$  the disclosures in note 1 of the financial statements concerning the use of the going concern basis of accounting.

### 6. We have nothing to report in respect of the matters on which we are required to report by exception

Under ISAs (UK and Ireland) we are required to report to you if, based on the knowledge we acquired during our audit, we have identified other information in the annual report that contains a material inconsistency with either that knowledge or the financial statements, a material misstatement of fact, or that is otherwise misleading.

In particular, we are required to report to you if:

- → we have identified material inconsistencies between the knowledge we acquired during our audit and the directors' statement that they consider that the annual report and financial statements taken as a whole is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy; or
- → the Report of the Audit Committee does not appropriately address matters communicated by us to the audit committee.

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- → adequate accounting records have not been kept by the parent company, or returns adequate for our audit have not been received from branches not visited by us; or
- → the parent company financial statements and the part of the Directors' Remuneration Report to be audited are not in agreement with the accounting records and returns; or
- → certain disclosures of directors' remuneration specified by law are not made; or
- $\rightarrow\,$  we have not received all the information and explanations we require for our audit.

Under the Listing Rules we are required to review:

- → the directors' statement, in relation to going concern set out on page 47 and the longer-term viability set out on page 21; and
- → the part of the Corporate Governance Statement on pages 49 to 52 relating to the company's compliance with the 11 provisions of the 2014 UK Corporate Governance Code specified for our review.

We have nothing to report in respect of the above responsibilities.

#### Scope and responsibilities

As explained more fully in the Directors' Responsibilities Statement set out on page 91, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. A description of the scope of an audit of accounts is provided on the Financial Reporting Council's website at www.frc.org.uk/auditscopeukprivate. This report is made solely to the Company's members as a body and subject to important explanations and disclaimers regarding our responsibilities, published on our website at www.kpmg.com/uk/auditscopeukco2014a, which are incorporated into this report as if set out in full and should be read to provide an understanding of the purpose of this report, the work we have undertaken and the basis of our opinions.

#### ANTHONY SYKES

#### SENIOR STATUTORY AUDITOR

for and on behalf of KPMG LLP, Statutory Auditor Chartered Accountants 15 Canada Square London, E14 5GL 23 February 2016

# FINANCIAL STATEMENTS

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### CONSOLIDATED INCOME STATEMENT

for the year ended 31 December 2015

	Note	Results before specific adjusting items 2015 £m	Specific adjusting items <sup>*</sup> 2015 £m	Total 2015 £m	Results before specific adjusting items 2014 £m	Specific adjusting items <sup>*</sup> 2014 £m	Total 2014 £m	OVERVIEW
Revenue	3	911.8	-	911.8	921.7	_	921.7	
Operating costs before restructuring costs, other one-off items and amortisation of intangible assets	4	(802.2)	_	(802.2)	(803.7)	_	(803.7)	
Profit from operations before restructuring costs, other one-off items and amortisation of intangible assets		109.6	-	109.6	118.0	_	118.0	
Restructuring costs and other one-off items:								
	4&6	(4.1)	(1.5)	(5.6)	(5.9)	(16.3)	(22.2)	
Business exit costs	6	_	(2.8)	(2.8)	_	(1.9)	(1.9)	
Impairment of property, plant and equipment	6	-	(5.9)	(5.9)	_	_	_	
Transaction-related costs	6	-	_	-	_	(1.2)	(1.2)	
Settlement of prior period anti-trust litigation	6	-	-	-	_	(3.6)	(3.6)	
Gain on disposal of properties	4	0.5	-	0.5	0.3	_	0.3	
Profit from operations before amortisation of intangible assets	3	106.0	(10.2)	95.8	2.4	(23.0)	89.4	GOVERNAANCE
Amortisation of intangible assets	4	(7.1)	_	(7.1)	(8.2)	_	(8.2)	
Impairment of intangible assets	6	(/)	(5.8)	(5.8)	(0.2)	(26.9)	(26.9)	A
Operating profit	3	98.9	(16.0)	82.9	104.2	(49.9)	54.3	
e per utility preside	9		(1010)	02.07	10 112	(1777)	0 110	
Finance income		2.5	_	2.5	2.1	_	2.1	
Finance expense		(20.6)	-	(20.6)	(22.9)	_	(22.9)	
Net financing costs	7	(18.1)	-	(18.1)	(20.8)	_	(20.8)	
Net loss on disposal of business	6	_	(6.I)	(6.1)	_	(2.0)	(2.0)	3
Share of profit of associate (net of income tax)	12	0.3	_	0.3	_	_	_	NA N
Profit before taxation		81.1	(22.1)	59.0	83.4	(51.9)	31.5	רוויאויעכואב א זאן פייופוע וא
Income tax expense	8	(24.2)	3.3	(20.9)	(24.7)	5.5	(19.2)	
Profit for the period		56.9	(18.8)	38.1	58.7	(46.4)	12.3	
Profit for period attributable to:								
Owners of the parent		52.3	(18.4)	33.9	54.8	(47.0)	7.8	
Non-controlling interests		4.6	(0.4)	4.2	3.9	0.6	4.5	
		56.9	(18.8)	38.1	58.7	(46.4)	12.3	
Basic earnings per share	9							
Continuing operations				II.9p			2.7p	
Diluted earnings per share								
Continuing operations				11 <b>.9</b> p			2.7p	
Dividende								
Dividends				4.00			2.00	
Interim dividend – pence				4.00p			3.90p	
- £m				11.4			.  7.00p	
Proposed final dividend – pence				7.00p			7.00p	

\* Details of 'Specific adjusting items' are given in note 6 to the consolidated financial statements.

The proposed final dividend is based upon the number of shares outstanding at the balance sheet date.

## CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

for the year ended 31 December 2015

	Translation	Hedging	Fair value	Retained cor	Total parent mprehensive	Non- controlling	Total comprehensive
	reserve £m	reserve £m	reserve £m	earnings £m	income £m	interests £m	income £m
2014	L.111	LIII	LIII	LIII.	LIII	LIII	LIII
Profit for the period	_	_	_	7.8	7.8	4.5	12.3
Items that will not be reclassified subsequently to profit or loss:							
Remeasurement loss on defined benefit plans	_	_	_	(75.2)	(75.2)	_	(75.2)
Tax effect of components of other comprehensive income not reclassified				10.0	10.0		10.0
comprehensive income not reclassified				(65.2)	(65.2)		(65.2)
Items that may be reclassified subsequently to profit or loss:				(03.2)	(05.2)		(03.2)
Foreign exchange translation differences	(6.6)	-	-	-	(6.6)	(0.4)	(7.0)
Net gain on hedge of net investment in foreign subsidiaries	7.9	_	_	_	7.9	_	7.9
Cash flow hedges:							
Transferred to profit or loss	_	(0.1)			(0.1)	-	(0.1)
	1.3	(0.1)			1.2	(0.4)	0.8
Total comprehensive income, net of tax	1.3	(0.1)		(57.4)	(56.2)	4.1	(52.1)
2015							
Profit for the period	-	-	-	33.9	33.9	4.2	38.1
Items that will not be reclassified subsequently to profit or loss:							
Remeasurement gain on defined benefit plans	-	-	-	1.3	1.3	-	1.3
Tax effect of components of other comprehensive income not reclassified	_	_	_	(0.9)	(0.9)	_	(0.9)
	_	_	_	0.4	0.4	_	0.4
Items that may be reclassified subsequently to profit or loss:							
Foreign exchange translation differences	(5.0)	-	-	_	(5.0)	0.6	(4.4)
Net gain on hedge of net investment in foreign subsidiaries	2.0	_	_	_	2.0	_	2.0
Cash flow hedges:							
Change in fair value	-	(0.1)	-	-	(0.1)	-	(0.1)
	(3.0)	(0.1)	-	-	(3.1)	0.6	(2.5)
Total comprehensive income,	(2.0)			24.2	21.2	4.0	24.0
net of tax	(3.0)	(0.1)	-	34.3	31.2	4.8	36.0

### CONSOLIDATED BALANCE SHEET

as at 31 December 2015

			2014	
	Note	2015 £m	Restated* £m	OVERVIEW
Assets				ME
Property, plant and equipment	10	256.7	241.0	<
Intangible assets	11	229.8	235.3	
Investments	12	5.4	6.2	
Other receivables		5.3	4.0	
Deferred tax assets	13	4.4	8.5	
Total non-current assets		501.6	495.0	
Inventories	14	129.2	126.6	STE
Derivative financial assets		2.0	6.0	Â
Trade and other receivables	15	174.4	193.9	EG
Cash and cash equivalents	16	49.8	63.0	C R
Assets classified as held for sale	6	_	4.5	STRATEGIC REPORT
Total current assets		355.4	394.0	ORT
Total assets		857.0	889.0	
Liabilities				
Interest-bearing loans and borrowings	18	257.4	232.9	
Employee benefits	20	204.5	211.8	G
Provisions	21	1.6	2.6	<pre> </pre>
Non-trade payables	22	0.7	0.8	Ϋ́
Deferred tax liabilities	13	2.3	2.4	GOVERNANCE
Total non-current liabilities		466.5	450.5	m
Interest-bearing loans and borrowings and bank overdrafts	18	8.4	37.1	
Trade and other payables	22	168.6	165.1	
Current tax payable		14.4	26.3	
Provisions	21	10.4	20.2	
Derivative financial liabilities		2.3	0.8	Z
Liabilities classified as held for sale	6	_	1.3	Ź
Total current liabilities		<b>204.</b> I	250.8	$\geq$
Total liabilities		670.6	701.3	ST/
Total net assets		186.4	187.7	FINANCIAL STATEMENTS
				AE -
Equity				SLI
Share capital	17	71.8	71.8	
Share premium		111.7	111.7	
Reserves		36.0	39.1	
Retained earnings		(69.7)	(71.4)	
Total equity attributable to equity owners of parent Company		149.8	151.2	
Non-controlling interests		36.6	36.5	
Total equity		186.4	187.7	

\* 2014 has been restated for the reclassification of current tax payable and deferred tax assets and liabilities, as detailed in notes 13 and 22.

The financial statements were approved by the Board of Directors on 23 February 2016 and were signed on its behalf by:

PETE RABY CHIEF EXECUTIVE OFFICER

KEVIN DANGERFIELD CHIEF FINANCIAL OFFICER

### CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

for the year ended 31 December 2015

	Share capital	Share	Translation reserve	Hedging reserve	Fair value reserve	Special I reserve	Capital redemption reserve	Other reserves	Retained earnings	Total parent equity	Non- controlling interests	Total equity
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
Balance at I January 2014	71.8	.7	(14.8)	0.6	(1.0)	6.0	35.7	.4	16.7	238.1	36.0	274.1
Profit for the year	_	_	_	_	_	_	_	_	7.8	7.8	4.5	12.3
Other comprehensive income	_	_	1.3	(0.1)	_	_	_	_	(65.2)	(64.0)	(0.4)	(64.4)
Transactions with owners:												
Dividends	_	_	_	_	_	_	_	_	(30.2)	(30.2)	(4.8)	(35.0)
Equity-settled share-based payment transactions	_	_	_	_	_	_	_	_	1.8	1.8	_	1.8
Own shares acquired for share incentive schemes	_	_	_	_	_	_	_	_	(2.3)	(2.3)	_	(2.3)
Adjustment arising from change in non-controlling									· · ·	× ,	1.2	
interest Balance at 31	_										1.2	1.2
December 2014	71.8	.7	(13.5)	0.5	(1.0)	6.0	35.7	.4	(71.4)	151.2	36.5	187.7
Balance at I January 2015	71.8	111.7	(13.5)	0.5	(1.0)	6.0	35.7	11.4	(71.4)	151.2	36.5	187.7
Profit for the year	-	-	_	-	-	-	-	-	33.9	33.9	4.2	38.1
Other comprehensive												
income	-	-	(3.0)	(0.1)	-	-	-	-	0.4	(2.7)	0.6	(2.1)
Transactions with owners:												
Dividends	-	-	-	-	-	-	-	-	(31.4)	(31.4)	(3.8)	(35.2)
Equity-settled share-based payment transactions	_	_	_	_	_	_	_	_	1.7	1.7	_	1.7
Own shares acquired for share incentive schemes	_	_	_	_	_	_	_	_	(2.9)	(2.9)	_	(2.9)
Adjustment arising from change in non-controlling interest	_		_	_		_	_	_	_	_	(0.9)	(0.9)
Balance at 31				_						_	(0.7)	(0.7)
December 2015	71.8	111.7	(16.5)	0.4	(1.0)	6.0	35.7	11.4	(69.7)	149.8	36.6	186.4

Details of the reserves are provided in note 17.

### CONSOLIDATED STATEMENT OF CASH FLOWS

for the year ended 31 December 2015

	20	15 2014	0
No	te £	m £m	OVERVIEW
Operating activities	20		≈e
Profit for the period Adjustments for:	38.	. 12.3	<
Depreciation	4 27.	.1 27.8	
Amortisation	4 <b>7</b>		
Net financing costs	7 <b>18</b>		
Loss on disposal of business	6 6		
Share of profit from associate (net of income tax)	12 <b>(0</b> 4		
Profit on sale of property, plant and equipment	(0. (0.		
Income tax expense	8 20		STE
Non-cash operating costs relating to restructuring	4 <b>0</b> .		AT
Non-cash specific adjusting items included in operating profit	15.		G
Equity-settled share-based payment expenses		<b>.4</b> 1.7	R
Cash generated from operations before changes in working capital and provisions	133.		STRATEGIC REPORT
0			RT
Decrease/(increase) in trade and other receivables	15.	.5 (2.8)	
Increase in inventories	(4.	.7) (9.5)	
Increase in trade and other payables	L	<b>.9</b> 3.1	
Decrease in provisions and employee benefits	(16.	.4) (15.0)	G
Cash generated from operations	130	. 1 107.8	GOVERNANCE
			RRN
Acquisition-related costs	(12)	- (0.3)	AZ
Interest paid	(13.	, , ,	Ê
Income tax paid	(29		
Net cash from operating activities	86.	.8 70.3	
Investing activities			
Purchase of property, plant and equipment	(63.	.5) (33.8)	
Proceeds from sale of property, plant and equipment	0.	.8 1.3	
Sale of investments		- 0.9	FINANCIAL STATEMENTS
Interest received	2.	.2 1.9	Ź
Disposal of subsidiaries, net of cash disposed	(0	<b>.l)</b> (0.6)	$\geq$
Acquisition of subsidiaries, net of cash acquired		- (20.7)	<pre>ALS</pre>
Loan made to associate		- (1.5)	에 다 다 다 다 다 다 다 다 다 다 다 다 다 다 다 다 다 다 다
Loan made to purchaser of business	(1.	.5) —	Ē
Investment made by non-controlling interests	0.	.5 —	SLI
Forward contracts used in net investment hedging	4.	.9 0.9	
Deferred consideration received on disposal of subsidiary		- 0.7	
Net cash from investing activities	(56.	.7) (50.9)	
Financing activities			
Purchase of own shares for share incentive schemes	(2	<b>.9)</b> (2.3)	
	IG <b>(8</b> .		
	l6 <b>(0</b> .		
	16	- 1.2	
Dividends paid	(31.		
Net cash from financing activities	(43.		
Net decrease in cash and cash equivalents	(12		
Cash and cash equivalents at start of period	63.		
Effect of exchange rate fluctuations on cash held	(0.	,	
Cash and cash equivalents at period end	l6 <b>49</b> .	<b>.8</b> 63.0	

A reconciliation of cash and cash equivalents to net borrowings is shown in note 16.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

#### I. ACCOUNTING POLICIES, ESTIMATES AND JUDGMENTS

#### Accounting policies

Morgan Advanced Materials plc (the 'Company') is a company incorporated in the UK.

The Group financial statements consolidate those of the Company and its subsidiaries (together referred to as the 'Group'), and include the Group's interest in associates. The parent Company financial statements present information about the Company as a separate entity and not about its Group. These consolidated financial statements have been drawn up to 31 December 2015. The Group maintains a 12-month calendar fiscal year ending on 31 December.

The Group financial statements have been prepared and approved by the Directors in accordance with International Financial Reporting Standards as adopted by the EU ('adopted IFRSs'). The Company has elected to prepare its parent Company financial statements in accordance with Financial Reporting Standard 101 (Reduced Disclosure Framework); these are presented on pages 146 to 163.

Where possible the Group has set out individual accounting policies in the note to the consolidated financial statements most relevant to that accounting policy.

Except for the changes set out in the 'Adoption of new and revised Standards' section, the accounting policies set out below have been applied consistently to all periods presented in these Group financial statements.

#### (a) Measurement convention

The financial statements are prepared on the historical cost basis except that the following assets and liabilities are stated at their fair value: derivative financial instruments and financial instruments available-for-sale.

#### (b) Functional and presentation currency

The Group financial statements are presented in pounds sterling, which is the Company's functional currency.

#### (c) Basis of consolidation

#### (i) Subsidiaries

Subsidiaries are entities controlled by the Group. The Group controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The financial statements of subsidiaries are included in the consolidated financial statements from the date on which control commences until the date on which control ceases.

#### (ii) Acquisitions

Business combinations are accounted for using the acquisition method as at the acquisition date, which is the date on which control is transferred to the Group. The Group measures goodwill as the acquisition-date fair value of the consideration transferred, including the amount of any non-controlling interest in the acquiree, less the net of the acquisition-date fair values of the identifiable assets acquired and liabilities assumed, including contingent liabilities as required by IFRS 3.

Consideration transferred includes the fair values of assets transferred, liabilities incurred by the Group to the previous owners of the acquiree, equity interests issued by the Group, contingent consideration, and share-based payment awards of the acquiree that are replaced in the business combination. Any contingent consideration payable is recognised at fair value at the acquisition date. Subsequent changes to the fair value of contingent consideration that is not classified as equity is recognised in the income statement.

Transaction costs that the Group incurs in connection with a business combination, such as finder's fees, legal fees, due diligence fees and other professional and consulting fees, are expensed as incurred.

#### (iii) Associates

Associates are those entities in which the Company has significant influence, but not control, over the financial and operating policies. Significant influence is presumed to exist when the Group holds between 20% and 50% of the voting power of another entity. Associates are accounted for using the equity method and are initially recognised at cost.

#### (iv) Transactions eliminated on consolidation

Intra-group balances and any unrealised gains and losses or income and expenses arising from intra-group transactions are eliminated in preparing the consolidated financial statements. Unrealised gains arising from transactions with associates are eliminated against the investment to the extent of the Group's interest in the associate. Unrealised losses are eliminated in the same way as unrealised gains, but only to the extent that there is no evidence of impairment.

#### I. ACCOUNTING POLICIES, ESTIMATES AND JUDGMENTS continued

#### (d) Foreign currency

#### (i) Foreign currency transactions

Transactions in foreign currencies are translated at the foreign exchange rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are translated to pounds sterling at the foreign exchange rate ruling at that date. Foreign exchange differences arising on translation are recognised in the income statement. Non-monetary assets and liabilities that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction. Non-monetary assets and liabilities denominated in foreign currencies that are stated at fair value are translated to pounds sterling at foreign exchange rates ruling at the dates the fair value was determined.

#### (ii) Financial statements of foreign operations

The assets and liabilities of foreign operations, including goodwill and fair value adjustments arising on consolidation, are translated to pounds sterling at foreign exchange rates ruling at the balance sheet date. The revenues and expenses of foreign operations are translated to pounds sterling at an average rate for the period where this approximates to the foreign exchange rates ruling at the dates of the transactions. Foreign exchange differences arising on retranslation since the adoption of IFRS are recognised directly in Other Comprehensive Income (OCI).

#### (e) Impairment

The carrying amounts of the Group's assets, other than deferred tax assets, are reviewed at each balance sheet date to determine whether there is any indication of impairment. If any such indication exists, the asset's recoverable amount is estimated (see (i) below).

An impairment loss is recognised whenever the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. Impairment losses are recognised in the income statement.

Impairment losses recognised in respect of cash-generating units are allocated first to reduce the carrying amount of any goodwill allocated to cash-generating units (group of units) and then to reduce the carrying amount of the other assets in the unit (group of units) on a pro-rata basis.

When a decline in the fair value of an available-for-sale financial asset has been recognised directly in OCI and there is objective evidence that the asset is permanently impaired, the cumulative loss that had been recognised directly in OCI is recognised in profit or loss. A significant or prolonged decline in an available-for-sale financial asset's fair value below its cost is objective evidence of impairment. The amount of the cumulative loss that is recognised in profit or loss is the difference between the acquisition cost and current fair value, less any impairment loss on that financial asset previously recognised in profit or loss.

#### (i) Calculation of recoverable amount

The recoverable amount of the Group's investments in receivables carried at amortised cost is calculated as the present value of estimated future cash flows, discounted at the original effective interest rate (ie the effective interest rate computed at initial recognition of these financial assets). Receivables with a short duration are not discounted. The recoverable amount of other assets is the greater of their fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For an asset that does not generate largely independent cash inflows, the recoverable amount is determined for the cash-generating unit to which the asset belongs.

#### (ii) Reversals of impairment

An impairment loss in respect of a receivable carried at amortised cost and other assets not listed below is reversed if the subsequent increase in recoverable amount can be related objectively to an event occurring after the impairment loss was recognised.

An impairment loss in respect of an investment in an equity instrument classified as available-for-sale is not reversed through profit or loss. If the fair value of a debt instrument classified as available-for-sale increases and the increase can be objectively related to an event occurring after the impairment loss was recognised in profit or loss, the impairment loss shall be reversed, with the amount of the reversal recognised in profit or loss.

An impairment loss in respect of goodwill is not reversed.

An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

#### (f) Revenue

Revenue from the sale of goods in the course of ordinary activities is measured at the fair value of the consideration received or receivable, net of returns, trade discounts and volume rebates. Revenue is recognised when the significant risks and rewards of ownership have been transferred to the customer, recovery of the consideration is probable, the associated costs and possible return of goods can be estimated reliably, there is no continuing management involvement with the goods, and the amount of revenue can be measured reliably. If it is probable that discounts will be granted and the amount can be measured reliably, then the discount is recognised as a reduction of revenue as the sales are recognised.

#### (g) Dividends

Dividends payable are recognised as a liability in the period in which they are declared and approved.

#### NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS continued

#### I. ACCOUNTING POLICIES, ESTIMATES AND JUDGMENTS continued

#### Accounting estimates and judgments

Judgments made by the Directors in the application of these accounting policies that have a significant effect on the financial statements and estimates with a significant risk of material adjustment in the next year are discussed below.

Management discussed with the Audit Committee the development, selection and disclosure of the Group's critical accounting policies and estimates and the application of these policies and estimates. The following accounting estimates are subject to significant uncertainty:

#### Recognition of identifiable intangible assets and goodwill

Note 11 contains information about intangible assets recognised on acquisition in the prior year. These primarily relate to technology and trademarks and customer relationships, which are supported by long-term relationships with key customers. The Group has estimated that the customer relationships have an economic life of 15-20 years. Such methods require the use of estimates which may produce results that are different from actual future outcomes.

#### Impairment of intangible assets and goodwill

The Group tests annually whether goodwill has suffered any impairment. This process relies on the use of estimates of the future profitability and cash flows of its cash-generating units which may differ from the actual results delivered. In addition, the Group reviews whether identified intangible assets have suffered any impairment. Note 11 contains information about the assumptions relating to goodwill impairment tests, including a sensitivity analysis.

#### Specific adjusting items

Specific adjusting items are items of financial performance which the Group believes should be separately identified on the face of the consolidated income statement to assist in understanding the underlying financial performance achieved by the Group. Determining whether an item is part of specific adjusting items requires judgment and whether it meets the Group's definition as detailed in the accounting policy.

#### **Provisions**

Note 21 contains information about provisions. Provisions for closure and restructuring costs, environmental issues and settlement of litigation are judgmental by their nature. Amounts provided are the Group's best estimate of exposure based on currently available information.

#### Taxation

The level of current tax and deferred tax recognised is dependent on the tax rates in effect at the balance sheet date, and on subjective judgments as to the outcome of decisions to be made by the tax authorities in the various tax jurisdictions around the world in which the Group operates. Deferred tax assets are recognised based on management's assessment of the extent to which they are recoverable.

#### Credit risk

Note 19 contains information about the Group's exposure to credit risk, including a sensitivity analysis. The Group establishes both specific and general allowances for impairment losses against receivables. The general loss allowance is estimated based on historical data of payment statistics for similar financial assets.

#### Pension assumptions

The principal actuarial assumptions applied to pensions are shown in note 20, including a sensitivity analysis. The actuarial evaluation of pension assets and liabilities is based on assumptions in respect of inflation, future salary increases, discount rates, returns on investments and mortality rates. Relatively small changes in the assumptions underlying the actuarial valuations of pension schemes can have a significant impact on the net pension liability included in the balance sheet.

#### Going concern

The Group's business activities, together with the factors likely to affect its future development, performance and position are set out in the Strategic Report on pages 7 to 47. The financial position of the Group, its cash flows, liquidity position and borrowing facilities, are described earlier in the Financial review. In addition, note 19 includes the Group's policies and processes for managing financial risk; details of its financial instruments and hedging activities; and its exposures to credit risk and liquidity risk.

The Group meets its day-to-day working capital requirements through local banking arrangements underpinned by the Group's £200 million unsecured multi-currency revolving credit facility maturing October 2019. The Group's forecasts and projections, taking account of reasonably possible changes in trading performance and exchange rates, show the Group operating comfortably within its debt financial covenants for the next 12 months.

The current economic climate continues to have an impact on the Group, its customers and suppliers. The Board fully recognises the challenges that lie ahead but, after making enquiries, the Directors have a reasonable expectation that the Company and the Group have adequate resources to continue in operational existence for the foreseeable future. Accordingly, they continue to adopt the going concern basis in preparing the Annual Report and Accounts.

### I. ACCOUNTING POLICIES, ESTIMATES AND JUDGMENTS continued

#### Adoption of new and revised Standards

The Group did not adopt any new and revised Standards during the year ended 31 December 2015.

#### New standards and interpretations

A number of new standards, amendments to standards and interpretations have been issued but are not yet effective, and have not been applied in preparing the Group financial statements. Those which may be relevant to the Group are set out below. The Group has not applied these standards early and, with the exception of IFRS 15 *Revenue from Contracts with Customers*, does not expect the application of these standards to have a material impact on the Group's financial statements. The impact of IFRS 15 *Revenue from Contracts with Customers* is not currently known or reasonably estimable.

IFRS 15 *Revenue from Contracts with Customers* is effective for periods beginning on or after 1 January 2018 and introduces a new revenue recognition model that recognises revenue either at a point in time or over time. The model features a contract-based five-step analysis of transactions to determine whether, how much and when revenue is recognised.

IFRS 9 *Financial Instruments* is effective for periods beginning on or after 1 January 2018 and reduces the number of primary measurement categories for financial assets to two: amortised cost and fair value.

IFRS 16 Leases is effective for periods beginning on or after 1 January 2018 and introduces a single, on-balance sheet accounting model that is similar to current finance lease accounting. The impact of IFRS 16 Leases is not currently known or reasonably estimable.

These standards are effective for annual periods beginning on or after 1 January 2016.

#### 2. ACQUISITIONS AND DISPOSALS

There were no acquisitons made in 2015. On 30 January 2015, the Group disposed of its Thermal Ceramics business in Wissembourg, France. The assets and liabilities disposed of were classified as held for sale as at 31 December 2014, as described in note 6 in the Annual Report 2014.

	£m
Property, plant and equipment	2.5
Intangible assets	O.I
Inventories	1.9
Total assets classified as held for sale	4.5
Trade and other payables	0.6
Employee benefits	0.7
Total liabilities classified as held for sale	1.3
Net assets of disposal group	3.2
Deferred consideration	3.2

The Group incurred a  $\pounds$ 1.9 million loss of business exit costs and incurred a loss on the disposal of this business of  $\pounds$ 6.1 million in 2015. The Group also made a loan of  $\pounds$ 1.5 million to the purchasers of the Wissembourg business. This is shown in 'loan made to purchaser of business' in the consolidated statement of cash flows.

#### NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS continued

#### **3. SEGMENT REPORTING**

#### Accounting policies

The Group has identified three reportable operating segments. These have been identified on the basis of internal management reporting information that is regularly reviewed by the Group's Board of Directors (the Chief Operating Decision Maker) in order to allocate resources and assess performance.

Segment results, assets and liabilities include items directly attributable to a segment as well as those that can be allocated on a reasonable basis. Unallocated items comprise mainly investments and related income, loans and borrowings and related expenses, corporate assets and head office expenses, and income tax assets and liabilities.

The Group comprises the following three reportable operating segments: North America, Europe and Asia/Rest of World.

The information presented below represents the operating segments of the Group.

	North America		Europe		Asia/Rest of World		Consolidated	
	2015 £m	2014 <i>£</i> m	2015 £m	2014 £m	2015 £m	2014 <i>£</i> m	2015 £m	2014 Restated <sup>*</sup> £m
Revenue from external customers	368.4	353.I	305.7	325.7	237.7	242.9	911.8	921.7
Regional EBITA	51.5	52.5	35.8	39.8	27.5	31.2	114.8	123.5
Unallocated costs							(5.2)	(5.5)
Group EBITA <sup>2</sup>							109.6	118.0
Restructuring costs and other one-off items	(0.9)	(0.8)	(1.2)	(1.2)	(0.1)	(3.6)	(2.2)	(5.6)
Unallocated restructuring costs and other one-off items							(1.4)	_
Underlying operating profit <sup>3</sup>							106.0	112.4
Amortisation of intangible assets	(3.3)	(3.4)	(2.7)	(3.8)	(1.1)	(1.0)	(7.I)	(8.2)
Operating profit before specific adjusting items							98.9	104.2
Specific adjusting items included in operating profit <sup>4</sup>							(16.0)	(49.9)
Operating profit							82.9	54.3
Finance income							2.5	2.1
Finance expense							(20.6)	(22.9)
Loss on disposal of business							(6.I)	(2.0)
Share of profit of associate (net of income tax)							0.3	_
Profit before taxation							59.0	31.5
Segment assets	305.8	300.1	252.9	283.1	233.3	225.3	792.0	808.5
Unallocated assets							65.0	80.5
Total assets							857.0	889.0
Segment liabilities	106.5	108.9	212.1	217.1	56.4	53.2	375.0	379.2
Unallocated liabilities							295.6	322.1
Total liabilities							670.6	701.3
Segment capital expenditure	21.1	13.9	23.2	9.8	19.2	10.1	63.5	33.8
Total capital expenditure							63.5	33.8
Segment depreciation	11.5	.2	8.5	9.3	7.1	7.3	27.1	27.8
Total depreciation	11.5	11.2	0.5	7.0	7.1	1.5	27.1	27.8

1. Segment profit is defined as Regional EBITA, which is segment operating profit before restructuring costs, other one-off items and amortisation of intangible assets.

Group EBITA is defined as operating profit before specific adjusting items, restructuring costs, other one-off items and amortisation of intangible assets.

3. Underlying operating profit is defined as operating profit before specific adjusting items and amortisation of intangible assets.

4. Details of 'specific adjusting items' are given in note 6 to the financial statements

The above measures of profit are shown because the Directors use them to measure the underlying performance of the business, as referred to in the Strategic Report section of the Annual Report.

\* 2014 has been restated for the reclassification of current tax payable and deferred tax assets and liabilities, as detailed in note 13.

## 3. SEGMENT REPORTING continued

During the year ended 31 December 2015 the Group recognised impairment losses totalling  $\pounds$ 5.9 million in the North America reportable operating segment, which has been recognised in the 'Impairment of property, plant and equipment' line of the income statement, impairment losses totalling  $\pounds$ 5.8 million in the Europe reportable operating segment, which has been recognised in the 'Impairment of intangible assets' line of the income statement and impairment losses totalling  $\pounds$ 0.7 million in the Asia/Rest of World reportable operating segment, which has been recognised in 'restructuring costs' line of the income statement. See notes 6, 10 and 11 for further details.

During the year ended 31 December 2014 the Group recognised impairment losses totalling £28.6 million in the Europe reportable operating segment. Of this amount £26.9 million has been recognised in the 'Impairment of intangible assets' line of the income statement and £1.7 million has been recognised in the 'Business exit costs' line of the income statement (with a further £0.2 million of related disposal costs). See note 6 for further details.

In the year ended 31 December 2015, the Group incurred  $\pounds$ 1.5 million of restructuring costs in specific adjusting items in the Asia/Rest of World reportable operating segment. In the year ended 31 December 2014, the Group incurred  $\pounds$ 16.3 million of restructuring costs in specific adjusting items in the Europe reportable operating segment. See note 6 for further details.

	Revenue from ex	Revenue from external customers		sets (excluding Il instruments)
	2015 £m	2014 <i>£</i> m	2015 £m	2014 <i>£</i> m
USA	323.8	308.2	186.5	176.2
China	75.7	83.8	56.8	53.2
Germany	64.6	68.6	44.5	47.6
UK (the Group's country of domicile)	64.0	72.3	129.7	130.5
France	29.9	36.2	17.3	13.1
Other Asia, Australasia, Middle East and Africa	162.9	155.9	30.4	30.9
Other Europe	130.8	133.2	18.4	20.4
Other North America	32.2	31.8	5.4	6.3
South America	27.9	31.7	8.2	8.3
	911.8	921.7	497.2	486.5

Revenue from external customers is based on geographic location of the end-customer. Segment assets are based on geographical location of the assets. No customer represents greater than 10% of revenue.

#### Segment revenue by product

	2015	2014
	£m	£m
Industrial	398.3	412.1
Transportation	197.9	184.9
Petrochemical	79.5	89.4
Energy	61.7	65.5
Security and defence	58.6	64.8
Electronics	63.7	53.7
Healthcare	52.1	51.3
	911.8	921.7

#### Intercompany sales to other segments

	North Ai	merica	Euro	ope	Asia/Rest	of World
	2015 £m	2014 £m	2015 £m	2014 <i>£</i> m	2015 £m	2014 <i>£</i> m
Intercompany sales to other segments	30.1	26.6	17.8	19.0	10.3	9.4

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## 4. OPERATING COSTS BEFORE SPECIFIC ADJUSTING ITEMS

	2015 £m	2014 £m
Change in stocks of finished goods and work in progress	4.3	2.7
Raw materials and consumables	219.0	228.8
Other external charges	153.9	156.7
Total	377.2	388.2
Employee costs:		
Wages and salaries	237.6	235.4
Equity-settled share-based payments	1.4	1.7
Social security costs	46.4	44.3
Other pension costs	14.3	12.9
Total	299.7	294.3
		07.0
Depreciation	27.1	27.8
Rentals under operating leases:		
Hire of plant and machinery	3.4	2.8
Other operating leases	7.2	6.2
Total	10.6	9.0
Other operating charges and income:		
Net foreign exchange losses	0.1	0.9
Other operating income and charges	87.5	83.5
Total	87.6	84.4
Total operating costs before restructuring costs, other one-off items and amortisation of intangible assets	802.2	803.7
Restructuring costs and other one-off items:		
Employment termination costs	3.1	3.5
Write-off of assets	0.2	2.0
Other reorganisation, rationalisation and closure costs	0.8	0.4
Profit on disposal of properties	(0.5)	(0.3)
Total	3.6	5.6
	5.0	5.0
Amortisation of intangible assets	7.1	8.2
Total operating costs before specific adjusting items	812.9	817.5

There were no further employment termination costs recognised within specific adjusting items in the year ending 31 December 2015. In the year ending 31 December 2014 a further  $\pm$ 3.9 million of employment termination costs were recognised in restructuring costs within specific adjusting items.

The Group recognised £25.4 million in expense in respect of research and development (2014: £21.7 million).

A summary of the audit and non-audit fees in respect of services provided by the auditor charged to operating profit in the year ended 31 December 2015 is set out below:

	2015 £m	2014 £m
Fees payable to the Company's auditor for the audit of the Company's annual accounts	0.4	0.4
Fees payable to the Company's auditor and its associates for other services:		
The auditing of accounts of any subsidiaries of the Company	1.5	1.6
Audit-related services	-	_
Taxation compliance services	0.2	0.3
Other non-audit services	0.1	0.1
	2.2	2.4

## 5. STAFF NUMBERS

The average number of persons employed by the Group (including Directors) during the year, analysed by geographical area and reporting segment, was as follows:

	Number of e	nployees
	2015	2014
Reportable operating segments		
North America	3,310	3,209
Europe	2,770	2,894
Asia/Rest of World	2,868	2,928
Corporate	13	13
	8,961	9,044

## 6. SPECIFIC ADJUSTING ITEMS

#### Accounting policies

The Group separately presents specific adjusting items (non-underlying) in the consolidated income statement which, in the Directors' judgment, need to be disclosed separately by virtue of their size and incidence in order for users of the consolidated financial statements to obtain a proper understanding of the financial information and the underlying performance of the business. In the years ending 31 December 2015 and 31 December 2014 business exit costs, impairment of plant, property and equipment, transaction-related costs, settlement of prior period anti-trust litigation and impairment of intangible assets are included as specific adjusting items as they meet this criteria.

	2015 £m	2014 £m
Specific adjusting items:	Aut 11	LIII
Restructuring costs	1.5	16.3
Business exit costs	2.8	1.9
Impairment of property, plant and equipment	5.9	_
Transaction-related costs	-	1.2
Settlement of prior period anti-trust litigation	-	3.6
Impairment of intangible assets	5.8	26.9
Net loss on disposal of businesses	6.1	2.0
Total specific adjusting items before income tax credit	22.1	51.9
Income tax credit from specific adjusting items	(3.3)	(5.5)
Total specific adjusting items after income tax credit	18.8	46.4

## 2015

#### Restructuring costs

As reported in 2014, the strategic objective to drive the performance of the Electrical Carbon and Seals and Bearings businesses to mid-teen margins and beyond has resulted in the Group undertaking a significant rationalisation of the carbon material footprint. This started in 2014 with the downsizing of activities at the Swansea, UK site. This footprint rationalisation has continued in 2015 with the decision to and the announcement of the cessation of carbon material manufacturing at the Shanghai, China site. These operations will be consolidated into other Group locations, mainly the USA. This decision has resulted in a charge of £1.5 million in 2015, £0.7 million of which relates to the impairment loss on plant and equipment and the balance to site clean-up costs and other write-offs. £0.4 million is expected to be settled in cash in 2016. An income tax credit of £0.2 million was recognised in respect of these restructuring costs. The £0.7 million of impairment loss forms part of the total plant and equipment impairment loss of £6.6 million.

#### Business exit costs

The business exit costs in the year relate to the deconsolidation of Morgan Thermal Ceramics Sukhoy Log Limited Liability Company ('Sukhoy') and the subsequent remeasurement to fair value of the retained investment.

In April 2006 the Group acquired a 51% shareholding in Sukhoy, a fibre business based near Yekaterinburg, Russia. The results and assets of Sukhoy have previously been consolidated on the basis that the Group was satisfied that it exercised management control. During 2015 there has been a deterioration in the relationship between Morgan and the minority partner, exacerbated by the increasingly difficult market conditions in Russia. As a result, it became clear to the Group towards the end of 2015 that it no longer had effective control of the business and that it was no longer appropriate to consolidate. Based on the recent financial performance and the Group's view of the future prospects of the business it was concluded that the value of the Group's investment in Sukhoy is nil. As a result the Group has recognised a £2.8 million charge in business exit costs in the 2015 accounts.

#### 6. SPECIFIC ADJUSTING ITEMS continued

### Impairment of property, plant and equipment

The impairment of property, plant and equipment for the year ended 31 December 2015 is as a result of a review of the carrying value of assets that support the Group's North America vehicle and personal protection and high-temperature furnace-lining businesses. Both of these businesses saw significant growth and investment in previous years but more recently they have been in decline. The Group has compared its expected future cash flows from these businesses with the book value of the property, plant and equipment that is dedicated to them and determined that a total impairment charge of £5.9 million is required. An income tax credit of £2.1 million was recognised in respect of the impairment charge. The £5.9 million of impairment loss forms part of the total plant and equipment impairment loss of £6.6 million, as shown in note 10.

#### Impairment of intangible assets

As a result of the continued reduction in demand on C&DS from UK MoD, the review of the carrying value of the remaining intangible assets of C&DS resulted in a further impairment charge of £5.8 million, relating to a full impairment of the customer relationships. Following this impairment charge, the carrying value of the C&DS intangibles was £9.8 million, all in respect of technology and trademarks. This was supported by the current expectations of the future trading performance of the C&DS business. An income tax credit of £1.0 million was recognised in respect of the impairment charge. Refer to note 11 for more details of the impairment charge.

#### Net loss on disposal of business

As reported in the 2014 Annual Report and Accounts, on 30 January 2015 the Group completed the sale of a Thermal Ceramics business in Wissembourg, France. This business manufactures low-temperature fibre boards used mainly in the building industry. The Group has incurred a loss on the disposal of this business of £6.1 million in 2015, in addition to the £1.9 million of business exit costs recognised in the 2014 accounts.

#### 2014

#### Restructuring costs

As part of the strategic objective to drive the performance of the Electrical Carbon and Seals and Bearings businesses to mid-teen margins and beyond the Group is undertaking a significant rationalisation of the carbon material footprint. Specifically, the cessation of carbon material manufacturing and a number of other finishing operations at the Swansea, UK site. These operations are being consolidated into other Group locations, mainly the USA and Hungary. This has resulted in a charge of £16.3 million in 2014, which is predominantly in respect of property related provisions, redundancy costs and asset write-offs. An income tax credit of £1.2 million has been recognised in respect of these items.

#### **Business exit costs**

In January 2015 the Group completed the sale of a Thermal Ceramics business in Wissembourg, France. This business manufactures lowtemperature fibre boards used mainly in the building industry. The Group has incurred a £1.9 million loss on disposal of this business and has booked an impairment charge in 2014 to reflect this. An income tax credit of £0.2 million has been recognised in respect of this item.

The assets and liabilities that were intended to be disposed of were classified as held for sale at 31 December 2014 and were as follows:

	2014
	£m
Property, plant and equipment	2.5
Intangible assets	0.1
Inventories	1.9
Total assets classified as held for sale	4.5
Trade and other payables	0.6
Employee benefits	0.7
Total liabilities classified as held for sale	1.3
Net assets of disposal group	3.2

#### Transaction-related costs

Transaction-related costs consist of £0.6 million of adviser costs incurred in relation to dealing with the proposal made by Vesuvius plc to acquire the Group, £0.4 million of legal and due diligence fees on the purchase of Porextherm Dämmstoffe GmbH and £0.2 million of legal fees relating to the establishment of a new joint venture in China. An income tax credit of £0.1 million has been recognised in respect of these items.

#### Settlement of prior period anti-trust litigation

During the year the Group has fully and finally settled a number of the European Anti-Trust actions relating to pre-2000 cartel activity and has a provision adequate to cover the remaining claim and the related legal fees. The net charge to the income statement in the year in relation to this is £3.6 million.

## 6. SPECIFIC ADJUSTING ITEMS continued

## Impairment of intangible assets

As a result of the continued reduction in demand on C&DS from UK MoD, the review of the carrying value of the intangible assets and goodwill of C&DS has resulted in an impairment charge of  $\pounds$ 26.9 million. Following this impairment charge, the carrying value of the C&DS intangibles and goodwill is  $\pounds$ 17.2 million. This is supported by the current expectations of the future trading performance of the C&DS business. An income tax credit of  $\pounds$ 2.1 million has been recognised in respect of the impairment charge. Refer to note 11 for more details of the impairment charge.

#### Net loss on disposal of businesses

The net loss on disposal of businesses for the year ended 31 December 2014 consisted of two business disposals:

#### a) UK Fired Shapes business

On 3 April 2014 the Group sold its UK Fired Shapes business to Jemmtec Limited in exchange for a 35% shareholding in Jemmtec Limited, a fired ceramics shapes business. The profit recognised on disposal of the business was  $\pounds$ 1.3 million. Assets disposed of consisted of  $\pounds$ 0.9 million of property, plant and equipment,  $\pounds$ 0.8 million of inventory and  $\pounds$ 0.2 million of goodwill. Based on the management structure of Jemmtec Limited the Group has determined that it does not have control of Jemmtec Limited and is therefore accounting for its 35% shareholding in Jemmtec as an associate.

#### b) Morgan AM&T Hairong Co. Limited

On 20 June 2014 the Group disposed of the whole of the share capital of Morgan AM&T Hairong Co. Limited ('Hairong') for £0.3 million consideration. The loss recognised on disposal of this shareholding was  $\pounds$ 3.3 million. Prior to the acquisition the immediate parent company of Hairong was Morgan AM&T (Shanghai) Co., Ltd, in which the Group holds a 70% shareholding. The adjustment to the non-controlling interest component of equity due to this transaction was  $\pounds$ 1.2 million. An income tax credit of  $\pounds$ 1.9 million has been recognised in respect of this item.

## 7. NET FINANCE INCOME AND EXPENSE

#### Accounting policies

Net financing costs comprise interest payable on borrowings calculated using the effective interest rate method, interest receivable on funds invested, gains and losses on hedging instruments that are recognised in the income statement, net interest on IAS 19 pension assets and interest on IAS 19 obligations. Interest income is recognised in the income statement as it accrues, using the effective interest method.

Borrowing costs (interest and other costs) are capitalised when they are incurred on raising specific funds to finance a major capital project which will be a significant productive asset, or to the extent that funds borrowed generally are used for the purposes of obtaining a qualifying asset.

	2015 £m	2014 £m
Recognised in profit or loss		
Amounts derived from financial instruments	1.0	0.7
Interest income on bank deposits measured at amortised cost	1.5	1.4
Finance income	2.5	2.1
Interest expense on financial liabilities measured at amortised cost	(13.7)	(17.2)
Net interest on IAS 19 obligations	(6.9)	(5.7)
Finance expense	(20.6)	(22.9)
Net financing costs recognised in profit or loss	(18.1)	(20.8)
Recognised directly in equity		
Cash flow hedges:		
Effective portion of changes in fair value of cash flow hedges	(0.1)	_
Transferred to profit or loss	-	(0.1)
Effective portion of change in fair value of net investment hedge	2.0	7.9
Foreign currency translation differences for foreign operations	(5.0)	(6.6)
	(3.1)	1.2

## 8. TAXATION - INCOME TAX EXPENSE

#### Accounting policies

Income tax on the profit or loss for the year comprises current and deferred tax. Income tax is recognised in the income statement except to the extent that it relates to items recognised directly in OCI, in which case it is recognised in OCI.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the balance sheet date, and any adjustment to tax payable in respect of previous years.

Deferred tax is provided using the balance sheet liability method, providing for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. The following temporary differences are not provided for: the initial recognition of goodwill, the initial recognition of assets or liabilities that affect neither accounting nor taxable profit, and differences relating to investments in subsidiaries to the extent that they will probably not reverse in the foreseeable future. The amount of deferred tax provided is based on the expected manner of realisation or settlement of the carrying amount of assets and liabilities, using tax rates enacted or substantively enacted at the balance sheet date.

A deferred tax asset is recognised only to the extent that it is probable that future taxable profits will be available against which the asset can be utilised. Deferred tax assets are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

#### Taxation – income tax expense Recognised in the income statement

	2015 £m	2014 <i>£</i> m
Current tax expense		
Current year	22.2	23.6
Adjustments for prior years	(4.9)	(1.3)
	17.3	22.3
Deferred tax expense/(credit)		
Origination and reversal of temporary differences	3.6	(3.1)
Total income tax expense in income statement	20.9	19.2

#### Reconciliation of effective tax rate

	2015 £m	<b>2015</b> %	2014 <i>£</i> m	2014 %
Profit before tax	59.0		31.5	
Income tax using the domestic corporation tax rate	11.9	20.2	6.8	21.6
Non-deductible expenses	6.7	11.4	10.9	34.6
Temporary differences not equalised in deferred tax	(0.3)	(0.5)	(0.3)	(1.0)
Adjustments in respect of prior years	(3.0)	(5.1)	(0.8)	(2.5)
Recognition of previously unrecognised temporary differences	1.7	2.9	1.1	3.5
Other (including the impact of overseas tax rates)	3.9	6.6	1.5	4.8
	20.9	35.5	19.2	61.0
Income tax recognised directly in equity				
Tax effect on components of other comprehensive income:				
Deferred tax associated with defined benefit schemes and share schemes	0.9		(10.0)	
Total income tax recognised directly in equity	0.9		(10.0)	

The effective rate of tax before specific adjusting items is 29.8% (2014: 29.6%).

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## 9. EARNINGS PER SHARE

## Earnings per share from continuing operations

The calculation of basic/diluted earnings per share from continuing operations at 31 December 2015 was based on the following:

	2015		2014	
_	Basic £m	Diluted £m	Basic £m	Diluted £m
Profit attributable to equity holders of the Company from continuing operations	33.9	33.9	7.8	7.8
Weighted average number of Ordinary shares Issued Ordinary shares at the beginning of the period (millions)	285.4	285.4	285.4	285.4
Effect of shares held by The Morgan General Employee Benefit Trust (millions)	(0.3)	(0.3)	(0.3)	(0.3)
Dilutive effect of share options/incentive schemes (millions)	n/a	0.4	n/a	0.5
Basic/diluted weighted average number of Ordinary shares during the period (millions)	285.I	285.5	285.1	285.6
Earnings per share from continuing operations (pence)	11.9p	II.9p	2.7p	2.7p

#### Underlying earnings per share

The calculation of basic/diluted underlying earnings per share at 31 December 2015 was based on the following:

	2015		2014	
	Basic £m	Diluted £m	Basic £m	Diluted £m
Underlying operating profit and share of profit of associate before specific adjusting items and amortisation, less net financing costs, income tax expense and non-controlling interests	59.4	59.4	63.0	63.0
Basic/diluted weighted average number of Ordinary shares during the period – calculated as above (millions)	285.1	285.5	285.1	285.6
Earnings per share before specific adjusting items and amortisation of intangible assets (pence)	20.8p	20.8p	22.lp	22.lp

## **10. PROPERTY, PLANT AND EQUIPMENT**

## Accounting policies

(i) Owned assets

Items of property, plant and equipment are stated at cost, or at deemed cost, less accumulated depreciation (see below) and impairment losses. The cost of self-constructed assets includes the cost of materials, direct labour, and an appropriate proportion of production overheads.

Where parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items of property, plant and equipment.

Gains and losses on the disposal of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of the asset. Gains and losses on the disposal of property are recognised in 'Restructuring costs and other one-off items' in the income statement. Gains and losses on the disposal of plant and equipment are recognised in 'Operating costs before restructuring costs, other one-off items and amortisation of intangible assets' in the income statement.

#### (ii) Leased assets

Leases under the terms of which the Group assumes substantially all the risks and rewards of ownership are classified as finance leases. Leased assets acquired by way of a finance lease are stated at an amount equal to the lower of their fair value and the present value of the minimum lease payments at inception of the lease, less accumulated depreciation and impairment losses.

## (iii) Depreciation

Depreciation is charged to the income statement on a straight-line basis over the estimated useful lives of each part of an item of property, plant and equipment. Land is not depreciated. Depreciation methods, useful lives and residual values are reviewed at each balance sheet date. The estimated useful lives are as follows:

$\rightarrow$	Buildings	50 years
$\rightarrow$	Plant and equipment and fixtures	3-20 years

## 10. PROPERTY, PLANT AND EQUIPMENT continued

Property, plant and equipment

	Land and buildings £m	Plant and equipment and fixtures £m	Total £m
Cost			
Balance at 1 January 2014	155.5	527.6	683.I
Additions	5.5	26.3	31.8
Acquisition of subsidiary	0.1	2.	12.2
Disposals	(0.4)	(15.5)	(15.9)
Transfer to assets classified as held for sale	(7.0)	(11.3)	(18.3)
Effect of movement in foreign exchange	0.3	5.7	6.0
Balance at 31 December 2014	154.0	544.9	698.9
Balance at 1 January 2015	154.0	544.9	698.9
Additions	18.6	39.4	58.0
Disposals	(3.7)	(14.3)	(18.0)
Effect of movement in foreign exchange	0.4	5.9	6.3
Balance at 31 December 2015	169.3	575.9	745.2
Depreciation and impairment losses			
Balance at 1 January 2014	57.6	384.1	441.7
Depreciation charge for the year	4.7	23.1	27.8
Acquisition of subsidiary	_	6.5	6.5
Impairment loss	1.7	1.4	3.1
Disposals	(0.5)	(11.4)	(11.9)
Transfer to assets classified as held for sale	(3.4)	(10.7)	(14.1)
Effect of movement in foreign exchange	0.8	4.0	4.8
Balance at 31 December 2014	60.9	397.0	457.9
Balance at 1 January 2015	60.9	397.0	457.9
Depreciation charge for the year	4.7	22.4	27.1
Impairment loss	7.4	6.6	14.0
Disposals	(2.3)	(13.4)	(15.7)
Effect of movement in foreign exchange	0.8	4.4	5.2
Balance at 31 December 2015	71.5	417.0	488.5
Balance at 51 December 2015	/1.5	117.0	400.5
Carrying amounts		1.10 5	
At I January 2014	97.9	143.5	241.4
At 31 December 2014	93.1	147.9	241.0
At 3I December 2015	97.8	158.9	256.7

## 10. PROPERTY, PLANT AND EQUIPMENT continued

## Assets pledged as security for liabilities

At 31 December 2015 no assets (2014: £nil) are subject to registered debentures to secure bank loans and other liabilities (see note 18). There were no borrowings drawn on these debentures (2014: £nil).

In March 2015, Morgan acquired the freehold of the Morgan Electrical Carbon site in Swansea, UK. The site was being occupied on a long lease and due to the downsizing of operations on the site and the desire to consolidate the remaining footprint Morgan decided to purchase the site, make the required site changes and then look to sell the freehold of the site. The terms of the agreement to acquire the site had been agreed and committed to at the time of signing the financial statements for the year ended 31 December 2014 and a provision was recorded, in Closure and Restructuring Provisions, to reflect the difference between the purchase price and the expected on-sale of the site value. With the actual purchase of the site taking place in 2015, the cost of the freehold has been recorded as an addition to Land and buildings and an impairment loss recorded to bring the value down to the expected net realisable value, with the offsetting release from the provision.

During the year ended 31 December 2015 the Group recognised impairment losses in relation to Plant and equipment and fixtures totalling £5.9 million in the North America reportable operating segment, which has been recognised in the 'Impairment of property, plant and equipment' line of the income statement, and impairment losses totalling £0.7 million in the Asia/Rest of World reportable operating segment, which has been recognised in 'restructuring costs' line of the income statement. See note 6 for further details.

## **II. INTANGIBLE ASSETS**

# Accounting policies

## (i) Goodwill

All business combinations are accounted for by applying the purchase method. Goodwill represents the difference between the cost of the acquisition and the fair value of assets, liabilities and contingent liabilities acquired.

Goodwill is allocated to cash-generating units and is tested annually for impairment.

#### (ii) Research and development

Expenditure on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, is recognised in the income statement as an expense as incurred.

Expenditure on development activities, whereby research findings are applied to a plan or design for the production of new or substantially improved products and processes, is capitalised if the product or process is technically and commercially feasible and the Group has sufficient resources to complete development, use and sale of products or processes. The expenditure capitalised includes the cost of materials, direct labour and an appropriate proportion of overheads. Capitalised development expenditure is stated at cost less accumulated amortisation (see below) and impairment losses. Other development expenditure is recognised in the income statement as an expense as incurred.

#### (iii) Other intangible assets

Other intangible assets that are acquired by the Group are stated at cost less accumulated amortisation (see below) and impairment losses.

#### (iv) Amortisation

Amortisation is charged to the income statement on a straight-line basis over the estimated useful lives of intangible assets unless such lives are indefinite. Goodwill and intangible assets with an indefinite useful life are systematically tested for impairment at each balance sheet date. Other intangible assets are amortised from the date they are available for use. The estimated useful lives are as follows:

- $\rightarrow$  Capitalised development costs 3 years
- $\rightarrow$  Computer software 3-10 years 15-20 years
- $\rightarrow$  Customer relationships
- $\rightarrow$  Technology and trademarks 15-20 years
- → Order book Amortised over the period in which the associated orders are fulfilled

continued

## **II. INTANGIBLE ASSETS** continued

Intangible assets

	Goodwill £m	Order book £m	Customer relationships £m	Technology and trademarks £m	Capitalised development costs £m	Computer software £m	Total £m
Cost							
Balance at 1 January 2014	185.2	_	73.9	22.6	0.6	16.0	298.3
Additions (externally purchased)	6.8	0.2	3.2	3.5	_	4.2	17.9
Disposals	(1.8)	_	(0.4)	(3.0)	_	(4.1)	(9.3)
Effect of movement in foreign exchange	1.7	_	2.0	_	_	_	3.7
Balance at 31 December 2014	191.9	0.2	78.7	23.1	0.6	16.1	310.6
Balance at 1 January 2015	191.9	0.2	78.7	23.1	0.6	[6,]	310.6
Additions (externally purchased)			-		_	4.6	4.6
Disposals	_	_	(2.1)	(1.6)	_	(0.8)	(4.5)
Effect of movement in foreign exchange	1.7	_	2.1	(0.2)	_	0.1	3.7
Balance at 31 December 2015	193.6	0.2	78.7	21.3	0.6	20.0	314.4
				2	0.0	2010	
Amortisation and impairment losses							
Balance at 1 January 2014	1.6	_	25.0	9.8	0.6	11.8	48.8
Amortisation charge for the year	_	0.2	4.2	1.4	_	2.4	8.2
Impairment losses for the year	16.4	_	10.5	_	_	_	26.9
Disposals	(1.7)	_	(0.4)	(3.0)	_	(4.2)	(9.3)
Effect of movement in foreign exchange	0.1	_	0.7	_	_	(0.1)	0.7
Balance at 31 December 2014	16.4	0.2	40.0	8.2	0.6	9.9	75.3
Balance at 1 January 2015	16.4	0.2	40.0	8.2	0.6	9.9	75.3
Amortisation charge for the year		0.2	3.7	1.7	0.0	1.7	7.1
Impairment losses for the year		_	5.8	-	_	-	5.8
Disposals		_	(2.0)		_	(0.8)	(4.3)
Effects of movement in foreign exchange		_	0.7	- (1.5)	_	(0.0)	0.7
Balance at 31 December 2015	16.4	0.2	48.2	8.4	0.6	10.8	84.6
Balance at 51 December 2015	10.1	0.2	70.2	0.7	0.0	10.0	04.0
Carrying amounts							
At I January 2014	183.6	_	48.9	12.8	_	4.2	249.5
At 31 December 2014	175.5	_	38.7	14.9		6.2	235.3
At 3I December 2015	177.2	_	30.5	12.9	_	9.2	229.8

## Impairment test for cash-generating units containing goodwill

In accordance with the requirements of IAS 36 *Impairment of* Assets, goodwill is allocated to the Group's cash-generating units that are expected to benefit from the synergies of the business combination that gave rise to the goodwill.

Goodwill is attributed to each cash-generating unit as follows:

	2015 £m	2014 <i>£</i> m
North America	77.9	77.3
Europe	53.8	53.7
Asia/Rest of World	45.5	44.5
C&DS	-	-
	177.2	175.5

Each cash-generating unit is assessed for impairment annually and whenever there is an indication of impairment.

## II. INTANGIBLE ASSETS continued

As part of the annual impairment test review the carrying value of goodwill has been assessed with reference to its value in use, reflecting the projected discounted cash flows of each cash-generating unit to which goodwill has been allocated.

The key assumptions used in determining value in use relate to growth rates and discount rates.

The cash flow projections in year one are based on budgeted operating cash flow projections in year one. The key assumptions that underpin these cash flow projections relate to sales and operating margins, which are based on past experience, taking into account the effect of known or likely changes in market or operating conditions.

Growth rates for the period not covered by budgets are specific to each cash-generating unit, ranging from 1.6% to 5.5% (2014: 1.5% to 5.5%). The growth rates are also used to calculated a terminal value. These growth rates reflect the products, industries and countries in which the operating segments operate. These medium- to long-term growth rates have been reviewed by management during 2015 and are considered to be appropriate.

In 2015, the Group has used the following pre-tax discount rates for calculating the terminal value of each of the cash-generating units: North America: 14.9%, Europe: 12.6%, Asia/Rest of World: 14.1%, Composites and Defence Systems: 12.0% (2014: 15.0%, 12.0%, 14.8%, 14.0%). These discount rates have been used as the Group believes they suitably approximate the rates used by end-market participants.

The Directors have considered the following individual sensitivities and are confident that no impairment would arise for each of the North America, Europe and Asia/Rest of World cash-generating units in any of the following three circumstances:

- $\rightarrow$  if the pre-tax discount rate was increased to 28% (2014: 30%); or
- ightarrow if no growth was assumed for years two to five and in the calculation of terminal value; or
- $\rightarrow$  if the cash flow projections of all businesses were reduced by 25% (2014: 25%).

As a result of the continued reduction in demand from UK MoD, the review of the carrying value of the remaining intangible assets of C&DS resulted in a further impairment charge of £5.8 million with a recoverable amount of nil at the end of the year (2014: £5.8 million), resulting in a full impairment of the customer relationship. The recoverable amount is considered to be the value-in-use and the discount rate used in management's review in the year was 12.0% (2014: 14.0%). The asset was previously reported under the Europe cash generating unit. Further details are given in note 6.

During the year ended 31 December 2014 the Group recognised an impairment loss of  $\pm$ 16.4 million on goodwill and  $\pm$ 10.5 million on customer relationships in relation to C&DS cash-generating unit. The Group also disposed of  $\pm$ 1.7 million of goodwill,  $\pm$ 0.4 million of customer relationships and  $\pm$ 3.0 million of technology and trademarks as part of the disposal of Morgan AM&T Hairong Ltd during the year ended 31 December 2014. All of these had nil net book value at the date of disposal.

For the year ended 31 December 2014, additions to goodwill, order book, customer relationships, technology and trademarks were from the acquisition of Porextherm Dämmstoffe GmbH.

## **12. INVESTMENTS**

## Accounting policies

#### Investments in debt and equity securities

Investments in debt and equity securities held by the Group are classified as being available-for-sale and are stated at fair value, with any resultant gain or loss being recognised directly in OCI (in the fair value reserve), except for impairment losses and, in the case of monetary items such as debt securities, foreign exchange gains and losses. When these investments are derecognised, the cumulative gain or loss previously recognised directly in equity is recognised in profit or loss. Where these investments are interest-bearing, interest calculated using the effective interest method is recognised in profit or loss.

	2015 £m	2014 <i>£</i> m
Non-current investments		
Equity securities available-for-sale	0.5	1.6
Investment in associates	4.9	4.6
	5.4	6.2

#### Equity securities available-for-sale

The equity securities available-for-sale represent an investment in a mutual fund. A 10% increase in the unit price would increase the fair value of the investments by £nil (2014: £0.1 million).

continued

## 12. INVESTMENTS continued

## Investment in associates

Details of the Group's material associate at the end of the reporting period are as follows:

		Place of incorporation and	Proportion of owner voting rights held by	
Name of associate	Principal activity	principal place of business	2015	2014
Jemmtec Limited	Manufacture of fired refractory shapes	United Kingdom	35%	35%

The above associate has been accounted for using the equity method in these consolidated financial statements.

The Group did not receive dividends from any of its associates during 2015 and 2014.

Summarised financial information in respect of the Group's material associate is set out below. The summarised financial information below has been prepared in accordance with IFRSs (adjusted by the Group for equity accounting purposes).

	Jemmte	c Limited
	2015 £m	2014 <i>£</i> m
Current assets	6.1	7.6
Non-current assets	10.0	9.7
Current liabiliites	2.7	5.4
Non-current liabilities	2.7	2.1
Revenue	12.5	10.5
Profit/(loss) from continuing operations	0.9	(0.1)

Reconciliation of the above summarised financial information to the carrying amount of the interest recognised in the Group's consolidated financial statements:

	Jemmtec	Limited
	2015 £m	2014 £m
Net assets of associate	10.7	9.8
Proportion of the Group's ownership interest in the associate	3.7	3.4
Goodwill	0.2	0.2
Carrying amount of the Group's interest in the associate	3.9	3.6

The aggregate of the Group's share of profit and total comprehensive income for associates that are not individually material was  $\pounds$ nil (2014:  $\pounds$ nil). The carrying value included in investment in associates in relation to associates that are not individually material was  $\pounds$ 1 million (2014:  $\pounds$ 1 million).

## 13. RECOGNISED DEFERRED TAX ASSETS AND LIABILITIES

Deferred tax assets and liabilities are attributable to the following:

	Assets 2015 £m	Assets 2014 Restated <sup>*</sup> £m	Liabilities 2015 £m	Liabilities 2014 Restated <sup>*</sup> £m	Net 2015 £m	Net 2014 Restated <sup>*</sup> £m
Property, plant and equipment	-	_	(18.0)	(17.6)	(18.0)	(17.6)
Intangible assets	-	_	(13.9)	(15.8)	(13.9)	(15.8)
Employee benefits	26.6	29.4	-	_	26.6	29.4
Provisions	5.5	7.6	-	—	5.5	7.6
Tax value of loss carried forward recognised	0.9	1.0	-	_	0.9	1.0
Other items	1.0	1.5	-	_	1.0	1.5
Offset	(29.6)	(31.0)	29.6	31.0	_	_
	4.4	8.5	(2.3)	(2.4)	2.1	6.1

\* Following a review of the presentation of tax balances the prior year deferred tax asset and liability balances have been re-presented to reflect management's view of a more likely basis for recovery of the assets and settlement of the liabilities. The re-presentation results in a decrease of the prior year deferred tax asset of £31.0 million and an equal decrease to the prior year deferred tax liability. Therefore there is no effect on the prior year net asset position.

## 13. RECOGNISED DEFERRED TAX ASSETS AND LIABILITIES continued

## Unrecognised deferred tax assets

Deferred tax assets have not been recognised in respect of the following items:

	2015 £m	2014 <i>£</i> m
Deductible temporary differences	147.7	147.2
Tax losses	102.7	107.2
Capital losses	79.0	82.0
	329.4	336.4

Deferred tax assets have not been recognised in relation to these temporary differences due to uncertainty surrounding future utilisation.

#### Movements in temporary differences during the year

	Balance 31 December 2013 £m	On acquisition £m	Recognised in income £m	Recognised directly in equity £m	Balance 31 December 2014 £m	Recognised in income £m	Recognised directly in equity £m	Balance 3I December 2015 £m
Property, plant and	(1(-2))		(1, 2)					(10.0)
equipment	(16.3)	—	(1.3)	—	(17.6)	(0.4)	-	(18.0)
Intangible assets	(16.3)	(1.7)	2.2	-	(15.8)	1.9	-	(13.9)
Employee benefits	22.5	—	(3.1)	10.0	29.4	(1.9)	(0.9)	26.6
Provisions	5.1	_	2.5	-	7.6	(2.1)	-	5.5
Tax value of loss carried								
forward recognised	0.6	—	0.4	—	1.0	(0.1)	-	0.9
Others	(0.9)	_	2.4	-	1.5	(1.0)	0.5	1.0
	(5.3)	(1.7)	3.1	10.0	6.1	(3.6)	(0.4)	2.1

Deferred income tax of  $\pounds 2.5$  million is provided on the potential unremitted earnings of overseas subsidiary undertakings.

# **14. INVENTORIES**

#### Accounting policies

Inventories are stated at the lower of cost and net realisable value. Net realisable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and selling expenses.

The cost of inventories is based on the first-in-first-out principle and includes expenditure incurred in acquiring the inventories and bringing them to their existing location and condition. In the case of manufactured inventories and work in progress, cost includes an appropriate share of overheads based on normal operating capacity.

#### Inventories

	2015 £m	2014 £m
Raw materials and consumables	37.0	35.0
Work in progress	36.4	39.5
Finished goods	55.8	52.1
	129.2	126.6

The Group holds consignment inventory amounting to  $\pm$ 13.7 million (2014:  $\pm$ 17.2 million) which is not reflected in the balance sheet. The majority of this balance is for precious metals, which are held on consignment by a subsidiary and for which it is invoiced only when the material is required.

During the year provisions of  $\pounds$ 3.3 million were made against inventories and recognised in operating costs (2014:  $\pounds$ 3.2 million) and  $\pounds$ 0.2 million (2014:  $\pounds$ 0.4 million) has been recognised in business exit costs within specific adjusting items (see note 6).

## **15. TRADE AND OTHER RECEIVABLES**

#### Accounting policies

Trade and other receivables are initially stated at their fair value and subsequently measured at amortised cost less impairment losses.

#### Trade and other receivables

	2015 £m	2014 £m
Current		
Trade receivables due from associate	1.3	2.1
Other trade receivables	154.6	168.4
Trade receivables	155.9	170.5
Loan made to associate	1.8	1.5
Other non-trade receivables and prepayments	16.7	21.9
	174.4	193.9

The Group's exposure to credit and currency risks related to trade and other receivables is disclosed in note 19.

## **16. CASH AND CASH EQUIVALENTS**

#### Accounting policies

Cash and cash equivalents comprise cash balances and call deposits. Short-term deposits include demand deposits and short-term highly liquid investments with maturities of three months or less that are readily convertible to known amounts of cash and are subject to an insignificant risk of changes in value. Bank overdrafts that are repayable on demand and form an integral part of the Group's cash management are included as a component of cash and cash equivalents for the purpose of the Group statement of cash flows.

#### Cash and cash equivalents

	2015 £m	2014 £m
Bank balances	38.8	49.1
Cash deposits	11.0	13.9
Cash and cash equivalents	49.8	63.0

## Reconciliation of cash and cash equivalents to net debt\*

	2015 £m	2014 £m
Opening borrowings	(270.0)	(262.5)
Net decrease in borrowings	8.5	1.2
Payment of finance lease liabilities	0.2	0.1
Finance leases acquired as part of acquisition of subsidiary	-	(1.2)
Effect of movements in foreign exchange on borrowings	(4.5)	(7.6)
Closing borrowings	(265.8)	(270.0)
Cash and cash equivalents	49.8	63.0
Closing net debt	(216.0)	(207.0)

\* Net debt is defined as interest-bearing loans and borrowings and bank overdrafts less cash and cash equivalents.

## **17. CAPITAL AND RESERVES**

## Accounting policies

(i) Ordinary share capital Ordinary shares are classified as equity.

#### (ii) Preference share capital

Preference share capital is classified as equity if it is non-redeemable and any dividends are discretionary, or is redeemable but only at the Company's option. Dividends on Preference share capital classified as equity are recognised as distributions within equity.

#### (iii) Repurchase of share capital and own shares held by The Morgan General Employee Benefit Trust ('the Trust')

When share capital recognised as equity is repurchased, the amount of the consideration paid, which includes directly attributable costs, is net of any tax effects, and is recognised as a deduction from equity. Repurchased shares and the purchase of own shares by the Trust are presented as a deduction from total equity.

#### Translation reserve

The translation reserve comprises all foreign exchange differences arising from the translation of the financial statements of foreign operations, as well as from the translation of liabilities that hedge the Company's net investment in a foreign subsidiary and forward contracts used for net investment hedging.

#### Hedging reserve

The hedging reserve comprises the effective portion of the cumulative net change in the fair value of cash flow hedging instruments related to hedged transactions that have not yet occurred.

#### Fair value reserve

The fair value reserve includes the cumulative net change in the fair value of available-for-sale investments until the investment is derecognised.

#### Special reserve

A Special Resolution to cancel the Share Premium Account was passed at the Annual General Meeting of the Company held on 11 June 1993. This cancellation was confirmed by an Order of the High Court of Justice, Chancery Division, on 14 July 1993. The amount of £88.9 million standing to the credit of the Share Premium Account on 14 July 1993 was transferred to the special reserve against which goodwill on consolidation could be written off. This reserve, together with the amounts standing to the credit of the Share Premium Account on 12 October 1990 of £71.5 million, on 19 June 1987 of £38.9 million and on 27 July 1989 of £12.3 million which were transferred following previous Orders of the High Court, becomes distributable to the extent of subsequent increases in issued share capital and share premium account, which has since occurred.

#### Capital redemption reserve

The capital redemption reserve arose when the Company redeemed Preference shares wholly out of distributable profits.

#### Other reserves

The other reserves include the  $\pounds$ 10.8 million increase in the year ended 3 January 2010 in the fair value of the Group's original 49% interest in Clearpower Limited from the date of its original acquisition to 5 January 2009 excluding goodwill and to the extent not previously recognised as the Group's share of the results of Clearpower Limited.

#### **Retained earnings**

The Company has acquired own shares to satisfy the requirements of the various share option incentive schemes. At 31 December 2015 706,952 shares were held by The Morgan General Employee Benefit Trust and are treated as a deduction from equity (2014: 375,203). Nil treasury shares were held by the Company (2014: nil). All rights conferred by those shares are suspended until they are reissued.

continued

## 17. CAPITAL AND RESERVES continued

## Dividends

The following Ordinary dividends were declared and paid by the Company:

	Pers	Per share		Total	
	2015 Pence	2014 Pence	2015 £m	2014 <i>£</i> m	
2013 final	-	6.70	-	19.1	
2014 interim	-	3.90	-	11.1	
2014 final	7.00	_	20.0	_	
2015 interim	4.00	_	11.4	_	
Total	11.00	10.60	31.4	30.2	

In addition to the above, the Company also declared and paid dividends on the 5.5% Cumulative First Preference shares and 5.0% Cumulative Second Preference shares.

After 31 December 2015 the following dividends were proposed by the Directors for 2015. These dividends have not been provided for and there are no income tax consequences.

	£m
7.0 pence per qualifying Ordinary share	20.0
5.5% Cumulative First Preference shares	_
5.0% Cumulative Second Preference shares	_
	20.0

The proposed 2015 final dividend is based upon the number of shares outstanding at the balance sheet date.

## Called-up share capital

	2015 £m	2014 <i>£</i> m
Equity share capital		
Fully paid: 285,369,988 (2014: 285,369,988) issued Ordinary shares of 25 pence each	71.4	71.4
	71.4	71.4
Preference share capital		
125,327 issued 5.5% Cumulative First Preference shares of £1 each, fully paid	0.1	0.1
311,954 issued 5.0% Cumulative Second Preference shares of £1 each, fully paid	0.3	0.3
Total Preference share capital	0.4	0.4
Total share capital	71.8	71.8

## Number of shares in issue

	Ordinary shares		Preference shares	
	2015	2014	2015	2014
In issue at beginning and end of period	285,369,988	285,369,988	437,281	437,281

As at the date of this report 285,369,988 Ordinary shares have been issued (2014: 285,369,988).

The holders of Ordinary shares are entitled to receive dividends as declared from time to time and are entitled to one vote per share at meetings of the Company.

Details of options outstanding in respect of Ordinary shares are given in note 20.

The 5.5% Cumulative First Preference shares of  $\pounds$ I each and the 5.0% Cumulative Second Preference shares of  $\pounds$ I each confer on the holders thereof the right to receive a cumulative preferential dividend at the rate of 5.5% and 5.0% respectively, calculated up to 30 June and 31 December respectively in every year. The First and Second Cumulative Preference shares shall not entitle the holders thereof to attend or vote at any general meeting unless either:

## 17. CAPITAL AND RESERVES continued

- (i) the meeting is convened to consider any resolutions for reducing the capital, or authorising any issue of debentures or debenture stock, or increasing the borrowing powers of the Board under the Articles of Association of the Company, or winding up, or sanctioning a sale of the undertaking, or altering the Articles in any manner affecting their respective interests, or any other resolutions directly altering their respective rights and privileges; or
- (ii) at the date of the notice convening the general meeting the Preference dividend is upwards of one month in arrears from the payment date of any half-yearly instalment.

On a return of capital on a winding-up the assets of the Company available for distribution shall be applied:

First, in payment to the holders of the First Preference shares of the amounts paid up on such shares, together with interest at the rate of 5.5% pa.

Second, in payment to the holders of the Second Preference shares of the amounts paid up on such shares, together with interest at the rate of 5.0% pa.

Third, in repaying the capital paid up or credited as paid up on the Ordinary shares.

Fourth, any surplus shall be distributed rateably amongst the holders of the Ordinary shares in proportion to the nominal amount paid up on their respective holdings of shares in the Company.

## **18. INTEREST-BEARING LOANS AND BORROWINGS**

This note provides information about the contractual terms of the Group's interest-bearing loans and borrowings which are measured at amortised cost. For more information about the Group's exposure to interest rate and foreign currency risk, see note 19.

#### Accounting policies

#### Interest-bearing loans and borrowings

Interest-bearing loans and borrowings are recognised initially at fair value less attributable transaction costs. Subsequent to initial recognition, interest-bearing loans and borrowings are stated at amortised cost with any difference between cost and redemption value being recognised in the income statement over the period of the borrowings on an effective interest basis.

#### Finance lease payments

Leases where the Group assumes substantially all of the risks and rewards of ownership are classified as finance leases as if the asset had been purchased outright. Assets acquired under finance leases are recognised as assets of the Group and the capital elements of the leasing commitments are shown as obligations in creditors. Depreciation is charged on a basis consistent with similar owned assets or over the lease term if shorter. Minimum lease payments are apportioned between the finance charge and the reduction of the outstanding liability. The finance charge is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

#### Borrowing facilities and liquidity

All of the Group's borrowing facilities are arranged by Group Treasury with Morgan Advanced Materials plc as the principal obligor. In a few cases operating subsidiaries have external borrowings but these are supervised and controlled centrally. Group Treasury seeks to obtain certainty of access to funding in the amounts, diversity of maturities and diversity of counterparties as required to support the Group's medium-term financing requirements and to minimise the impact of poor credit market conditions.

#### Interest-bearing loans, borrowings and overdrafts

	2015 £m	
Non-current liabilities		
Senior Notes	184.6	176.1
Bank and other loans	72.2	55.8
Obligations under finance leases	0.6	1.0
	257.4	232.9
Current liabilities		
Senior Notes	-	31.3
Bank and other loans	8.0	5.5
Obligations under finance leases	0.4	0.3
	8.4	37.1

## 18. INTEREST-BEARING LOANS AND BORROWINGS continued

#### Terms and debt repayment schedule

The terms and conditions of outstanding loans are given in note 19 in the Liquidity risk section.

#### Finance lease liabilities

Finance lease liabilities are payable as follows:

	Minimum lease payments 2015 £m	Interest 2015 £m	Principal 2015 £m	Minimum lease payments 2014 £m	Interest 2014 £m	Principal 2014 £m
Less than one year	0.4	-	0.4	0.3	_	0.3
Between one and five years	0.7	0.1	0.6	1.1	0.1	1.0
More than five years	-	-	-	—	_	-
	1.1	0.1	1.0	1.4	0.1	1.3

Bank and other loans did not include any loans secured on the assets of the Group (2014: £nil).

As at 31 December 2015 the Group had available headroom under the bank syndication of £128.0 million (2014: £146.6 million).

#### **19. FINANCIAL RISK MANAGEMENT**

This note presents information about the Group's exposure to a variety of financial risks: credit risk, liquidity risk and market risk, and the Group's management of capital. Further quantitative disclosures are included throughout these consolidated financial statements.

#### Accounting policies

#### Classification of financial instruments issued by the Group

Financial instruments issued by the Group are treated as equity (ie forming part of shareholders' funds) only to the extent that they meet the following two conditions:

- (i) they include no contractual obligations upon the Group to deliver cash or other financial assets or to exchange financial assets or financial liabilities with another party under conditions that are potentially unfavourable to the Group; and
- (ii) where the instrument will or may be settled in the Company's own equity instruments, it is either a non-derivative that includes no obligation to deliver a variable number of the Company's own equity instruments or is a derivative that will be settled by the Company exchanging a fixed amount of cash or other financial assets for a fixed number of its own equity instruments.

To the extent that this definition is not met the proceeds of issue are classified as a financial liability. Where the instrument so classified takes the legal form of the Company's own shares, the amounts presented in these financial statements for called-up share capital and share premium account exclude amounts in relation to those shares.

Finance payments associated with financial liabilities are dealt with as part of finance expenses. Finance payments associated with financial instruments that are classified in equity are dividends and are recorded directly in equity.

#### Financial Risk Management and Treasury policy

Group Treasury works within a framework of policies and procedures approved by the Audit Committee. It acts as a service to Morgan Advanced Materials' businesses, not as a profit centre, and manages and controls risk in the treasury environment through the establishment of such procedures. Group Treasury seeks to align treasury goals, objectives and philosophy to those of the Group. It is responsible for all of the Group's funding, liquidity, cash management, interest rate risk, foreign exchange risk and other treasury business. As part of the policies and procedures, there is strict control over the use of financial instruments to hedge foreign currencies and interest rates. Speculative trading in derivatives and other financial instruments is not permitted.

#### 19. FINANCIAL RISK MANAGEMENT continued Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations. The Group is exposed to credit risk on financial instruments such as liquid assets, derivative assets and trade receivables.

The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk at the reporting date was:

	Carrying a	mount
	2015 £m	2014 <i>£</i> m
Available-for-sale financial assets	0.5	1.6
Trade and other receivables	155.9	170.5
Cash and cash equivalents	49.8	63.0
Derivatives	2.0	6.0
	208.2	241.1

#### Available-for-sale financial assets

The Group limits its exposure to credit risk by only investing in liquid securities and only with counterparties that have a sound credit rating. Given these high credit ratings, management does not expect any counterparty to fail to meet its obligations.

#### Trade and other receivables

The Group's exposure to credit risk is influenced mainly by the individual characteristics of each customer. The demographics of the Group's customer base, including the default risk of the industries and countries in which customers operate, has less influence on credit risk.

Management has a credit policy in place and the exposure to credit risk is monitored on an ongoing basis. Credit evaluations are performed on all customers requiring credit over a certain amount. The Group does not require collateral in respect of financial assets.

The Group serves thousands of customers. Many of these have purchased the same product for several years and in some cases decades. Others have modified and enhanced designs or adopted the same components into new products, extending the lifecycle of the components that the Group supplies. The Group's level of customer retention is very high, particularly with its major accounts, and, although the top 20 ranking will alter from year to year, many of the names remain consistent over time.

The Group establishes an allowance for impairment that represents its estimate of incurred losses in respect of trade and other receivables and investments.

The ageing of trade receivables at the reporting date was:

	Gross 2015 £m	Impairment 2015 £m	Gross 2014 £m	Impairment 2014 £m
Not past due	122.4	(0.6)	134.6	(0.2)
Past due 0-30 days	20.9	(0.3)	19.5	(0.1)
Past due 31-60 days	5.1	(0.1)	6.7	(0.2)
Past due 61-90 days	5.0	(2.4)	12.0	(3.5)
Past due more than 90 days	15.9	(10.0)	9.9	(8.2)
	169.3	(13.4)	182.7	(12.2)

The only movement in the allowance for impairment in respect of trade receivables was an increase of £1.2 million (2014: decrease of £0.9 million).

A specific impairment allowance may be created in respect of an individual trade receivable for which full recovery is doubtful. As at 31 December 2015 and 31 December 2014 there were no specific impairment allowances that were significant to the Group.

The allowances in the accounts in respect of trade receivables are used to record impairment losses unless the Group is satisfied that no recovery of the amount owing is possible; at the point the amount is considered irrecoverable it is written off against the financial asset directly.

#### Cash, cash equivalents and derivatives

Cash balances held by companies representing over 75% of the Group's revenue are managed centrally through a number of pooling arrangements. Credit risk is managed by investing liquid assets and acquiring derivatives in a diversified way from high-credit-quality financial institutions. Counterparties are reviewed through the use of rating agencies, systemic risk considerations and through regular review of the financial press.

## 19. FINANCIAL RISK MANAGEMENT continued

## Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by cash. The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions.

The Group seeks a balance between certainty of funding and a flexible, cost-effective borrowing structure. The policy is to ensure that the Group has sufficient liquidity available to meet all foreseeable needs.

The following are the undiscounted contracted maturities of financial liabilities, including interest payments:

				201	5			
	Effective interest rate	Year of maturity	Carrying amount £m	Contractual cash flows £m	Less than I year £m	I-2 years £m	2-5 years £m	More than 5 years £m
Non-derivative financial liabilities					i			
								-
4.32% Euro Senior Notes 2017	4.32%	2017	14.9	15.9	0.7	15.2	-	-
6.12% US Dollar Senior Notes 2017	6.12%	2017	118.8	133.3	7.3	126.0	-	-
6.26% US Dollar Senior Notes 2019	6.26%	2019	50.9	63.6	3.1	3.2	57.3	-
Bank and other loans	1.26%	up to 2019	80.2	80.2	8.0	0.6	71.6	
Obligations under finance leases	4.56%	up to 2019	1.0	1.1	0.4	0.3	0.4	_
Trade and other payables			96.I	96.1	96.I	-	-	-
Derivative financial liabilities								
Forward exchange contracts as cash flow hedges			0.6	0.6	0.5	0.1	_	_
Forward exchange contracts as fair value hedges			0.7	0.7	0.1	0.6	_	_
Forward exchange contracts as net investment hedges			1.0	1.0	0.8	0.2	_	_
			364.2	392.5	117.0	146.2	129.3	_

				2014				
	Effective	Year of	Carrying amount	Contractual cash flows	Less than I year	I-2 years	2-5 years	More than 5 years
	rate	maturity	£m	£m	´£m	ź.m	, £m	£m
Non-derivative financial liabilities								
3.65% Euro Senior Notes 2015	3.65%	2015	31.3	31.9	31.9	-	_	-
4.32% Euro Senior Notes 2017	4.32%	2017	15.7	17.4	0.7	0.7	16.0	_
6.12% US Dollar Senior Notes 2017	6.12%	2017	112.3	132.9	6.9	6.9	9.	_
6.26% US Dollar Senior Notes 2019	6.26%	2019	48.1	63.1	3.0	3.0	57.1	_
Bank and other loans	1.16%	up to 2019	61.3	61.3	8.5	0.3	52.5	
Obligations under finance leases	4.78%	up to 2019	1.3	1.4	0.4	0.3	0.7	_
Trade and other payables			93.0	93.0	93.0	_	—	—
Derivative financial liabilities								
Forward exchange contracts as cash flow hedges			0.7	0.7	0.7	_	_	_
Forward exchange contracts as fair value hedges			0.1	0.1	0.1	_	_	_
Forward exchange contracts as net investment hedges			_	_	_	_	_	_
			363.8	401.8	145.2	11.2	245.4	

## 19. FINANCIAL RISK MANAGEMENT continued

## Cash flows associated with derivatives that are cash flow hedges

The following table indicates the periods in which cash flows associated with cash flow hedges are expected to occur. This is matched with the periods in which cash flows associated with cash flow hedges are expected to impact profit or loss.

	Carrying amount £m	Contractual cash flows £m	Less than 1 year £m	I-2 years £m	2-5 years £m	More than 5 years £m
Forward exchange contracts – Assets	1.2	54.7	52.I	2.6	_	-
Forward exchange contracts – Liabilities	(0.6)	(53.9)	(51.2)	(2.7)	-	-
Total 2015	0.6	0.8	0.9	(0.1)	-	-
Forward exchange contracts – Assets	1.3	58.5	48.3	10.2	_	_
Forward exchange contracts – Liabilities	(0.7)	(57.7)	(48.0)	(9.7)	_	—
Total 2014	0.6	0.8	0.3	0.5	_	-

#### Market risk

Market risk is the risk that changes in market prices, such as interest rates, foreign exchange rates and equity prices, will affect the Group's income or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return on risk.

The Group buys and sells derivatives in the ordinary course of business for hedging purposes, and also incurs financial liabilities, in order to manage market risks. All such transactions are carried out in accordance with the Treasury Policy, which has been approved by the Audit Committee. Generally the Group seeks to apply hedge accounting in order to manage volatility in profit or loss.

#### Interest rate risk

The Group seeks to reduce the volatility in its interest charge caused by rate fluctuations. This is achieved through a combination of fixed rate debt and interest rate swaps. The proportions of fixed and floating rate debt are determined having regard to a number of factors, including prevailing market conditions, interest rate cycle, the Group's interest cover and leverage position and any perceived correlation between business performance and rates.

At the reporting date the interest rate profile of the Group's interest-bearing financial instruments was:

	Fixed rate instruments carrying amount		Variable rate instrum amount	
	2015 £m	2014 £m	2015 £m	2014 £m
Financial assets	-	25.7	49.8	63.0
Financial liabilities	(226.9)	(209.4)	(40.3)	(84.1)
	(226.9)	(183.7)	9.5	(21.1)

The fixed rate financial liabilities predominantly comprise the currency equivalent of £184.6 million (2014: £207.4 million) of Senior Notes as well as the currency equivalent of £40.5 million (2014: £nil) of euro payables under cross-currency swaps at a negative rate of 0.15%. The average cost of the Group's fixed rate instruments is 4.9% (2014: 5.7%).

An increase of 100 basis points in interest rates on the variable element of the Group's net debt at the reporting date would have increased profit by £0.1 million (2014: £0.5 million). A decrease of 100 basis points would have increased profit by £0.3 million (2014: £0.2 million). This analysis assumes that all other variables, in particular foreign currency rates, remain constant.

#### Foreign currency risk

Due to the international reach of the Group, currency transaction exposures exist. The Group has a policy in place to hedge all material firm commitments and a large proportion of highly probable forecast foreign currency exposures in respect of sales and purchases over the following 12 months, and achieves this through the use of the forward foreign exchange markets. A significant proportion of the forward exchange contracts have maturities of less than one year after the balance sheet date. The Group continues its practice of not hedging income statement translation exposure.

There are exchange control restrictions which affect the ability of a small number of the Group's subsidiaries to transfer funds to the Group. The Group does not believe such restrictions have had or will have any material adverse impact on the Group as a whole or the ability of the Group to meet its cash flow requirements.

The table overleaf, shows the Group's currency exposures, being exposures on currency transactions that give rise to net currency gains and losses recognised in the income statement. Such exposures comprise the monetary assets and liabilities of the Group that are not denominated in the functional currency of the operating company involved, other than certain non-GBP borrowings treated as hedges of net investments in overseas entities.

## 19. FINANCIAL RISK MANAGEMENT continued

		2015			2014		
Functional currency of Group operations	GBP £m	USD £m	€ £m	GBP £m	USD £m	€ £m	
Trade receivables	1.8	7.6	9.8	2.2	4.5	21.1	
Cash and cash equivalents	1.0	3.3	(2.9)	0.5	1.0	(5.9)	
Trade payables	(1.3)	(8.7)	(2.1)	(2.4)	(9.2)	(3.2)	
Net balance sheet exposure	1.5	2.2	4.8	0.3	(3.7)	12.0	

The amounts shown in the table take into account the effect of the forward contracts entered into to manage these currency exposures.

In respect of other monetary assets and liabilities held in currencies other than the currency of the reporting unit, the Group ensures that the net exposure is kept to an acceptable level, by buying or selling foreign currencies at spot rates where necessary to address short-term imbalances.

The Group classifies its forward exchange contracts hedging forecasted transactions as cash flow hedges and states them at fair value. The fair value of forward exchange contracts used as hedges of forecasted transactions at 31 December 2015 was an asset of £0.6 million (2014: asset of £0.6 million).

The contractual cash flows associated with the forward exchange contracts that are designated as cash flow hedges are shown in the section on liquidity risk. The impact on profit or loss is expected to occur at the same time as the associated cash flows.

Currency translation risks are controlled centrally. To defend against the impact of a permanent reduction in the value of its overseas net assets through currency depreciation, the Group seeks to match the currency of financial liabilities with the currency in which the net assets are denominated. This is achieved by raising funds in different currencies and through the use of hedging instruments such as swaps, and is implemented only to the extent that the Group's gearing covenant under the terms of its loan documents, as well as its facility headroom, are likely to remain comfortably within limits. In this way, the currency of the Group's financial liabilities becomes more aligned to the currency of the trading cash flows that service them.

The Group's currency split of total borrowings after the impact of net investment hedges was as follows:

	2015 £m	2014 £m
GBP	(39.2)	6.3
USD	186.7	160.3
€	57.3	82.2
Chinese Renminbi	31.7	_
Japanese Yen	15.2	7.5
Other	8.6	5.8
	260.3	262.1

The Group's sensitivity to changes in foreign exchange rates on financial assets and liabilities as at 31 December 2015 is as follows:

Based upon the currency profile of the Group's net financial assets and liabilities, if GBP had strengthened by 10%, reported net financial liabilities would have decreased by £20.9 million (2014: £21.6 million). Conversely, if GBP had weakened by 10%, reported net financial liabilities would have increased by £25.1 million (2014: £26.3 million). Assuming the change occurred on the balance sheet date, there would be no impact on reported profit.

The amounts generated from the sensitivity analysis are forward-looking estimates of market risk assuming certain adverse market conditions occur. Actual results in the future may differ materially from those projected results due to developments. The impact of a weakening in GBP on the Group's financial assets and liabilities would be more than offset in equity and income by its impact on the Group's overseas net assets and earnings respectively.

Based on the 2015 results, if in isolation the USD average exchange rate for 2015 were 10% weaker, reported revenue and profit before tax would be £34.8 million (2014: £33.0 million) and £2.9 million (2014: £4.3 million) lower.

Based on the 2015 results, if in isolation the EUR average exchange rate for 2015 were 10% weaker, reported revenue and profit before tax would be £20.5 million (2014: £21.3 million) and £2.8 million (2014: £2.7 million) lower.

## 19. FINANCIAL RISK MANAGEMENT continued

## Other market price risk

Equity price risk arises from available-for-sale equity securities held for meeting partially the unfunded portion of the Group's defined benefit pension obligations. The primary goal of the Group's investment strategy is to maximise returns in order to meet partially the Group's unfunded defined benefit obligations.

#### Capital management

The Board's policy is to maintain a strong capital base (total equity) so as to maintain investor, creditor and market confidence and to sustain future development of the business. The Board uses a number of measures, identified as key performance indicators (KPIs), to ensure the continued success of the Group. The main KPI for the Group is the underlying operating profit margin. The aim is to achieve mid-teen margins in good times and double-digit margins when the environment is more challenging.

The Board encourages employees of the Group to hold the Company's Ordinary shares. The Group operates a number of employee share and share option schemes. From time to time the Company purchases its own shares on the market; the timing of these purchases depends on market prices. Primarily the shares are intended to be used for issuing shares under the Group's various share option incentive schemes.

The Board seeks to maintain a balance between the advantages and security afforded by a sound capital position, and the higher returns that might be possible with higher levels of borrowings.

The Group monitors capital using the following indicators:

#### Debt to adjusted capital

	2015	2014
	£m	£m
Total interest-bearing loans and borrowings	259.4	265.5
Less: cash and cash equivalents and overdrafts	(43.4)	(58.5)
Net debt*	216.0	207.0
Total equity	186.4	187.7
Less: amounts accumulated in equity relating to cash flow hedges	(0.4)	(0.5)
Adjusted capital	186.0	187.2
Debt to adjusted capital ratio	1.2	1.1

#### Net debt\* to EBITDA

	2015	2014
	£m	£m
Net debt*	216.0	207.0
Operating profit before specific adjusting items, restructuring costs and other one-off items	102.5	109.8
Depreciation and amortisation	34.2	36.0
EBITDA	136.7	145.8
Net debt <sup>*</sup> to EBITDA ratio	l.6x	1.4x
Interest cover		
EBITDA	136.7	145.8
Net finance costs (excluding IAS 19 pension charge)	11.2	15.1
Interest cover	I2.3x	9.7x

\* Net debt is defined as interest-bearing loans and borrowings and bank overdrafts less cash and cash equivalents.

There were no changes in the Group's approach to capital management during the year.

Neither the Company nor any of its subsidiaries are subject to externally imposed capital requirements.

continued

## 19. FINANCIAL RISK MANAGEMENT continued

## Fair values

The fair values of financial assets and liabilities, together with the carrying amounts shown in the balance sheet, are as follows:

	Carrying amount 2015 £m	Fair value 2015 £m	Carrying amount 2014 £m	Fair value 2014 <i>£</i> m
Financial assets and liabilities at amortised cost				
3.65% Euro Senior Notes 2015	-	-	(31.3)	(31.6)
4.32% Euro Senior Notes 2017	(14.9)	(15.5)	(15.7)	(16.6)
6.12% US Dollar Senior Notes 2017	(118.8)	(125.5)	(112.3)	(121.6)
6.26% US Dollar Senior Notes 2019	(50.9)	(56.0)	(48.1)	(53.5)
Bank and other loans	(80.2)	(80.2)	(61.3)	(61.3)
Obligations under finance leases	(1.0)	(1.0)	(1.3)	(1.3)
Trade and other payables	(96.1)	(96.1)	(93.0)	(93.0)
Loans and receivables	155.9	155.9	170.5	170.5
Cash and cash equivalents	49.8	49.8	63.0	63.0
	(156.2)	(168.6)	(129.5)	(145.4)
Available-for-sale financial instruments				
Available-for-sale financial assets	0.5	0.5	1.6	1.6
Derivatives and other items at fair value				
Forward exchange contracts used for hedging	0.5	0.5	1.4	1.4
Cross-currency swaps used for hedging	(0.8)	(0.8)	3.8	3.8
	(156.0)	(168.4)	(122.7)	(138.6)

The following summarises the major methods and assumptions used in estimating the fair values of financial instruments reflected in the preceding table.

#### Equity securities

Fair value is based on quoted market prices at the balance sheet date.

#### Derivatives

Forward exchange contracts are marked to market either using listed market prices or by discounting the contractual forward price and deducting the current spot rate.

#### Interest-bearing loans and borrowings

Fair value is calculated based on discounted expected future principal and interest cash flows. The interest rates used to determine the fair value of loans and borrowings are 1.6 – 3.5% (2014: 1.8 – 3.8%) and finance leases 4.56% (2014: 4.78%).

#### Finance lease liabilities

The fair value is estimated as the present value of future cash flows, discounted at market interest rates for homogeneous lease agreements. The estimated fair values reflect changes in interest rates.

#### Trade and other receivables/payables

For receivables/payables with a remaining life of less than one year, the notional amount is deemed to reflect the fair value. All other receivables/ payables are discounted to determine the fair value.

#### Cash and cash equivalents, trade and other payables and loans and receivables

The Group has disclosed the fair value of cash and cash equivalents, current loans and receivables and current payables at their carrying amount, given their notional amount is deemed to be their fair value.

## 19. FINANCIAL RISK MANAGEMENT continued

## Fair value hierarchy

The table below analyses financial instruments carried at fair value, by valuation method. The different levels have been defined as follows:

- $\rightarrow$  Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities
- Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (ie as prices) or indirectly (ie derived from prices)
- → Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

	31 D	31 December 2015			31 December 14		
	Level I £m	Level 2 £m	Total £m	Level I £m	Level 2 £m	Total £m	
Available-for-sale financial assets	0.5	-	0.5	1.6	_	1.6	
Derivative financial assets	-	2.0	2.0	_	6.0	6.0	
	0.5	2.0	2.5	1.6	6.0	7.6	
Derivative financial liabilities	-	(2.3)	(2.3)	_	(0.8)	(0.8)	

The table below analyses financial instruments disclosed at fair value, by valuation method.

	31 D	31 December 2015			December 14		
	Level I £m	Level 2 £m	Total £m	Level I £m	Level 2 £m	Total £m	
3.65% Euro Senior Notes 2015	_	-	-	_	(31.6)	(31.6)	
4.32% Euro Senior Notes 2017	-	(15.5)	(15.5)	_	(16.6)	(16.6)	
6.12% US Dollar Senior Notes 2017	-	(125.5)	(125.5)	_	(121.6)	(121.6)	
6.26% US Dollar Senior Notes 2019	-	(56.0)	(56.0)	_	(53.5)	(53.5)	
Obligations under finance leases	-	(1.0)	(1.0)	_	(1.3)	(1.3)	
	-	(198.0)	(198.0)	_	(224.6)	(224.6)	

There have been no transfers between level 1 and level 2 during 2015 and 2014 and there were no level 3 financial instruments in either 2015 and 2014.

## 20. EMPLOYEE BENEFITS

## Accounting policies

### (i) Defined contribution plans

For defined contribution plans, the Group pays contributions to either publicly or privately administered pension insurance plans, and the Group has no further payment obligations once the contributions have been paid. Obligations for contributions to defined contribution pension plans are recognised as an expense in the income statement as incurred.

#### (ii) Defined benefit plans

A defined benefit plan is any retirement plan which is not a defined contribution plan. Typically, defined benefit plans defined an amount of retirement benefit that an employee will receive, usually depending on one or more factors such as age, years of service and earnings.

The Group's net obligation in respect of defined benefit pension plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value, and the fair value of any plan assets is deducted. The discount rate is the yield at the balance sheet date on AA-credit-rated bonds that have maturity dates approximating the terms of the Group's obligations. The calculation is performed by a qualified actuary using the projected unit credit method.

When the calculation results in a benefit to the Group, the recognised asset is limited to the total of the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan. An economic benefit is available to the Group if it is realisable during the life of the plan, or on settlement of the plan liabilities. Remeasurement gains and losses, differences between the interest income and actual returns on assets, and the effect of changes in actuarial assumptions, are recognised in full in OCI in the year in which they arise.

#### (iii) Long-term service benefits

The Group's net obligation in respect of long-term service benefits, other than pension plans, is the amount of future benefit that employees have earned in return for their service in the current and prior periods. The obligation is calculated using the projected unit credit method, or similar approximation, and is discounted to its present value and the fair value of any related assets is deducted. The discount rate is the yield at the balance sheet date on AA-credit-rated bonds that have maturity dates approximating the terms of the Group's obligations.

## **20. EMPLOYEE BENEFITS** continued

## (iv) Share-based payment transactions

The grant date fair value of share-based payment awards granted to employees is recognised as an expense, with a corresponding increase in equity, over the period that the employees become unconditionally entitled to the awards. The amount recognised as an expense is adjusted to reflect the actual number of awards for which the related service and non-market performance conditions are met, such that the amount ultimately recognised as an expense is based on the number of awards that meet the related service and non-market performance conditions at the vesting date.

#### **Employee benefits**

The Group operates a number of defined benefit arrangements as well as defined contribution plans. The defined benefit plans are primarily in the UK, USA and Europe and predominantly provide pensions based on service and career-average pay. In addition post-retirement medical plans are operated in the USA.

The Group have considered third-party powers and do not believe the Trustees have any powers that would prevent the Group obtaining a refund of any surplus on wind-up of the Scheme following gradual settlement of the plan obligations. As such the Group's interpretation is that the current version of IFRIC 14 does not have an impact and, as a result, any IAS 19 surplus can be recognised as an asset and it is not necessary to recognise additional liabilities in respect of contribution agreements reached with the pension scheme Trustees.

#### **UK** schemes

In the UK, the Group operates two defined benefit pension schemes, the Morgan Pension Scheme, and the Morgan Group Senior Staff Pension and Life Assurance Scheme ('the UK Schemes'). The two UK Schemes provide a benefit based upon an employee's total service, and their career average earnings (including allowance for Consumer Price Inflation), although historically benefits were based upon an employee's final salary. Once in payment, pensions receive increases as set out in the rules, at either a fixed level, or in line with the Retail Price Index. The overall duration of the UK Schemes is around 18 years.

The UK Schemes' assets are held in trustee-administered funds governed by UK regulations, as is the nature of the relationship between the Group and the Trustees. Responsibility for the governance of the UK Schemes - including investment decisions and contribution schedules - lies with the Board of Trustees who must consult with the Company on such matters. The Board of Trustees must be composed of representatives of the Company, plan participants and an independent trustee, in accordance with the UK Schemes governing documents.

Funding legislation in the UK requires that schemes are fully funded on a scheme-specific basis as measured, and this must be assessed at least every three years. To the extent that there is a deficit against this measure, a payment schedule must be agreed such that the deficit is removed over a period of time, typically around 10 years.

The most recent full actuarial valuation of the UK Schemes were undertaken as at March 2013 and resulted in combined assessed deficits of £82 million. On the basis of these full valuations, the Trustees of the UK Schemes, having consulted with the Group, agreed past service deficit recovery payments totalling £7.3 million a year in 2015/16, increasing with 2.75% pa until 2023 and contributions in respect of future service as accrued. New full valuations are due with effective dates of March 2016 and the outcome of those consultations will determine the Group's future contribution requirements, with any new deficit arising needing to be met through the payment of additional contributions.

The UK Schemes were closed to new entrants on 1 August 2011, with any new employees receiving benefits through the Morgan Group Personal Pension Plan, a defined contribution arrangement.

#### **US** schemes

In the USA, the Group operates a number of defined benefit pension schemes ('the US Schemes'). The majority of these are qualified arrangements for tax purposes, although the Group also operates a Supplemental Executive Retirement Plan SERP) which is not tax approved. With the exception of the SERP, the US Schemes are all frozen, with employees accruing benefits within a 401k arrangement.

The US Schemes provide a benefit based upon an employee's service and earnings. The benefits are level both prior to, and whilst in, payment. Overall, the US Schemes' duration is around 11 years.

The qualified US Schemes' assets are held in a trust separately from the Group's assets. For the SERP the Group holds an asset to meet the obligations however, due to its nature this is accounted for as a Group asset, rather than an asset of the SERP. Responsibility for the governance of the US Schemes, including investment decisions and contribution schedules, lies with a management committee, all of whose members are appointed by the Group.

The funding requirements in the USA, ERISA, require schemes to be fully funded at all times, and if not to target full funding within a period of seven years.

The most recent full actuarial valuation of the US Schemes were undertaken as at 1 January 2015 for those plans in deficit these deficits totalled £10.5 million. On the basis of these valuations, the Group made a £9.2 million payment in 2015 and is expected to make payments of £7.1 million in 2016, both amounts being in excess of the minimum required contributions. The Group is then expected to make payments totalling at least £6.8 million over the following five years.

## 20. EMPLOYEE BENEFITS continued

## European schemes

In Europe, the Group operates a number of retirement schemes, with the bulk of the obligations relating to arrangements for employees in Germany. In line with local practice these arrangements are not funded in advance, with benefits being met by the Group as they fall due.

				2015	
	2015	2015	2015	Rest of	2015
Pension plans and employee benefits	UK £m	USA £m	Europe £m	the World £m	Total £m
Present value of unfunded defined benefit obligations	-	(8.3)	(27.2)	(1.9)	(37.4)
Present value of funded defined benefit obligations	(500.9)	(170.6)	(1.5)	(13.0)	(686.0)
Fair value of plan assets	383.5	123.8	0.4	11.2	518.9
Net obligations	(117.4)	(55.1)	(28.3)	(3.7)	(204.5)
	()	(0011)	(2010)	(011)	(20110)
Movements in present value of defined benefit obligation					
At I January 2015	(512.4)	(178.8)	(32.1)	(14.0)	(737.3)
Current service cost	(2.5)	_	(0.6)	(1.2)	(4.3)
Interest cost	(18.2)	(7.1)	(0.5)	(0.3)	(26.1)
Remeasurement gains/(losses)					~ /
Changes in financial assumptions	6.7	6.6	1.9	_	15.2
Changes in demographic assumptions	_	_	_	(0.2)	(0.2)
Experience adjustments on benefit obligations	8.8	2.1	(0.2)	0.2	10.9
Benefits paid	17.6	8.3	1.2	0.8	27.9
Contributions by members	(0.9)	_	_	_	(0.9)
Exchange adjustments	_	(10.0)	1.6	(0.2)	(8.6)
At 31 December 2015	(500.9)	(178.9)	(28.7)	(14.9)	(723.4)
Movements in fair value of plan assets					
At I January 2015	393.6	120.0	0.5	11.4	525.5
Interest on plan assets	14.1	4.9	-	0.2	19.2
Remeasurement losses	(16.1)	(7.5)	-	(1.0)	(24.6)
Contributions by employer	9.4	7.9	1.1	1.2	19.6
Contributions by members	0.9	-	-	-	0.9
Benefits paid	(17.6)	(8.3)	(1.2)	(0.8)	(27.9)
Administrative expenses	(0.8)	_	-	_	(0.8)
Exchange adjustments	_	6.8	-	0.2	7.0
At 3I December 2015	383.5	123.8	0.4	11.2	518.9
Actual return on assets	(2.0)	(2.6)	-	(0.8)	(5.4)
	2015	2015	2015	2015 Rest of	2015
	UK	USA	Europe	the World	Total
Pension plans and employee benefits	£m	£m	£m	£m	£m
Expense recognised in the consolidated income statement					
Current service cost and past service cost	(2.5)	-	(0.6)	(1.2)	(4.3)
Administrative expenses	(0.8)	-	-	-	(0.8)
Net interest on net defined benefit liability	(4.1)	(2.2)	(0.5)	(0.1)	(6.9)
Total expense	(7.4)	(2.2)	(1.1)	(1.3)	(12.0)

In addition to the above, the Group directly incurred £1.4 million (2014: £0.9 million) of administrative expenses in relation to the USA schemes, which have been recognised in overheads outside of the pension liability.

continued

#### 20. EMPLOYEE BENEFITS continued

The IAS 19 expense in relation to the Group's defined benefit arrangements is recognised in the following line items in the consolidated income statement:

	2015 £m	2014 <i>£</i> m
Operating costs	(5.1)	(5.0)
Net finance expense	(6.9)	(5.7)
Total expense	(12.0)	(10.7)

On 30 January 2015, the Group disposed of its Thermal Ceramics business in Wissembourg, France. £0.7 million of employee benefits related to Wissembourg and were classified as held for sale as at 31 December 2014, as described in note 6.

### Statement of financial position reconciliation

	2015 £m	2014 £m
At I January 2015	(211.8)	(144.6)
Pension expense	(12.0)	(10.7)
Contributions	19.6	19.5
Other comprehensive income	1.3	(75.2)
Transfer to liabilities classified as held for sale	-	0.7
Exchange adjustments	(1.6)	(1.5)
At 3I December 2015	(204.5)	(211.8)

The Group expects to contribute £19.7 million to these arrangements in 2016.

	UK £m	USA £m	Europe £m	Rest of the World £m	Total £m
Estimate of employer contributions to be paid into the plans during the					
12-month period beginning 1 January 2016	9.5	8.0	1.0	1.2	19.7

The fair values of the plan assets were as follows:

	2015 UK £m	2015 USA £m	2015 Europe £m	2015 Rest of the World £m	2015 Total £m
Equities and growth assets	161.7	38.1	-	-	199.8
Bonds	31.6	60.I	-	-	91.7
Matching insurance policies	177.1	_	0.3	4.0	181.4
Other	13.1	25.6	0.1	7.2	46.0
Total	383.5	123.8	0.4	11.2	518.9

The assumptions used are best estimate assumptions chosen from a range of possible actuarial assumptions which may not be borne out in practice. The principal assumptions are the discount rate and inflation assumptions which are long term and measured on external factors, based upon each plan's duration. In addition to these, the mortality assumption in the UK and USA is material to the cost of the promised benefits. In both the UK and Europe, the assumed increases in salaries and pensions in payment are derived from assumed future inflation.

## 20. EMPLOYEE BENEFITS continued

Actuarial assumptions were:

	2015 UK %	2015 USA %	2015 Europe %	2015 Rest of the World %
Discount rate	3.70	4.50	2.30	2.90
Inflation (UK: RPI/CPI)	3.00/1.80	n/a	1.70	n/a
Salary increase	n/a	n/a	2.20	5.00
Pensions increase	2.90/3.10/3.70	n/a	1.70	n/a
Mortality – post-retirement:				
Life expectancy of a male aged 60 in accounting year	26.6	26.2	23.6	n/a
Life expectancy of a male aged 60 in accounting year + 20	28.2	28.0	26.4	n/a

The actual liability in respect of global employee benefits will not be known until the last payments have been made. In placing a current estimate on the Group's past service benefit obligations, a number of assumptions about the future are required. For defined benefit schemes, the Directors make annual estimates and assumptions in respect of discount rates, future changes in salaries, employee turnover, inflation rates and life expectancy. In making these estimates and assumptions, the Directors consider advice provided by external advisers, such as actuaries.

The accounting assumptions noted above are used to calculate the year-end net pension liability in accordance with the relevant accounting standard, IAS 19 (revised) *Employee Benefits*. Changes in these assumptions have no impact on the Group's cash payments to their arrangements. The payments due are calculated based on local funding requirements, or in the case of the Group's unfunded arrangements on the incidence of benefit payments falling due.

The sensitivities of the Group's net balance sheet to the principal assumptions are:

	Change in assumption	2015 Increase effect on deficit £m	2014 Increase effect on deficit £m
Discount rate	Decrease by 0.1%	9.8	9.9
Inflation	Increase by 0.1%	4.4	5.1
Mortality – post-retirement	Pensioners live 1 year longer	17.1	16.2
Exchange rates	GBP weakens against USD by 10%	6.1	6.5
	GBP weakens against EUR by 10%	3.1	3.6

These sensitivities have been calculated to show the movement in the net balance sheet in isolation, and assuming no other changes in market conditions at the accounting date. This is unlikely in practice – for example, a change in discount rate is unlikely to occur without any movement in the value of the assets held by the Group's schemes.

## 20. EMPLOYEE BENEFITS continued

	2014	2014	2014	2014 Rest of	2014
	UK	USA	Europe	the World	Total
Pension plans and employee benefits	£m	£m	£m	£m	£m
Present value of unfunded defined benefit obligations	_	(8.7)	(30.5)	(1.6)	(40.8)
Present value of funded defined benefit obligations	(512.4)	(170.1)	(1.6)	(12.4)	(696.5)
Fair value of plan assets	393.6	120.0	0.5	11.4	525.5
Net obligations	(118.8)	(58.8)	(31.6)	(2.6)	(211.8)
Movements in present value of defined benefit obligation					
At   January 2014	(441.5)	( 4 .9)	(28.5)	(13.1)	(625.0)
Current service cost	(2.4)	_	(0.6)	(1.2)	(4.2)
Interest cost	(19.5)	(6.7)	(0.9)	(0.4)	(27.5)
Remeasurement losses	× ,	. ,			,
Changes in financial assumptions	(65.1)	(16.6)	(6.2)	(0.1)	(88.0)
Changes in demographic assumptions	_	(13.1)	_	_	(13.1)
Experience adjustments on benefit obligations	(0.9)	2.5	0.1	(0.3)	1.4
Benefits paid	18.1	7.4	1.4	Ì.Í	28.0
Contributions by members	( . )	_	_	_	( . )
Transfer to liabilities classified as held for sale	_	_	0.7	_	0.7
Exchange adjustments	_	(10.4)	1.9	_	(8.5)
At 31 December 2014	(512.4)	(178.8)	(32.1)	(14.0)	(737.3)
Movements in fair value of plan assets			0.5		100.1
At I January 2014	366.5	102.6	0.5	10.8	480.4
Interest on plan assets	16.4	5.1	—	0.3	21.8
Remeasurement gains	19.4	5.1	_	_	24.5
Contributions by employer	9.1	7.7	1.4	1.3	19.5
Contributions by members	1.1	—	-	—	1.1
Benefits paid	( 8. )	(7.4)	(1.4)	(1.1)	(28.0)
Administrative expenses	(0.8)	—	_	—	(0.8)
Exchange adjustments		6.9	_	0.1	7.0
At 31 December 2014	393.6	120.0	0.5	11.4	525.5
Actual return on assets	35.8	10.2		0.3	46.3
				2014	
	2014 UK	2014 USA	2014 Europe	Rest of the World	2014 Total
Pension plans and employee benefits	£m	£m	£m	£m	£m
Expense recognised in the consolidated income statement					
Current service cost and past service cost	(2.4)	—	(0.6)	(1.2)	(4.2)
Administrative expenses			_	_	(0.8)
Administrative expenses	(0.8)	_			(0.0)
Net interest on net defined benefit liability	(0.8) (3.1)	(1.6)	(0.9)	(0.1)	(5.7)

# 20. EMPLOYEE BENEFITS continued Risks

Through its defined benefit pension plans, the Group is exposed to a number of risks, the most significant of which are detailed below.

The balance sheet net pension liability is a snapshot view which can be significantly influenced by short-term market factors.

The calculation of the surplus or deficit depends, therefore, on factors which are beyond the control of the Group – principally the value at the balance sheet date of equity shares in which the scheme has invested and long-term interest rates which are used to discount future liabilities. The funding of the scheme is based on long-term trends and assumptions relating to market growth, as advised by qualified actuaries and investment advisers.

Investment returns:	The Group's net balance sheet, and contribution requirements are heavily dependent upon the return on the assets invested in by the schemes.
Longevity:	The cost to the Group of the pensions promised to members is dependent upon the expected term of these payments. To the extent that members live longer than expected this will increase the cost of these arrangements.
Inflation rate risk:	In the UK, the pension promises are, in the main, linked to inflation, and higher inflation will lead to higher liabilities.

The above risks have been mitigated for a large proportion of the UK Schemes' population through the purchase of an insurance policy, the payments from which exactly match the promises made to employees. Remaining investment risks have also been mitigated to some extent by diversification of the return-seeking assets and backing uninsured pensioner liabilities by bonds and swaps.

In addition, the IAS 19 defined benefit obligation is linked to yields on AA-rated corporate bonds, however the majority of the Group's arrangements invest in a number of other assets which will move in a different manner from these bonds. Therefore, changes in market conditions may lead to volatility in the net pension liability on the Group's balance sheet and in other comprehensive income, and to a lesser extent in the IAS 19 pension expense in the Group's income statement.

#### Defined contribution plans

The Group operates a number of defined contribution pension plans. The total expense relating to these plans in the current year was  $\pounds$ 7.8 million (2014:  $\pounds$ 7.0 million). The Group expects to contribute  $\pounds$ 8.8 million to these arrangements in 2016.

#### Share-based payments

The Group operates various share option programmes that allow Group employees to acquire shares in the Company. Under the Morgan Advanced Materials plc Long-Term Incentive Plan (LTIP) and The Morgan Advanced Materials Bonus Deferral Share Matching Plan (BDSMP) awards of shares are made to various key executives. Under the Executive Share Option Scheme 2004 (ESOS 2004) share options were granted by the Company. The Company also maintains a UK all-employee Sharesave scheme ('Employee Sharesave Scheme 2004'). The grant date fair value of options granted to employees is recognised as an employee expense, with a corresponding increase in equity, over the period that the employees become unconditionally entitled to the options. The amount recognised as an expense is adjusted to reflect the actual number of share options for which the related service and non-market vesting conditions are met.

The fair value of the options and awards under each scheme have been measured using the following models:

LTIP, BDSMP, ESOS 2004	Monte Carlo model
Employee Sharesave Scheme 2004	Modified binomial model

The following options and awards were outstanding at 31 December 2015 in respect of Ordinary shares:

	Exercise / Award	Number	Normal exercis	e dates ranging
	price(s)	of shares outstanding	from	to
Employee Sharesave Scheme 2004	214.00p-264.00p	1,824,398	l December 2015	31 May 2019
ESOS 2004	171.90p	_	23 May 2008	23 May 2015
BDSMP	0.00p-347.50p	753,286	23 March 2016	24 September 2018
LTIP	0.00p	3,341,939	21 May 2016	28 February 2025

continued

## 20. EMPLOYEE BENEFITS continued Performance metrics for LTIP, BDSMP and ESOS 2004

The key performance metrics used in the plans are:

→ Total Shareholder Return (TSR) – the return (expressed as a percentage) on a notional investment in one share in the Company expressed as follows:

(a) the average share price over the last three months of the performance period; plus

(b) the net dividends per share paid during the performance period reinvested in company shares at the ex-dividend date; divided by (c) the average share price over the three months preceding the performance period.

- Earnings Per Share (EPS) (for the LTIP and BDSMP) profit before taxation less the charge for non-controlling interests in any financial year of the Group, adjusted by the Remuneration Committee to exclude the effect of amortisation of intangible assets, charges related to IAS 39 *Financial Instruments: Recognition and Measurement* and the effect of any other special items which the Remuneration Committee does not, in its discretion, consider to reflect underlying operating performance, divided by the weighted average number of shares in issue during the relevant financial years (defined on a pre-taxation basis).
- → Group Earnings Before Interest, Tax and Amortisation (EBITA) the Group's revenue for any financial year less operating expenses, but measured before the impact of taxation, net financing costs and the effect of amortisation of intangible assets. The Remuneration Committee may also make further adjustments to exclude items which it does not, in its discretion, consider to reflect the underlying operating performance of the Group during the relevant financial years.
- → Group Return on Capital Employed (ROCE) EBITA, divided by the capital employed at the end of the relevant financial year.
- → Group average Return on Capital Employed (ROCE) EBITA, divided by the average of the capital employed at the end of the relevant financial years.
- Divisional EBITA for the LTIP & BDSMP calculations Divisional revenue for the relevant financial years less operating costs (including restructuring costs and other one-off items), but measured before the impact of taxation, net financing costs and the effect of amortisation of intangible assets at reported exchange rates. The Remuneration Committee may also make further adjustments to exclude items which it does not, in its discretion, consider to reflect the underlying operating performance of the Division during the relevant financial years.
- Divisional average ROCE Divisional Earnings before net financing costs, taxation and amortisation of intangible assets (EBITA), divided by the average of the Capital Employed by the Division at the end of the relevant financial years.

For the TSR elements of the plans, for performance between median and upper quartile, awards are made on a straight-line, pro-rata basis. Similarly for EPS, Group EBITA, Group average ROCE, Divisional EBITA and Divisional average ROCE metrics, for performance between the identified trigger points, awards are made on a straight-line, pro-rata basis.

#### Share Plans terms and conditions

The terms and conditions of all awards and grants made that were outstanding on or after 1 January 2014:

Grant date/Employees entitled	Number of instruments granted	Vesting conditions	Contractual life of option
Awards granted to senior employees in 2015 under the BDSMP	499,634	Three years of service plus satisfaction of performance metrics	3 years
Awards granted to senior employees in 2015 under the LTIP	1,168,758	Three years of service plus satisfaction of performance metrics	3 years
Awards granted to senior employees in 2014 under the BDSMP	105,726	Three years of service plus satisfaction of performance metrics	3 years
Awards granted to senior employees in 2014 under the LTIP	1,182,302	Three years of service plus satisfaction of performance metrics	3 years
Awards granted to senior employees in 2013 under the BDSMP	194,944	Three years of service plus satisfaction of performance metrics	3 years
Awards granted to senior employees in 2013 under the LTIP	1,332,099	Three years of service plus satisfaction of performance metrics	3 years
Awards granted to senior employees in 2012 under the BDSMP	1,740,554	Three years of service plus satisfaction of performance metrics	3 years
Awards granted to senior employees in 2012 under the LTIP	1,251,358	Three years of service plus satisfaction of performance metrics	3 years
Options granted to senior employees in 2005 under the ESOS 2004	2,097,000	Three years of service plus satisfaction of performance metrics	10 years

## 20. EMPLOYEE BENEFITS continued

## Performance metrics for LTIP

The performance metrics for LTIP awards are set annually. The Company has given an undertaking to shareholders that awards will only vest if there is also an improvement in underlying financial performance. Awards will only vest therefore if the Remuneration Committee is satisfied that the Group's and/or Division's (pre-2012 LTIP awards only) underlying financial performance over the performance period justifies vesting.

#### 2011 LTIP Awards

For LTIP awards granted to the CEO, CFO and non-Divisional employees in 2011, the extent to which 50% of the awards vest depends on the Company's TSR ranking against an appropriate comparator group over the period from 3 January 2011 to 31 December 2013. The extent to which the other 50% of these awards vest depends on the growth in the Group's EPS compared with RPI between the 2010 base financial year and the 2013 financial year:

Т	SR Element		EPS Element
TSR against FTSE All-Share Industrials Index	% of award that vests	EPS growth	% of award that vests
Upper quartile	50%	15% pa	50%
Median	15%	8% pa	15%
Below median	Nil	< 8% pa	Nil

To support the two-Divisional structure introduced in July 2010, the 2011 LTIP awards for senior Divisional executives were tailored to the value creation of each Division. Under these awards, the Divisional element is split into Divisional EBITA growth and Divisional average ROCE. Vesting under the Divisional element only occurs when Divisional performance exceeds the threshold performance metrics under both measures. Once the Divisional performance metrics exceed the threshold, the two elements are then measured independently.

For the LTIP award granted to the COO (who, at the time of the award, was CEO Morgan Ceramics) in 2011, TSR ranking (as for CEO, CFO and non-Divisional employees) and Divisional performance between the 2010 base financial year and the 2013 financial year, were awarded on an equal basis:

TSR Element		Divisional Element			
TSR against FTSE All-Share Industrials Index	% of award that vests	Divisional EBITA growth	% of award that vests	Divisional average ROCE	% of award that vests
Upper quartile	50%	18% pa	25%	40.7%	25%
Median	15%	12% pa	7.5%	35.7%	7.5%
Below median	Nil	< 12% pa	Nil	< 35.7%	Nil

For LTIP awards granted to other executives in the former Morgan Ceramics Division in 2011, 100% of awards are based on Morgan Ceramics Divisional performance, between the 2010 base financial year and the 2013 financial year:

Divisional EBITA growth	% of award that vests	Divisional average ROCE	% of award that vests
18% pa	50%	40.7%	50%
12% pa	15%	35.7%	15%
< 12% pa	Nil	< 35.7%	Nil

For the LTIP award granted to the former CEO Morgan Engineered Materials in 2011, TSR ranking (as for CEO, CFO and non-Divisional employees) and Divisional performance between the 2010 base financial year and the 2013 financial year, were awarded on an equal basis:

TSR Element		Divisional Element			
TSR against FTSE All-Share Industrials Index	% of award that vests	Divisional EBITA growth	Divisional average ROCE	% of award that vests	
Upper quartile	50%	15% pa	25%	36.1%	25%
Median	15%	10% pa	7.5%	33.7%	7.5%
Below median	Nil	< 10% pa	Nil	< 33.7%	Nil

For LTIP awards granted to other executives in the former Morgan Engineered Materials Division in 2011, 100% of awards are based on Morgan Engineered Materials Divisional performance, between the 2010 base financial year and the 2013 financial year:

Divisional EBITA growth	% of award that vests	Divisional average ROCE	% of award that vests
15% pa	50%	36.1%	50%
10% pa	15%	33.7%	15%
< 10% pa	Nil	< 33.7%	Nil

## **20. EMPLOYEE BENEFITS** continued 2012 LTIP Awards

To support the 'One Morgan' organisation structure, the performance metrics for the 2012 LTIP awards were reviewed during 2013.

There were no changes to the performance conditions of the LTIP awards granted to the CEO, CFO and non-Divisional employees in 2012. The extent to which 33% of the awards vest depends on the Company's TSR ranking against an appropriate comparator group over the period from 2 January 2012 to 31 December 2014. The extent to which 33% of these awards vest depends on the compound annual growth in the Group's EPS between the 2011 base financial year and the 2014 financial year. The extent to which 33% vest depends on the Group's average ROCE for the financial years ending 31 December 2012, 2013 and 2014:

TSR Elei	ment	Group Element			
TSR against FTSE All-Share Industrials Index	% of award that vests	EPS growth	% of award that vests	Group average ROCE	% of award that vests
Upper quartile	33.33%	15% pa	33.33%	37%	33.33%
Median	10%	8% pa	10%	33%	10%
Below median	Nil	< 8% pa	Nil	< 33%	Nil

For the 2012 LTIP award made to the COO (who, at the time of the award, was CEO Morgan Ceramics), it was decided that the Morgan Ceramics Divisional performance metrics attached to his 2012 LTIP award be replaced by Group performance metrics, aligned with those attached to the 2012 LTIP awards awarded to the other executive Directors, as set out above.

For the 2012 LTIP awards granted to other executives in the former Morgan Ceramics and Morgan Engineered Materials Divisions in 2012, it was decided that a single set of Group performance metrics should apply to these participants. The single set of Group performance metrics blends the performance metrics originally set for the two Divisions over the performance period (as set out below). The Group performance metrics are split into compound annual growth EBITA and Group average ROCE. Vesting only occurs when Group performance exceeds the threshold performance metrics under both measures. Once the Group performance metrics exceed the threshold, the two elements are then measured independently:

Compound annual growth EBITA	% of award that vests	Group average ROCE	% of award that vests
15% pa	50%	40.9%	50%
5.6% pa	15%	38.5%	15%
< 5.6% pa	Nil	< 38.5%	Nil

The changes to the performance conditions attaching to the 2012 LTIP awards did not result in a change in the fair value at the measurement date.

Details of the original 2012 LTIP performance metrics for other executives in the former Morgan Ceramics and Morgan Engineered Materials Divisions are set out below:

For the COO (who, at the time of the award was CEO Morgan Ceramics), 1/3 of the award was to vest on relative TSR, with the remaining 2/3 to vest on a divisional EBITA / ROCE matrix. For the EBITA/ROCE element, there would have been no vesting unless EBITA growth in Morgan Ceramics was at least 6% p.a. and ROCE is 41% in 2014; full vesting would have occurred for EBITA growth of 15% p.a. and ROCE of 43.5%.

For LTIP awards granted to executives in the former Morgan Ceramics Division in 2012, 100% of awards were based on Morgan Ceramics Divisional performance, between the 2011 base financial year and the 2014 financial year:

Divisional EBITA	% of award that vests	Divisional average ROCE	% of award that vests
15% pa	50%	43.5%	50%
6% pa	15%	41%	15%
< 6% pa	Nil	< 41%	Nil

For LTIP awards granted to executives in the former Morgan Engineered Materials Division in 2012, 100% of awards were based on Morgan Engineered Materials Divisional performance, between the 2011 base financial year and the 2014 financial year:

Divisional EBITA	% of award that vests	Divisional average ROCE	% of award that vests
15% pa	50%	37.10%	50%
5% pa	15%	34.70%	15%
< 5% pa	Nil	< 34.7%	Nil

# 20. EMPLOYEE BENEFITS continued

## 2013 and 2014 LTIP Awards

For LTIP awards granted to all participants in 2013, the extent to which 33% of the awards vest depends on the Company's TSR ranking against an appropriate comparator group over the period from 1 January 2013 to 31 December 2015. The extent to which 33% of these awards vest depends on the growth in the Company's EPS between the 2012 base financial year and the 2015 financial year. The extent to which 33% vest depends on the Group's average ROCE for the financial years ending 31 December 2013, 2014 and 2015.

For LTIP awards granted to all participants in 2014, the extent to which 33% of the awards vest depends on the Company's TSR ranking against an appropriate comparator group over the period from 1 January 2014 to 31 December 2016. The extent to which 33% of these awards vest depends on the growth in the Company's EPS between the 2013 base financial year and the 2016 financial year. The extent to which 33% vest depends on the Group's ROCE for the financial year ending 31 December 2016:

TSR Eler	ment	EPS Element		ROCE Element	
TSR against FTSE All-Share Industrials Index	% of award that vests	EPS Growth	% of award that vests	ROCE	% of award that vests
Upper quartile	33.33%	15% pa	33.33%	37%	33.33%
Median	10%	8% pa	10%	33%	10%
Below median	Nil	< 8% pa	Nil	< 33%	Nil

## 2015 LTIP Awards

For LTIP awards granted to all participants in 2015, the extent to which 33% of the awards vest depends on the Company's TSR ranking against an appropriate comparator group over the period from 1 January 2015 to 31 December 2017. The extent to which 33% of these awards vest depends on the growth in the Company's EPS between the 2014 base financial year and the 2017 financial year. The extent to which 33% vest depends on the Group's ROCE for the financial year ending 31 December 2017:

TSR Element EPS Element		ROCE Element			
TSR against FTSE All-Share Industrials Index	% of award that vests	EPS Growth	% of award that vests	ROCE	% of award that vests
Upper quartile	33.33%	15% pa	33.33%	33%	33.33%
Median	10%	6% pa	10%	27%	10%
Below median	Nil	< 6% pa	Nil	< 27%	Nil

#### Performance metrics for the BDSMP

The BDSMP was introduced following shareholder approval in 2008.

Under the plan rules, participants may be offered the opportunity to defer up to 75% of their annual bonus on a pre- or post-tax basis into Company shares. Participants must hold the deferred shares for three years to be eligible for a matching award based on the pre-tax value of their deferred shares. Matching shares may be earned at the end of three years in the event that stretching performance metrics have been met. The performance metrics for the BDSMP are set annually.

Under the 2011, 2012, 2013, 2014 and 2015 grants participants were given the opportunity to defer up to 50% of their bonus under the BDSMP and the performance metrics are based on EPS growth targets relative to the 2010, 2011, 2012, 2013 and 2014 base years respectively:

EPS performance	Vesting of Matching Shares (as multiple of the shares under the Deferred Award)
20% pa	3x match
16% pa	2x match
12% pa	Ix match
8% pa	Nil
< 8% pa	Nil

## ESOS 2004

There were no awards during 2015 (2014: nil).

OVERVIEW

continued

## 20. EMPLOYEE BENEFITS continued

## Employee Sharesave Scheme 2004 terms and conditions

The terms and conditions of awards/grants that were outstanding on or after 1 January 2014 that are not covered in the information above are as follows:

Grant date/Employees entitled	Number of instruments granted	Vesting conditions	Contractual life of option
Options granted to UK employees in 2015 under the Employee Sharesave Scheme 2004	640,447	Three years of service	3 years
Options granted to UK employees in 2014 under the Employee Sharesave Scheme 2004	404,687	Three years of service	3 years
Options granted to UK employees in 2013 under the Employee Sharesave Scheme 2004	463,394	Three years of service	3 years
Options granted to UK employees in 2012 under the Employee Sharesave Scheme 2004	1,071,868	Three years of service	3 years

### Share Plans - further details

	Awards	Awards made in 2015		
	LTIP 2004	BDSMP	Employee Sharesave Schemes 2004	
Fair value at measurement date	209.52-298.60p	347.50p	47.00p	
Share price	330.00p	347.50p	283.00p	
Exercise price	n/a	n/a	264.00p	
Expected volatility (expressed as weighted average volatility used in the model)	45%	n/a	40%	
Option life (expressed as weighted average life used in the model)	3 years	3 years	3 years	
Expected dividends	3.3%	n/a	3.9%	
Risk-free interest rate	1.0%	n/a	0.9%	

The expected volatility is based on the historic volatility (calculated based on the weighted average remaining life of the share options) adjusted for any expected changes to future volatility due to publicly available information.

The number and weighted average exercise prices of share options are as follows:

	Weighted average exercise price 31 December 2015	Number of options 31 December 2015	Weighted average exercise price 31 December 2014	Number of options 31 December 2014
Outstanding at the beginning of the period	90.24p	6,874,277	83.llp	9,100,894
Granted during the period	I25.42p	2,423,190	79.45p	1,670,549
Forfeited during the period	165.98p	(248,931)	88.17p	(620,040)
Exercised during the period	230.I0p	(974,584)	217.56p	(972,372)
Lapsed during the period	2.35p	(2,154,329)	1.12p	(2,304,754)
Outstanding at the end of the period	II0.42p	5,919,623	90.24p	6,874,277
Exercisable at the end of the period	-	120,446	138.28p	390,085

The weighted average share price at the date of share options exercised during the period was 317.11 pence (2014: 329.82 pence).

The options outstanding at the year end have an exercise price in the range nil to 347.50 pence and a weighted average contractual life of 0.2 years.

The fair value of services received in return for share options granted are measured by reference to the fair value of share options granted.

The weighted average fair value of options issued in the period was 230.05 pence (2014: 233.92 pence).

The IFRS 2 fair value charge expensed to the income statement was  $\pounds$ 1.4 million (2014:  $\pounds$ 1.7 million).

#### 21. PROVISIONS

#### Accounting policies

A provision is recognised in the balance sheet when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of economic benefits will be required to settle the obligation, and a reliable estimate can be made of the obligation. The best estimate of the expenditure required to settled the present obligation is the amount that an entity would rationally pay to settle the obligation at the end of the reporting period or to transfer it to a third-party at that time. If the effect is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and, where appropriate, the risks specific to the liability.

#### (i) Restructuring

A provision for restructuring is recognised when the Group has approved a detailed and formal restructuring plan, and the restructuring has either commenced or has been announced publicly. Future operating costs are not provided for.

#### (ii) Onerous contracts

A provision for onerous contracts is recognised when the expected benefits to be derived by the Group from a contract are lower than the unavoidable cost of meeting its obligations under the contract.

#### (iii) Environmental

In accordance with the Group's Environmental Policy a provision is recognised for known environmental issues which the Group will rectify over the next few years. In a number of jurisdictions companies have a constructive obligation to remedy any known environmental problems.

#### Provisions

	Closure and restructuring provisions £m	Other En provisions £m	nvironmental provisions £m	Total £m
Balance at 31 December 2014	15.2	5.9	1.7	22.8
Provisions made during the year	3.3	0.7	0.4	4.4
Provisions used during the year	(12.0)	(1.8)	(1.3)	(15.1)
Provisions reversed during the year	(0.1)	_	-	(0.1)
Effect of movements in foreign exchange	-	_	-	-
Balance at 31 December 2015	6.4	4.8	0.8	12.0
Current	6.0	3.6	0.8	10.4
Non-current	0.4	1.2	-	1.6
	6.4	4.8	0.8	12.0

Closure and restructuring provisions are based on the Group's restructuring programmes and represent committed expenditure at the balance sheet date. The amounts provided are based on the costs of terminating relevant contracts, under the contract terms, and management's best estimate of other associated restructuring costs including professional fees, most of which are expected to be incurred over the next year. Due to the nature of the provision for closure and restructuring provisions, the timing of any potential future outflows in respect of these liabilities is uncertain. The principal uncertainties in relation to this provision are that the final costs associated with the restructuring activity cannot be made for certain.

Other provisions relate to a range of items, including long-service costs and legal claims. The estimated costs are based on the Group's assessment of the probable future costs of these activities. The Group expects to incur most of the liability in less than one year. Due to the nature of the provision, the timing of any potential future outflows in respect of these liabilities is uncertain. The principal uncertainties in relation to this provision are until the legal case is resolved, the final costs associated cannot be made for certain.

Environmental provisions are for known environmental issues which the Group will rectify over the next few years. In a number of jurisdictions companies have a constructive obligation to remedy any known environmental problems. The estimated costs are based on management's best estimate of the costs required to remedy these problems. Due to the nature of the provision, the timing of any potential future outflows in respect of these liabilities is uncertain. The principal uncertainties in relation to this provision are until the environmental investigation or remedial activities are resolved, the final costs associated cannot be made for certain.

### NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS continued

#### 22. TRADE AND OTHER PAYABLES

#### Accounting policies

Trade and other payables are initially stated at their fair value and subsequently measured at amortised cost.

#### Trade and other payables

	2015 £m	2014 Restated <sup>*</sup> £m
Non-current		
Trade and non-trade payables	0.7	0.8
Current		
Trade payables due to associate	0.5	0.5
Other trade payables	95.6	92.5
Non-trade payables and accrued expenses	72.5	72.1
	168.6	165.1

2014 has been restated for the reclassification of £20.6 million of tax accruals from non-trade payables and accrued expenses to current tax payable. The account captions which have been affected by the change are current tax payable and non-trade payables and accrued expenses

#### 23. OPERATING LEASES

#### Accounting policies

#### **Operating lease payments**

Payments made under operating leases are recognised in the income statement on a straight-line basis over the term of the lease. Lease incentives received are recognised in the income statement as an integral part of the total lease expense.

#### Leases as lessee

Non-cancellable operating lease rentals are payable as follows:

	2015 £m	2014 £m
Less than one year	8.3	8.5
Between one and five years	22.9	17.1
More than five years	30.8	28.1
	62.0	53.7

The Group leases a number of properties under operating leases of varying duration. In some cases, during the life of the lease, the rental payable is reviewed after a fixed period to reflect market rentals.

#### Leases as lessor

The total of future minimum sub-lease income under non-cancellable sub-leases is £nil million (2014: £nil million).

#### 24. CAPITAL COMMITMENTS

Commitments for property, plant and equipment and computer software expenditure for which no provision has been made in these accounts amount to £0.9 million (2014: £1.3 million) for the Group.

#### **25. CONTINGENCIES**

Subsidiary undertakings within the Group have given unsecured guarantees of £9.6 million (2014: £10.3 million) in the ordinary course of business.

In an international group of companies a variety of claims arise from time to time. Provision has been made in these accounts against those claims which the Directors consider meet the requirements of IAS 37 Provisions, Contingent Liabilities and Contingent Assets and are likely to result in significant liabilities.

The Group has been subject to legal claims in a number of countries. In some cases it will not be possible to form a view, either because the facts are unclear or because further time is needed to properly assess the merits of the case and no provisions are held against such cases. The Board, having taken legal advice, is of the opinion that in respect of these claims, where it is possible to form a view they will not have a material impact on the Group's financial position.

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#### 25. CONTINGENCIES continued

The Group is subject to periodic tax audits by various fiscal authorities covering corporate, employee and sales taxes in the various jurisdictions in which it operates. None of these are currently expected to have a material impact on the Group's financial position. In addition, future changes in legislation, regulation or interpretation could increase the Group's taxes and have an adverse effect on the Group's operating results and financial condition.

#### 26. RELATED PARTIES

#### Identification of related parties

The Group has related party relationships with its subsidiaries (a list of all related undertakings is shown in note 44), with its associates (see note 12) and with its Directors and executive officers.

#### Transactions with key management personnel

The Company has written service contracts or letters of appointment with each of its Directors, under which the Directors receive a salary or a fee and other emoluments.

The key management of the Group and parent Company consists of the Board of Directors (including non-executive Directors) and members of the Executive Committee.

The compensation for the 14 (2014: 17) executive and non-executive Directors and members of the Executive Committee charged in the year was:

	2015	2014
	£m	£m
Short-term employee benefits	3.1	3.6
Employer National Insurance Contributions	0.5	0.6
Pension and other post-employment costs	0.5	0.6
Share-based payments	0.6	0.7
Non-executive Directors' fees and benefits	0.4	0.4
Total compensation of key management personnel	5.1	5.9

The aggregate amount of remuneration paid to or receivable by Directors in respect of qualifying services was £1,942,181 (2014: £1,968,536). The aggregate amount of gains made by Directors on the exercise of share options was £4,597 (2014: £395,057). The aggregate amount of money paid to or receivable by Directors, and the net value of assets (other than money and share options) received or receivable by the Directors, under the Long-Term Incentive Plan in respect of qualifying services was nil (2014: £2,194). The aggregate value of Company contributions to the defined benefit scheme and cash allowance in lieu of pension was £201,768 (2014: £336,699). The number of Directors participating in the defined benefit scheme was 2 (2014: 3).

Further information on 2015 executive Directors' remuneration is given in the Remuneration Report on pages 66 to 88.

#### Other related party transactions

	2015 £m	2014 <i>£</i> m
Sales to associate	0.3	1.3
Purchases from associate	1.5	1.5
Loan made to associate	1.8	1.5
Trade receivables due from associate	1.3	2.1
Trade payables due to associate	0.5	0.5

The balances with the Group's associate are shown in note 15 and note 22. In addition, the Group has trade receivables owed by associates of  $\pounds$ 1.3 million (2014:  $\pounds$ 1.3 million) which have been fully provided for.

The Group entered into four fixed forward foreign exchange purchase contracts during late 2014 and early 2015 for the Chief Financial Officer (the CFO) with a total nominal value of  $\in$ 341,000 (£266,142 at the contracted exchange rates). The CFO provided the Group with £242,730 funds in advance to settle the contracts on 8 January 2015 and £23,412 a day after the fourth and final contract settled on 13 January 2015 when the Euros were passed to the CFO. No loss or expense was incurred by the Group and no gain or benefit was realised by the CFO.

#### 27. SUBSEQUENT EVENTS

There have been no significant post-balance sheet events.

### COMPANY BALANCE SHEET

as at 31 December 2015

	Note	2015 £m	2014 £m
Non-current assets	i Note	2.111	L.111
Intangible assets	30	1.8	2.8
Property, plant and equipment	31	12.3	0.1
Investments in subsidiary undertakings	32	837.5	870.1
Other debtors		2.3	_
		853.9	873.0
Current assets			
Debtors – amounts due within one year	33	39.8	51.7
Cash and cash equivalents		10.8	27.0
		50.6	78.7
Creditors – amounts falling due within one year	34	77.3	23.
Net current liabilities		(26.7)	(44.4)
Total assets less current liabilities		827.2	828.6
Non-current liabilities			
Creditors – amounts falling due after more than one year	35	218.6	227.7
Provisions for liabilities:			
Employee benefits	37	117.4	118.8
Other provisions	38	1.9	1.0
		337.9	347.5
Net assets		489.3	481.1
Capital and reserves			
Equity shareholders' funds			
Share capital	39	71.4	71.4
Share premium	40	111.7	111.7
Merger reserve	40	17.0	17.0
Capital redemption reserve	40	35.7	35.7
Retained earnings	40	253.1	244.9
		488.9	480.7
Non-equity shareholders' funds			
Share capital	39	0.4	0.4
Shareholders' funds		489.3	481.1

The financial statements were approved by the Board of Directors on 23 February 2016 and were signed on its behalf by:

PETE RABY CHIEF EXECUTIVE OFFICER

KEVIN DANGERFIELD CHIEF FINANCIAL OFFICER

# COMPANY STATEMENT OF CHANGES IN EQUITY for the year ended 31 December 2015

	Called up share capital £m	Share premium account £m	Merger reserve £m	Capital redemption reserve £m	Profit and loss account £m	Total equity £m	OVERVIEW
Balance at I January 2014	71.4	.7	17.0	35.7	383.3	619.1	$\leq$
Total comprehensive income for the period							
Profit for the year	—	_	-	_	11.0	11.0	
Other comprehensive income (note 46)	—	_	-	_	(118.6)	(118.6)	
Total comprehensive income for the period	_	_	_	—	(107.6)	(107.6)	
Transactions with owners, recorded directly in equity							
Dividends	_	_	_	_	(30.2)	(30.2)	S
Own shares acquired for share incentive schemes	-	_	-	—	(2.3)	(2.3)	(RA
Charges and transfers in relation to share-based payments for the year	_	_	_	_	1.7	1.7	STRATEGIC
Total contributions by and distributions to owners	_	_	_	_	(30.8)	(30.8)	RE
Balance at 31 December 2014	71.4	.7	17.0	35.7	244.9	480.7	REPORT
							Ĥ
Balance at I January 2015	71.4	111.7	17.0	35.7	363.5	599.3	
Effect of change in accounting policy (note 46)	-	-	-	-	(118.6)	(118.6)	
Balance at 1 January 2015 restated	71.4	111.7	17.0	35.7	244.9	480.7	
Total comprehensive income for the period							G
Profit for the year	-	-	-	-	40.9	40.9	Q
Total comprehensive income for the period	-	-	-	-	40.9	40.9	RP
Transactions with owners, recorded directly in equity							GOVERNANCE
Dividends	-	-	-	_	(31.4)	(31.4)	
Own shares acquired for share incentive schemes	-	-	-	_	(2.9)	(2.9)	
Charges and transfers in relation to share-based payments for the year	-	_	_	_	1.6	1.6	
Total contributions by and distributions to owners	_	_	_	-	(32.7)	(32.7)	
Balance at 31 December 2015	71.4	111.7	17.0	35.7	253.1	488.9	

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#### **28. ACCOUNTING POLICIES**

#### Basis of preparation

These financial statements were prepared in accordance with Financial Reporting Standard 101 Reduced Disclosure Framework ('FRS 101').

In preparing these financial statements, the Company applies the recognition, measurement and disclosure requirements of International Financial Reporting Standards as adopted by the EU ('Adopted IFRSs'), but makes amendments where necessary in order to comply with Companies Act 2006 and has set out below where advantage of the FRS 101 disclosure exemptions has been taken.

In the transition to FRS 101, the Company has applied IFRS 1 whilst ensuring that its assets and liabilities are measured in compliance with FRS 101. An explanation of how the transition to FRS 101 has affected the reported financial position and financial performance of the Company is provided in note 46.

Under Section 408(4) of the Companies Act 2006 the Company is exempt from the requirement to present its own profit and loss account.

In these financial statements, the Company has applied the exemptions available under FRS 101 in respect of the following disclosures:

- $\rightarrow$  a cash flow statement and related notes;
- $\rightarrow$  comparative period reconciliations for share capital, tangible fixed assets and intangible assets;
- $\rightarrow$  disclosures in respect of transactions with wholly owned subsidiaries;
- $\rightarrow$  the effects of new but not yet effective IFRSs;
- $\rightarrow$  disclosures in respect of the compensation of key management personnel;
- $\rightarrow$  disclosures in respect of capital management.

As the consolidated financial statements of Morgan Advanced Materials plc include the equivalent disclosures, the Company has also taken the exemptions under FRS 101 available in respect of the following disclosures:

- $\rightarrow$  IFRS 2 Share Based Payments in respect of group-settled share-based payments;
- $\rightarrow$  the disclosures required by IFRS 7 Financial Instrument Disclosures.

The Company proposes to continue to adopt the reduced disclosure framework of FRS 101 in its next financial statements.

The accounting policies set out below have, unless otherwise stated, been applied consistently to the period presented in these financial statements.

#### Measurement convention

The financial statements are prepared on the historical cost basis except that the following assets and liabilities are stated at their fair value - financial instruments classified as fair value through the profit or loss.

#### Intangible assets

#### Other intangible assets

Other intangible assets that are acquired by the Company are stated at cost less accumulated amortisation and less accumulated impairment losses.

#### Amortisation

Amortisation is charged to the income statement on a straight-line basis over the estimated useful lives of intangible assets unless such lives are indefinite. Intangible assets with an indefinite useful life and goodwill are systematically tested for impairment at each balance sheet date. Other intangible assets are amortised from the date they are available for use. The estimated useful lives are as follows: 3 - 7 years

 $\rightarrow$  Software

#### Tangible assets and depreciation

Tangible fixed assets are stated at cost less accumulated depreciation and accumulated impairment losses.

Depreciation is charged to the income statement on a straight-line basis over the estimated useful lives of each part of an item of tangible fixed assets. Land is not depreciated. The estimated useful lives are as follows:

 $\rightarrow$  Plant, equipment and fixtures 3 – 20 years

Depreciation methods, useful lives and residual values are reviewed at each balance sheet date.

#### **Foreign currency**

Transactions in foreign currencies are translated to the Company's functional currencies at the foreign exchange rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are retranslated to the functional currency at the foreign exchange rate ruling at that date. Foreign exchange differences arising on translation are recognised in the income statement except for differences arising on the retranslation of qualifying cash flow hedges, which are recognised in other comprehensive income. Non-monetary assets and liabilities that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction. Non-monetary assets and liabilities denominated in foreign currencies that are stated at fair value are retranslated to the functional currency at foreign exchange rates ruling at the dates the fair value was determined.

#### 28. ACCOUNTING POLICIES continued

#### Expenses

#### Operating lease payments

Payments made under operating leases are recognised in the income statement on a straight-line basis over the term of the lease. Lease incentives received are recognised in the income statement as an integral part of the total lease expense.

#### Taxation

Tax on the profit or loss for the year comprises current and deferred tax. Tax is recognised in the income statement except to the extent that it relates to items recognised directly in equity or other comprehensive income, in which case it is recognised directly in equity or other comprehensive income.

Current tax is the expected tax payable or receivable on the taxable income or loss for the year, using tax rates enacted or substantively enacted at the balance sheet date, and any adjustment to tax payable in respect of previous years.

Deferred tax is provided on temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. The following temporary differences are not provided for: the initial recognition of goodwill; the initial recognition of assets or liabilities that affect neither accounting nor taxable profit other than in a business combination, and differences relating to investments in subsidiaries to the extent that they will probably not reverse in the foreseeable future. The amount of deferred tax provided is based on the expected manner of realisation or settlement of the carrying amount of assets and liabilities, using tax rates enacted or substantively enacted at the balance sheet date.

A deferred tax asset is recognised only to the extent that it is probable that future taxable profits will be available against which the temporary difference can be utilised.

#### Classification of financial instruments issued by the Company

Following the adoption of IAS 32, financial instruments issued by the Company are treated as equity only to the extent that they meet the following two conditions:

- (a) they include no contractual obligations upon the Company to deliver cash or other financial assets or to exchange financial assets or financial liabilities with another party under conditions that are potentially unfavourable to the Company; and
- (b) where the instrument will or may be settled in the Company's own equity instruments, it is either a non-derivative that includes no obligation to deliver a variable number of the Company's own equity instruments or is a derivative that will be settled by the Company's exchanging a fixed amount of cash or other financial assets for a fixed number of its own equity instruments.

To the extent that this definition is not met, the proceeds of issue are classified as a financial liability. Where the instrument so classified takes the legal form of the Company's own shares, the amounts presented in these financial statements for called-up share capital and share premium account exclude amounts in relation to those shares.

#### Non-derivative financial instruments

Non-derivative financial instruments comprise investments in equity and debt securities, trade and other debtors, cash and cash equivalents, loans and borrowings, and trade and other creditors.

#### Trade and other debtors

Trade and other debtors are recognised initially at fair value. Subsequent to initial recognition they are measured at amortised cost using the effective interest method, less any impairment losses.

#### Trade and other creditors

Trade and other creditors are recognised initially at fair value. Subsequent to initial recognition they are measured at amortised cost using the effective interest method.

#### Investments in debt and equity securities

Other investments in debt and equity securities held by the Company are classified as being available-for-sale and are stated at fair value, with any resultant gain or loss being recognised directly in equity (in the fair value reserve), except for impairment losses and, in the case of monetary items such as debt securities, foreign exchange gains and losses. When these investments are derecognised, the cumulative gain or loss previously recognised directly in equity is recognised in profit or loss. Where these investments are interest-bearing, interest calculated using the effective interest method is recognised in profit or loss.

Investments in subsidiaries are carried at cost less impairment.

continued

#### 28. ACCOUNTING POLICIES continued

#### Interest-bearing borrowings

Interest-bearing borrowings (which include amounts owed to/by Group undertakings) are recognised initially at fair value less attributable transaction costs. Subsequent to initial recognition, interest-bearing borrowings are stated at amortised cost using the effective interest method, less any impairment losses.

#### Derivative financial instruments and hedging

#### Derivative financial instruments

Derivative financial instruments are recognised at fair value. The gain or loss on remeasurement to fair value is recognised immediately in profit or loss. However, where derivatives qualify for hedge accounting, recognition of any resultant gain or loss depends on the nature of the item being hedged (see below).

#### Cash flow hedges

Where a derivative financial instrument is designated as a hedge of the variability in cash flows of a recognised asset or liability, or a highly probable forecast transaction, the effective part of any gain or loss on the derivative financial instrument is recognised directly in the hedging reserve. Any ineffective portion of the hedge is recognised immediately in the income statement.

#### Fair value hedges

Where a derivative financial instrument is designated as a hedge of the variability in fair value of a recognised asset or liability or an unrecognised firm commitment, all changes in the fair value of the derivative are recognised immediately in the income statement. The carrying value of the hedged item is adjusted by the change in fair value that is attributable to the risk being hedged (even if it is normally carried at cost or amortised cost) and any gains or losses on remeasurement are recognised immediately in the income statement (even if those gains would normally be recognised directly in reserves).

#### **Employee benefits**

#### Defined contribution plans

A defined contribution plan is a post-employment benefit plan under which the Company pays fixed contributions into a separate entity and will have no legal or constructive obligation to pay further amounts. Obligations for contributions to defined contribution pension plans are recognised as an expense in the income statement in the periods during which services are rendered by employees.

#### Defined benefit plans

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. The Company's net obligation in respect of defined benefit pension plans and other post employment benefits is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value, and the fair value of any plan assets (at bid price) and any unrecognised past service costs are deducted. The liability discount rate is the yield at the balance sheet date on AA credit rated bonds denominated in the currency of, and having maturity dates approximating to the terms of the Company's obligations. The calculation is performed by a qualified actuary using the projected unit credit method. When the calculation results in a benefit to the Company, the recognised asset is limited to the total of any unrecognised past service costs and the present value of benefits available in the form of any future refunds from the plan, reductions in future contributions to the plan or on settlement of the plan and takes into account the adverse effect of any minimum funding requirements.

All actuarial gains and losses as at the date of transition to FRS 101 were recognised. In respect of subsequent actuarial gains and losses that arise the Company recognises them in the period they occur directly into equity through the statement of comprehensive income.

The Company is the sponsoring and principal employer of two UK defined benefit pension schemes, the Morgan Pension Scheme and the Morgan Group Senior Staff Pension and Life Assurance Scheme ('the UK Schemes'). As there is no contractual agreement or stated Group policy for charging the net defined benefit cost of the plan to participating entities, the net defined benefit cost of the pension plan is recognised fully by the sponsoring employer, which is the Company. The Company recognises a cost equal to its contribution payable for the period as disclosed in note 37. The Company also guarantees certain obligations and liabilities to the employees that currently participate in the two UK schemes.

#### Share-based payment transactions

Share-based payment arrangements in which the Company receives goods or services as consideration for its own equity instruments are accounted for as equity-settled share-based payment transactions, regardless of how the equity instruments are obtained by the Company.

The grant date fair value of share-based payments awards granted to employees is recognised as an employee expense, with a corresponding increase in equity, over the period in which the employees become unconditionally entitled to the awards. The fair value of the awards granted is measured using an option valuation model, taking into account the terms and conditions upon which the awards were granted. The amount recognised as an expense is adjusted to reflect the actual number of awards for which the related service and non-market vesting conditions are expected to be met, such that the amount ultimately recognised as an expense is based on the number of awards that do meet the related service and non-market performance conditions at the vesting date. For share-based payment awards with non-vesting conditions, the grant date fair value of the share-based payment is measured to reflect such conditions and there is no true-up for differences between expected and actual outcomes.

#### 28. ACCOUNTING POLICIES continued

Share-based payment transactions in which the Company receives goods or services by incurring a liability to transfer cash or other assets that is based on the price of the Company's equity instruments are accounted for as cash-settled share-based payments. The fair value of the amount payable to employees is recognised as an expense, with a corresponding increase in liabilities, over the period in which the employees become unconditionally entitled to payment. The liability is remeasured at each balance sheet date and at settlement date. Any changes in the fair value of the liability are recognised as personnel expense in profit or loss.

#### Own shares held by The Morgan General Employee Benefit Trust

Transactions of the Group-sponsored Morgan General Employee Benefit Trust are treated as being those of the Company and are therefore reflected in the Company's financial statements. In particular, the Trust's purchases and sales of shares in the Company are debited and credited to equity.

#### **Provisions**

A provision is recognised in the balance sheet when the Company has a present legal or constructive obligation as a result of a past event, that can be reliably measured and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects risks specific to the liability.

#### Investments

Investments in subsidiary undertakings, associates and joint ventures are stated at cost less amounts written off unless they are designated as a hedged item in a fair value hedge of foreign currency risk under FRS 26 *Financial Instruments: Recognition and Measurement.* In this case they are accounted for at historical cost plus a hedging adjustment recognised in profit or loss for the changes in their fair value attributable to the foreign currency exposure from the date the hedge is designated.

#### Interest-bearing loans and borrowings

Immediately after issue, debt is stated at the fair value of the consideration received. Immediately after issue capital instruments are stated after deduction of issue costs. The finance cost of the debt is allocated to periods over the term of the debt at a constant rate on the carrying amount.

#### Dividends on shares presented within shareholders' funds

Dividends unpaid at the balance sheet date are only recognised as a liability at that date to the extent that they are appropriately approved and are no longer at the discretion of the Company. Unpaid dividends that do not meet these criteria are disclosed in the Notes to the financial statements.

#### Financial guarantee contracts

Where the Company enters into financial guarantee contracts to guarantee the indebtedness of other companies within its group, the Company considers these to be insurance arrangements, and accounts for them as such. In this respect, the Company treats the guarantee contract as a contingent liability until such time as it becomes probable that the Company will be required to make a payment under the guarantee, at which point a liability would be recognised.

#### 29. STAFF NUMBERS AND COSTS

The average number of persons employed by the Company (including Directors) during the year, analysed by category, was as follows:

	Number of	f employees
	2015	2014
Directors and head office staff	37	37
Regional staff	7	7
	44	44

The majority of the Directors and head office staff devote a proportion of their time to Regional duties. Of the 37 Directors and head office staff, the average number who spent all or a proportion of their time on corporate duties was 13 (2014: 13), as shown in note 5.

Full details of the Directors' remuneration for the period can be found in the remuneration report on pages 66 to 88.

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#### 29. STAFF NUMBERS AND COSTS continued

Aggregate employee-related costs was as follows:

	2015 £m	2014 <i>£</i> m
Wages and salaries	6.7	8.2
Equity-settled share-based payments (see note 20)	1.4	1.7
Social security costs	0.7	0.9
Other pension costs	1.0	0.7
	9.8	11.5

£1.1 million (2014: £1.2 million) of the equity-settled share-based payments amount was recharged to other Morgan Group companies.

#### **30. INTANGIBLE ASSETS**

	Software £m
Cost	
Balance at 1 January 2015	4.8
Additions – externally purchased	0.2
Disposals	(0.5)
Balance at 31 December 2015	4.5
Amortisation	
Balance at 1 January 2015	2.0
Amortisation for the year	1.2
Disposals	(0.5)
Balance at 31 December 2015	2.7
Carrying amounts	
At 31 December 2014	2.8
At 3I December 2015	1.8

#### 31. PROPERTY, PLANT AND EQUIPMENT

	Plant, equipment		
	and fixtures £m	Property £m	Total £m
Cost			
Balance at 1 January 2015	1.1	-	1.1
Additions	-	12.2	12.2
Balance at 31 December 2015	1.1	12.2	13.3
Depreciation			
Balance at 1 January 2015	1.0	-	1.0
Depreciation charge for the year	-	-	-
Balance at 31 December 2015	1.0	-	1.0
Carrying value			
At 31 December 2014	0.1	_	0.1
At 3I December 2015	0.1	12.2	12.3

#### 32. INVESTMENT IN SUBSIDIARY UNDERTAKINGS

	Shares in Group undertakings £m	Loans £m	Total £m
Cost			
Balance at 1 January 2015	620.2	379.3	999.5
Additions	1.0	14.0	15.0
Fair value hedge of investments' exposure to foreign currency risk	(0.4)	_	(0.4)
Less: disposals/loan repayments/liquidations/effect of movements in foreign exchange	-	(28.7)	(28.7)
Balance at 31 December 2015	620.8	364.6	985.4
Provisions		12.4	120.4
Balance at I January 2015	116.8	12.6	129.4
Provided in the year	16.8	1.7	18.5
Less: disposals/loan repayments/liquidations/effect of movements in foreign exchange	-	-	-
Balance at 31 December 2015	133.6	14.3	147.9
Carrying amounts			
At 31 December 2014	503.4	366.7	870.1
At 3I December 2015	487.2	350.3	837.5

Note 44 gives details of the Company's subsidiaries.

#### 33. DEBTORS

	2015 £m	2014 <i>£</i> m
Amounts owed by Group undertakings	32.8	38.3
Other debtors	3.6	6.2
Derivative financial assets (note 45)	2.9	6.7
Prepayments and accrued income	0.5	0.5
Due within one year	39.8	51.7

continued

#### 34. CREDITORS: AMOUNTS FALLING DUE WITHIN ONE YEAR

	2015 £m	2014 £m
Bank overdrafts (note 36)	53.5	72.0
Bank and other loans (note 36)	-	31.3
Trade creditors	2.3	1.8
Amounts owed to Group undertakings	12.7	5.3
Other creditors, including deferred consideration	1.9	3.8
Accruals and deferred income	4.1	6.7
Derivative financial liabilities (note 45)	2.8	2.2
	77.3	23.

#### 35. CREDITORS: AMOUNTS FALLING DUE AFTER MORE THAN ONE YEAR

	2015 £m	2014 <i>£</i> m
Amounts payable to group undertakings	131.3	158.3
Bank and other loans (note 36)	86.1	68.1
Other creditors	0.4	1.3
Derivative financial liabilities	0.8	_
	218.6	227.7

#### 36. BORROWINGS

	2015 £m	2014 £m
Creditors: amounts falling due within one year:		
Bank overdrafts (note 34)	53.5	72.0
Bank and other loans (note 34)	-	31.3
Creditors: amounts falling due after more than one year:		
Bank and other loans (note 35)	86.1	68.1
	139.6	171.4

#### Terms and debt repayment schedule

	Currency	Nominal interest rate	Year of maturity	Face value 2015 £m	Carrying amount 2015 £m	Face value 2014 £m	Carrying amount 2014 £m
Bank overdrafts	Various	1.70%		53.5	53.5	72.0	72.0
3.65% Euro senior notes	EUR	3.65%	2015	_	-	31.3	31.3
4.32% Euro senior notes	EUR	4.32%	2017	14.9	14.9	15.7	15.7
Syndicated revolving credit facility	GBP	1.15%	2019	54.2	54.2	18.9	18.9
Syndicated revolving credit facility	EUR	0.65%	2019	-	-	7.8	7.8
Syndicated revolving credit facility	USD	0.90%	2019	17.0	17.0	25.7	25.7
				139.6	139.6	171.4	171.4

Bank and other loans did not include any loans secured on the assets of the Company (2014: £nil).

#### **37. EMPLOYEE BENEFITS**

#### The Morgan Pension Scheme and the Morgan Group Senior Staff Pension and Life Assurance Scheme

The Company participates in two defined benefit schemes in the UK. The assets of these schemes are held in separate trustee-administered funds, The Morgan Pension Scheme (MPS) and the Morgan Group Senior Staff Pension and Life Assurance Scheme (SSS). These schemes were closed to new members on 1 August 2011 from which time membership of a defined contribution plan is available. The information disclosed below is in respect of the whole of the two plans for which the Company was the sponsoring employer for the two periods shown.

Pension plans and employee benefits	2015 £m	2014 £m
Present value of funded defined benefit obligations	(500.9)	(512.4)
Fair value of plan assets	383.5	393.6
Net obligations	(117.4)	(  8.8)
Movements in present value of defined benefit obligation		
At I January	(512.4)	(441.5)
Current service cost	(2.5)	(2.4)
Interest cost	(18.2)	(19.5)
Remeasurement gains/(losses)		
Changes in financial assumptions	6.7	(65.I)
Experience adjustments on benefit obligations	8.8	(0.9)
Benefits paid	17.6	18.1
Contributions by members	(0.9)	( . )
At 3I December	(500.9)	(512.4)
<b>Movements in fair value of plan assets</b> At I January	393.6	366.5
Interest on plan assets	14.1	16.4
Remeasurement (losses)/gains	(16.1)	19.4
Contributions by employer	9.4	9.1
Contributions by members	0.9	1.1
Benefits paid	(17.6)	( 8. )
Administrative expenses	(0.8)	(0.8)
At 3I December	383.5	393.6
Actual return on assets	(2.0)	35.8
Pension plans and employee benefits	£m	£m
Expense recognised in the consolidated income statement	Av111	Leg
Current service cost and past service cost	(2.5)	(2.4)
Administrative expenses	(0.8)	(0.8)
Net interest on net defined benefit liability	(4.1)	(0.0)
Total expense	(7.4)	(6.3)
I Utal Experise	(7.4)	(0.3)

continued

#### 37. EMPLOYEE BENEFITS continued

The fair values of the plan assets and the return on those assets were as follows:

	2015 £m	2014 £m
Equities and growth assets	161.7	158.4
Bonds	31.6	32.2
Matching insurance policies	177.1	192.5
Other	13.1	10.5
Total	383.5	393.6

The assumptions used are best estimate assumptions chosen from a range of possible actuarial assumptions which may not be borne out in practice. The principal assumptions are the discount rate and inflation assumptions which are long-term and measured on external factors, based upon each plan's duration. In addition to these, the mortality assumption in the UK is material to the cost of the promised benefits. The assumed increases in salaries and pensions in payment are derived from assumed future inflation.

Principal actuarial assumptions at the year end were as follows:

Assumptions:	2015 %	2014 %
Inflation (RPI & CPI)	3.00/1.80	3.00/1.80
Discount rate	3.70	3.60
Pensions increase	2.90/3.10/3.70	2.90/3.10/3.70
Salary increase	n/a	n/a
Mortality – post-retirement:		
Life expectancy of a male aged 60 in accounting year	<b>26.6 years</b>	26.5 years
Life expectancy of a male aged 60 in accounting year + 20	<b>28.2 years</b>	28.1 years

#### History of the plans

The history of the plans are as follows:

	2015	2014
Balance Sheet	£m	£m
Present value of the defined benefit obligation	(500.9)	(512.4)
Fair value of plan assets	383.5	393.6
Deficit	(117.4)	(  8.8)

#### Funding

The most recent full actuarial valuations of the UK Schemes were undertaken as at March 2013 and resulted in combined assessed deficits of  $\pounds$ 82 million. On the basis of these full valuations, the Trustees of the UK Schemes, having consulted with the Company, agreed past service deficit recovery payments totalling  $\pounds$ 7.3 million a year in 2015/16, increasing with 2.75% pa until 2023 and contributions in respect of future service as accrued. New full valuations are due with effective dates of March 2016 and the outcome of those consultations will determine the Company's future contribution requirements, with any new deficit arising needing to be met through the payment of additional contributions.

#### Sensitivity analysis

The sensitivities of the Company's net balance sheet to the principal assumptions are:

	Change in assumption	2015 Increase effect £m	2014 Increase effect £m
Discount rate	Decrease by 0.1%	7.0	7.0
Inflation	Increase by 0.1%	4.0	4.0
Mortality – post retirement	Pensioners live 1 year longer	11.0	12.0

These sensitivities have been calculated to show the movement in the net balance sheet in isolation, and assuming no other changes in market conditions at the accounting date. This is unlikely in practice – for example, a change in discount rate is unlikely to occur without any movement in the value of the assets held by the Company's schemes.

#### Defined contribution plans

The Group operates a number of defined contribution pension plans. The total Company expense relating to these plans in the current year was £0.1 million (2014: £0.1 million).

#### **38. PROVISIONS FOR LIABILITIES**

	Closure and restructuring provisions £m	Other provisions £m	Total £m
Balance at 31 December 2014	0.2	0.8	1.0
Provisions made during the year	1.3	_	1.3
Provisions used during the year	(0.3)	(0.1)	(0.4)
Balance at 31 December 2015	1.2	0.7	1.9

Closure and restructuring provisions are based on the Company's restructuring programmes and represent committed expenditure at the balance sheet date and are expected to be utilised within one year.

Other provisions relate to a range of items including legal claims and are based on the Company's assessment of the probable cost of these activities and are expected to be utilised within one year.

#### **39. SHARE CAPITAL**

	5.5% Cumulative First Preference shares 2015	5.0% Cumulative Second Preference shares 2015	Ordinary shares 2015
In thousands of shares			
On issue at 1 January 2015	125	312	285,370
On issue at 31 December 2015	125	312	285,370
		2015 £m	2014 <i>£</i> m
Allotted, called up and fully paid			
Ordinary shares of 25 pence each		71.4	71.4
5.5% Cumulative First Preference shares of £1 each		0.1	0.1
5.0% Cumulative Second Preference shares of £1 each		0.3	0.3
		71.8	71.8
Shares classified as equity shareholders' funds		71.4	71.4
Shares classified as non-equity shareholders' funds		0.4	0.4
		71.8	71.8

Refer to note 17 for details of the rights to dividends, voting rights and return of capital relating to the Preference shares.

Dividends payable for the First and Second Preference shares were £22,491 (2014: £22,491) of which £11,245 (2014: £11,245) was outstanding at the balance sheet date.

The 5.5% Cumulative First Preference shares of  $\pounds$ I each and the 5.0% Cumulative Second Preference shares of  $\pounds$ I each confer on the holders thereof the right to receive a cumulative preferential dividend at the rate of 5.5% and 5.0% respectively, calculated up to 30 June and 31 December respectively in every year.

For proposed Ordinary dividends see the consolidated income statement on page 97.

continued

#### 40. SHARE PREMIUM AND RESERVES

	Share premium £m	Merger reserve £m	Capital redemption reserve £m	Profit and loss account £m
At I January 2015	111.7	17.0	35.7	244.9
Charges and transfers in relation to share-based payments for the year	-	_	-	1.6
Dividends	-	_	-	(31.4)
Own shares acquired for share incentive schemes	-	-	-	(2.9)
Retained profit for the year	-	-	-	40.9
At 3I December 2015	111.7	17.0	35.7	253.1

The merger reserve comprises the balance associated with the premium of shares issued during previous acquisitions. Further details on share premium and reserves are given in note 17.

Capita Trustees Limited administer a Trust in which shares are held to satisfy awards granted under the Company's share plans. The shares are distributed via discretionary settlement governed by the rules of the Trust deed dated | March 1996 (as amended).

The total number of own shares held by the Trust at 31 December 2015 is 706,952 (2014: 375,203) and at that date had a market value of  $\pounds$ 1.7 million (2014:  $\pounds$ 1.2 million).

The amount of reserves of Morgan Advanced Materials plc that may not be distributed under Section 831(4) of the Companies Act 2006 is £301.2 million (2014: £301.2 million). This comprises the entire of share premium, merger reserve, capital redemption reserve and a portion of the profit and loss account.

#### **4I. OPERATING LEASES**

Non-cancellable operating lease rentals are payable as follows:

	Land and buildings	
	2015 £m	2014 £m
Between one and five years	0.2	0.2
	0.2	0.2

During the year £0.2 million (2014: £0.2 million) was recognised as an expense in the income statement in respect of operating leases.

#### 42. CONTINGENCIES

Where the Company enters into financial guarantee contracts to guarantee the indebtedness of other companies within its Group, the Company considers these to be insurance arrangements, and accounts for them as such. In this respect, the Company treats the guarantee contract as a contingent liability until such time as it becomes probable that the Company will be required to make a payment under the guarantee, at which point a liability would be recognised.

There are no other contingent liabilities in the Company as at 31 December 2015.

The Group has been subject to legal claims in a number of countries. In some cases it will not be possible to form a view, either because the facts are unclear or because further time is needed to properly assess the merits of the case and no provisions are held against such cases. The Board, having taken legal advice, is of the opinion that the remainder of these actions will not have a material impact on the Group's financial position.

#### 43. RELATED PARTIES

The Company has related party relationships with its subsidiaries, its associate and with its Directors and executive officers. It is exempt from providing information relating to these parties with the exception of transactions with its associate.

	2015	2014
	£m	£m
Loan made to associate	1.8	1.5
Other debtors due from associate	0.2	0.1
	2.0	1.6

During the prior year ended 31 December 2014 the Company made an interest bearing loan of  $\pounds$ 1.5 million loan to Jemmtec Limited, a company that a wholly owned subsidary of the Company has a 35% shareholding in. A further amount of  $\pounds$ 0.3 million was advanced during the year and the balance remains outstanding at the balance sheet date.

The Company entered into four fixed forward foreign exchange purchase contracts during late 2014 and early 2015 for the Chief Financial Officer ('the CFO') with a total nominal value of €341,000 (£266,142 at the contracted exchange rates). The CFO provided the Company with £242,730 funds in advance to settle the contracts on 8 January 2015 and £23,412 a day after the fourth and final contract settled on 13 January 2015 when the Euros were passed to the CFO. No loss or expense was incurred by the Company and no gain or benefit was realised by the CFO.

#### 44. FIXED ASSET INVESTMENTS

The Group's related undertakings<sup>\*</sup> at 31 December 2015 are set out below. All the companies are wholly owned or held directly by the Company unless otherwise stated.

		% shareholding
Name of undertaking*	Country of incorporation	owned by the Group
Marshall Morganite S.A.	France	99.89
1organ Carbon France SA	France	99.99
1organ Thermic SAS	France	100
Thermal Ceramics S.A.	France	100
Thermal Ceramics de France S.A.S	France	100
1organ Molten Metal Systems GmbH	Germany	100
he Morgan Crucible Management GmbH	Germany	100
1organ Deutschland Holding GmbH	Germany	100
1organ Holding GmbH	Germany	100
1organ Rekofa GmbH	Germany	100
1organ Thermal Ceramics Deutschland GmbH	Germany	100
Vesgo Ceramics GmbH	Germany	100
1organ Advanced Materials Haldenwanger GmbH	Germany	100
orextherm Dämmstoffe GmbH	Germany	100
1organ Materials Hungary Limited Liability Company	Hungary	100
1organ Trans Budapest Kereskedelmi Kft	Hungary	100
1organ Carbon Italia s.r.l	Italy	100
hermal Ceramics Italiana Srl	Italy	100
1CE Finance Sarl	Luxembourg	100
1NA Finance Sarl	Luxembourg	100
1organite Luxembourg S.A.	Luxembourg	100
Gunac B.V.	Netherlands	100
1organ Advanced Ceramics Sales B.V.	Netherlands	100
lorgan Electro Ceramics B.V. (in liquidation)	Netherlands	100
1organ Holding Netherlands B.V.	Netherlands	100
1organ Terrassen B.V.	Netherlands	100
lorgan AM&T B.V.	Netherlands	100
hermal Ceramics Benelux B.V.	Netherlands	100
1organ Carbon Polska Spolka zoo	Poland	100
hermal Ceramics Polska Sp.zoo	Poland	100
lorgan Thermal Ceramics Sukhoy Log Limited Liability Company	Russian Federation	51

continued

#### 44. FIXED ASSET INVESTMENTS continued

Name of undertaking <sup>*</sup>	9 Country of incorporation	6 shareholding owned by the Group
Morganite Espanola SA	Spain	100
Morgan Matroc S.A. (in liquidation)	Spain	100
Thermal Ceramics Espana SL	Spain	100
Morganite National Carbon AG	Switzerland	100
Certech International Limited	United Kingdom	100
Clearpower Limited	United Kingdom	99
E/M Coatings Limited (in liquidation)	United Kingdom	100
Integrated Survivability Technologies Limited	United Kingdom	50
lemmtec Limited	United Kingdom	35
aw Debenture MC Senior Pension Trust Corporation	United Kingdom	N/A
MCCo Limited	United Kingdom	100
Morganite Carbon Limited	United Kingdom	100
Morganite Crucible Limited	United Kingdom	100
Morgan Technical Ceramics Limited	United Kingdom	100
The Morgan Crucible Company Limited	United Kingdom	100
Morgan Holdings Limited	United Kingdom	100
Morgan Trans Limited	United Kingdom	51
Morgan Crucible Pension Trustees Limited	United Kingdom	N/A
Morganite Electrical Carbon Limited	United Kingdom	100
Morgan Electro Ceramics Limited	United Kingdom	100
Terrassen Holdings Limited	United Kingdom	100
Morgan North America Holding Limited	United Kingdom	100
Morganite Special Carbons Limited	United Kingdom	100
NP Aerospace Limited	United Kingdom	100
Petty France Investment Nominees Limited	United Kingdom	100
Morgan Europe Holding Limited	United Kingdom	100
TCG Guardian   Limited	United Kingdom	100
TCG Guardian 2 Limited	United Kingdom	100
Thermal Ceramics Europe Limited	United Kingdom	100
Thermal Ceramics UK Limited	United Kingdom United Kingdom	100
Thermal Ceramics Limited	United Kingdom United Kingdom	100
Carbo San Luis S.A.	Argentina	84.6
Morganite Brasil Ltda	Brazil	100
Morgan Advanced Materials Canada Inc.	Canada	100
Carbo Chile SA	Chile	99.99
Thermal Ceramics de Colombia	Colombia	100
Refractarios Multiples SA	Guatemala	100
Refractarios Nacionales SA	Guatemala	100
Ceramicas Termicas SA	Guatemala	
	Mexico	100
Morgan Technical Ceramics S.A. de CV.		100
Grupo Industrial Morgan, S.A. de C.V.	Mexico	100
Grafitos y Maquinados, S.A. de C.V.	Mexico	100
Certech Inc.	United States	100
Graphite Die Mold, Inc.	United States	100
Morgan Advanced Materials and Technology Inc.	United States	100
Morgan Advanced Ceramics Inc.	United States	100
Morgan Advanced Materials, Inc.	United States	100
Morganite Crucible Inc.	United States	100
Morganite Inc.	United States	100
Morganite Industries Inc.	United States	100

#### 44. FIXED ASSET INVESTMENTS continued

		% shareholding	ĒR
Name of undertaking*	Country of incorporation	owned by the Group	OVERVIEW
National Electrical Carbon Products Inc.	United States	100	
NP Aerospace Inc. (USA)	United States	100	
Thermal Ceramics Inc.	United States	100	
Thermal Ceramics Venezuela CA	Bolivarian Republic of Venezuela	100	
Alexandria Investments Pty Ltd	Australia	100	
) Brown Carbon (Pty) Ltd	Australia	100	
1organite Australia Pty Ltd	Australia	100	C
10rgan Mechanical Carbon Australasia Pty Ltd	Australia	100	- ح
10rgan Technical Ceramics Australia Pty Ltd	Australia	100	STRATEGIC REPORT
, Beijing Morgan Ceramics Limited	China	100	9
Dalian Morgan Ceramics Company Limited	China	100	쥬
Dalian Morgan Refractories Limited	China	70	ç
angsu Morgan Ceramic Core Technology Co. Ltd	China	58	~
1organ Guangzhou Co Ltd	China	100	
10rgan Thermal Ceramics International Trading (Shanghai) Co. Ltd	China	100	
10rgan Kailong (Jingmen) Thermal Ceramics Co. Ltd	China	70	
10rgan Molten Metal Systems (Suzhou) Co. Ltd	China	100	C
10rgan Thermal Ceramics Shanghai Ltd.	China	100	GOVERNANCE
hanghai Morgan Advanced Material and Technology Co Ltd	China	100	Ē
1organ AM&T (Shanghai) Co., Ltd.	China	70	A
	China	100	
10rgan Haldenwanger Technical Ceramics (Wuxi) Co. Ltd	China	51	
ixing Morgan Thermal Ceramics Co Ltd		100	
1organ AM&T Hong Kong Company Limited	Hong Kong		
Assam Carbon Products Limited	India India	28.77	
Ciria India Ltd	India India	70 07.25	
Diamond Crucible Company Limited	India India	87.25	_
1organite Crucible (India) Ltd	India	75	Z
1organ Advanced Materials India Private Limited	India	100	Z
1urugappa Morgan Thermal Ceramics Limited	India	51	
1organite Carbon Kabushiki Kaisha	Japan	100	
hin-Nippon Thermal Ceramics Corp	Japan	50	HINANCIAL STATEMEN
1organ Korea Company Limited	Republic of Korea	92.78	
1organ Carbon (M) Sdn Bhd	Malaysia	100	
Graphite Industriel S.A.R.L.	Morocco	50	
1organite Carbon NZ Limited	New Zealand	100	
1organ Crucible Holdings (NZ) Limited	New Zealand	100	
1organ Donald Brown Ltd	New Zealand	100	
1organ Ceramics Asia Pte. Ltd.	Singapore	100	
Gard-rite Latex (Pty) Ltd	South Africa	100	
Grandtech Industrial Ceramics (Pty) Ltd	South Africa	100	
1organite Ujantshi (Pty) Ltd	South Africa	100	
1organite Industrial Carbon (Pty) Ltd	South Africa	100	
1organite South Africa (Pty) Ltd	South Africa	100	
Refralloy Carbon (Pty) Ltd	South Africa	100	
Ringsdorff Carbon Corporation (Pty) Ltd	South Africa	100	
icantex (Pty) Ltd	South Africa	100	
"hermal Ceramics South Africa (Pty) Ltd	South Africa	100	
1organ Advanced Materials (Taiwan) Co., Ltd	Taiwan	100	
1organite Thermal Ceramics (Taiwan) Limited	Taiwan	88	
Morgan Holdings (Thailand) Ltd	Thailand	100	

continued

#### 44. FIXED ASSET INVESTMENTS continued

Name of undertaking*	Country of incorporation	% shareholding owned by the Group
Morgan Technical Ceramics (Thailand) Ltd	Thailand	100
Morgan Karbon Grafit Sanayi Anonim Sirketi	Turkey	100
Morgan Advanced Materials Industries Ltd	United Arab Emirates	100
Morgan Ceramics Middle East FZE	United Arab Emirates	100

\* Related undertakings include subsidiary undertakings, all significant holdings (being 20% or more interest), associate undertakings, joint ventures and qualifying partnerships.

#### 45. DERIVATIVE FINANCIAL ASSETS AND LIABILITIES

	2015 £m	2014 <i>£</i> m
Derivative financial assets		
Forward foreign exchange contracts non designated	2.9	6.7
	2.9	6.7
Derivative financial liabilities		
Forward foreign exchange contracts non designated	(3.1)	(2.2)
Forward foreign exchange contracts designated as fair value hedges	(0.5)	-
	(3.6)	(2.2)

Fair values are measured using a hierachy where the inputs are:

 $\rightarrow$  Level I – quoted prices (unadjusted) in active markets for identical assets or liabilities,

-> Level 2 – inputs other than quoted prices included within Level 1 that are observable for the asset or liability either directly or indirectly,

 $\rightarrow$  Level 3 – inputs for the assets or liability that are not based on observable market data (unobservable inputs).

The derivative financial assets and liabilities are all measured using level 2 inputs. The fair value of forward foreign exchange contracts is estimated by discounting the future cash flows using appropriate market-sourced data at the balance sheet date.

#### 46. EXPLANATION OF TRANSITION TO FRS 101 FROM FORMER UK GAAP

Reconciliation of equity

		at	l January 2014		at 3	December 2014	
	_		Effect of			Effect of	
		UK GAAP	transition to FRS 101	FRS 101	UK GAAP	transition to FRS 101	FRS 101
	Note	£m	£m	£m	£m	£m	£m
Fixed assets							
Intangible assets	а	_	1.9	1.9	_	2.8	2.8
Tangible fixed assets	а	2.0	(1.9)	0.1	2.9	(2.8)	0.1
Investment in subsidiary undertakings		846.4	_	846.4	870.1	_	870.I
		848.4	_	848.4	873.0	_	873.0
Current assets							
Debtors – due within one year	b	37.7	1.6	39.3	49.4	2.3	51.7
Cash at bank and in hand		25.4	_	25.4	27.0	_	27.0
		63.1	1.6	64.7	76.4	2.3	78.7
<b>Creditors:</b> amounts falling due within one year	b	(59.2)	(2.2)	(61.4)	(121.0)	(2.1)	(123.1)
Net current assets		3.9	(0.6)	3.3	(44.6)	0.2	(44.4)
Total assets less current liabilities		852.3	(0.6)	851.7	828.4	0.2	828.6
Creditors – amounts falling due after							
more than one year							
Amounts payable to subsidiary undertakings		(180.2)	—	(180.2)	(158.3)	-	(158.3)
Employee benefits	С	_	(75.0)	(75.0)	-	(118.8)	(118.8)
Other creditors		_	—	-	(1.3)	-	(1.3)
Borrowings		(49.7)	-	(49.7)	(68.1)	-	<b>(68.</b> ]
		(229.9)	(75.0)	(304.9)	(227.7)	(118.8)	(346.5)
Provisions for liabilities		(2.9)	—	(2.9)	(1.0)	-	(1.0)
Net assets		619.5	(75.6)	543.9	599.7	(118.6)	481.1
Capital and reserves							
Equity shareholders' funds							
Called-up share capital		71.4	—	71.4	71.4	-	71.4
Share premium account		.7	—	.7	111.7	-	111.7
Merger reserve		17.0	—	17.0	17.0	-	17.0
Capital redemption reserve		35.7	—	35.7	35.7	-	35.7
Profit and loss account	b, c	383.3	(75.6)	307.7	363.5	(118.6)	244.9
		619.1	(75.6)	543.5	599.3	(118.6)	480.7
Non-equity shareholders' funds							
Called-up share capital		0.4		0.4	0.4	-	0.4
Shareholders' funds		619.5	(75.6)	543.9	599.7	(118.6)	481.1

#### Notes to the reconciliation of equity

a) Reclassification of Software assets from fixed assets to intangible assets. Under former UK GAAP certain software assets were appropriately classified as fixed assets. The requirements under IAS 38 are different and the same software assets are now classified as intangible assets.
 b) Recognition of derivative financial assets and liabilities at fair value. Under former UK GAAP companies were not required to recognise intercompany derivatives on the balance sheet.

Under IAS 39 these need to be recognised at their fair value on the balance sheet.

c) Recognition of UK portion of pension liability. Under former UK GAAP the pension liability was recognised under FRS 17 Retirement Benefits, which stipulated that if a company is unable to identify its share of the underlying assets and liabilities of the scheme on a consistent and reasonable basis then they can account for the scheme as if it were a defined contribution scheme, recognising only the contribution payable by the company. As a result no recognition of the liability was made on the balance sheet of the Company. Under FRS 101 this exemption is no longer available. Therefore under FRS 101, as the sponsoring employer, the Company has recognised the full defined benefit liability for those plans it sponsors on the balance sheet, which was not previously recognised on the individual balance sheet of any UK company within the Group.

OVERVIEW

### GROUP STATISTICAL INFORMATION

Under adopted IFRSs

	2011 £m	2012 Restated <sup>*</sup> £m	2013 Results before specific adjusting items £m	2014 Results before specific adjusting items Restated <sup>***</sup> £m	2015 Results before specific adjusting items £m
Revenue	1,101.0	1,007.5	957.8	921.7	911.8
Profit from operations before restructuring costs, other one-off items and amortisation of intangible assets	143.4	120.9	119.0	118.0	109.6
Restructuring costs and other one-off items:					
Restructuring costs	(5.6)	(13.3)	(11.3)	(5.9)	(4.1)
Gain on disposal of properties	2.4	0.1	0.8	0.3	0.5
Net pension credit	1.3	_	_	_	-
Profit from operations before amortisation of intangible assets	141.5	107.7	108.5	112.4	106.0
Amortisation of intangible assets	(8.3)	(8.3)	(8.3)	(8.2)	(7.1)
Operating profit	133.2	99.4	100.2	104.2	98.9
Net financing costs	(21.8)	(22.7)	(23.3)	(20.8)	(18.1)
Share of profit of associate (net of income tax)	_	_	_	_	0.3
Profit before taxation	.4	76.7	76.9	83.4	81.1
Income tax expense	(32.6)	(21.6)	(21.1)	(24.7)	(24.2)
Profit after taxation before discontinued operations	78.8	55.1	55.8	58.7	56.9
- Discontinued operations	_	21.0	_	_	-
Profit for the period	78.8	76.1	55.8	58.7	56.9
Assets employed					
Property, plant and equipment	259.8	245.5	241.4	241.0	256.7
Intangible assets	283.3	265.1	249.5	235.3	229.8
Investments and other receivables	10.3	10.0	8.0	10.2	10.7
Deferred tax assets	41.1	40.6	28.2	8.5	4.4
Net current assets	160.1	194.4	132.8	143.2	151.3
Total assets less current liabilities	754.6	755.6	659.9	638.2	652.9
Employee benefits	135.1	166.8	144.6	211.8	204.5
Provisions and other items	304.8	276.7	207.7	236.3	259.7
Deferred tax liabilities	44.5	40.5	33.5	2.4	2.3
	270.2	271.6	274.1	187.7	186.4
Equity					
Total equity attributable to equity holders of the parent Company	229.4	233.8	238.1	151.2	149.8
Non-controlling interests	40.8	37.8	36.0	36.5	36.6
Total equity	270.2	271.6	274.1	187.7	186.4
Ordinary dividends per share	9.3p	10.0p	10.5p	10.9p	II.0p
Earnings per share	46.1	10.0P	10.56	10.76	mop
Basic	26.9p	18.7p	14.8p	2.7p	II.9p
Diluted	25.7p	18.4p	14.7p	2.7p	II.9p
Underlying	29.9p	21.7p	21.5p	22.1p	20.8p
Diluted underlying	28.6p	21.7p	21.3p 21.4p	22.1p	20.8p

\* IAS 19 (revised) Employee Benefits has been adopted from 2013 onwards, with the 2012 comparatives restated accordingly. Figures for 2010-11 have been prepared following the requirements of the previous IAS 19 Employee Benefits and have not been restated for the impact of the new IAS 19 (revised) Employee Benefits.
 \*\* 2014 has been restated for the reclassification of deferred tax assets and liabilities, as detailed in note 13. Figures for 2011-13 have not been restated for this change.

### CAUTIONARY STATEMENT

This document has been prepared for and only for the members of the Company as a body and no other persons. Its purpose is to assist members to assess how the Directors have performed their duties, the Company's strategies and the potential for those strategies to succeed and for no other purpose. Save as would otherwise arise under English law, the Company, its Directors, employees, agents or advisers do not accept or assume responsibility or liability to any third parties to whom this document is shown or into whose hands it may come and any such responsibility or liability is expressly disclaimed. This document contains forward-looking statements that are subject to risk factors associated with, amongst other things, the economic and business circumstances occurring from time to time in the countries, sectors and markets in which the Group operates. These and other factors could adversely affect the outcome and financial effects of the plans and events described. Forward-looking statements by their nature involve a number of risks, uncertainties and assumptions because they relate to events and/or depend on circumstances that may or may not occur in the future and could cause actual results and outcomes to differ materially from those expressed in or implied by the forward-looking statements.

It is believed that the expectations reflected in these statements are reasonable but they may be affected by a wide range of such variables. No assurances can be given that the forward-looking statements in this document will be realised. The forwardlooking statements reflect the knowledge and information available at the date this document was prepared and will not be updated during the year but will be considered in the Annual Report for next year. Nothing in this document should be construed as a profit forecast.

### GLOSSARY OF TERMS

Energy use	Energy from all sources
Cash flow from operations	Group EBITA (as defined below) of £109.6 million (2014: £118.0 million), plus depreciation of £27.1 million (2014: £27.8 million), plus loss on sale of plant and machinery £0.1 million (2014: £0.3 million), plus the decrease in working capital of £12.1 million (2014: less the increase of £10.4 million) less the decrease in provisions (excluding restructuring) and employee benefits of £13.3 million (2014: £15.7 million)
Constant currency	Applying 2015 exchange rates to current year and prior year figures
Group earnings before interest, tax, depreciation and amortisation (EBITDA)	Operating profit before specific adjusting items, restructuring costs and other one-off items, depreciation and amortisation of intangible assets
Group EBITA	Operating profit before specific adjusting items, restructuring costs and other one-off items, and amortisation of intangible assets
Group underlying operating profit	Operating profit before specific adjusting items and amortisation of intangible assets
Like-for-like	Constant currency as adjusted for acquisitions and disposals
Lost time accident (LTA)	Accident which results in one or more days' lost time
Lost time per LTA	Total time lost due to health and safety in the year divided by the number of lost time accidents reported in the year
Net debt	Interest-bearing loans and borrowings, bank overdrafts less cash and cash equivalents
Restructuring costs and other one-off items	Include the costs of restructuring activity and gain on disposal of property
Non-financial KPIs	These are at constant currency and updated to reflect changes in reporting methodology
Regional EBITA	Segment operating profit before specific adjusting items, restructuring costs and other one-off items, and amortisation of intangible assets
Return on operating capital employed (ROCE)	Group underlying operating profit divided by the sum of working capital (which excludes pension liability and provisions) and the net book value of tangible assets. Goodwill and other intangible assets are excluded
Segment profit	Segment profit is defined as Regional EBITA, which is segment operating profit before restructuring costs and other one-off items, and amortisation of intangible assets
Specific adjusting items	See note 6 for further details
Unallocated central costs	Includes plc costs (eg Report & Accounts, AGM, non-executive) and Group management costs (eg corporate head office rent, utilities, staff etc)
Underlying earnings per share (EPS)	Basic earnings per share adjusted to exclude specific adjusting items and amortisation of intangible assets
Underlying profit before tax (PBT)	Operating profit before specific adjusting items and amortisation of intangible assets, less net financing costs, plus share of profit of associate (net of income tax)
Waste	Hazardous and non-hazardous waste, including recycled material
Water use/intensity	Water from all sources, including process, irrigation and sanitary use
Working capital (as used in the ROCE calculation)	Working capital as used in the calculation of ROCE is the sum of inventories, £129.2 million (2014: £126.6 million), trade and other receivables, £174.4 million (2014: £193.9 million), net derivative financial liabilities £(0.3) million (2014: asset of £5.2 million), net assets classified as held-for-sale, nil (2014: £3.2 million), trade and other payables, £(168.6) million (2014: £(165.1) million), plus the net of deferred consideration, third-party dividends payable and other sundry items, £(0.5) million (2014: £0.9 million)

### SHAREHOLDER INFORMATION

#### Analysis of Ordinary shareholdings as at 31 December 2015

		Number of holdings	% of total holdings	Number of shares	% of share capital			
Size of holding	1-2,000	5,664	73.67	3,114,993	1.10			
	2,001-5,000	1,162	15.11	3,762,336	1.31			
	5,001-10,000	409	5.31	2,917,161	1.02			
	10,001-50,000	261	3.40	5,656,160	1.99			
	50,001-100,000	41	0.53	3,005,110	1.05			
	100,001 and above	152	1.98	266,914,228	93.53			
		7,689	100.00	285,369,988	100.00			
Holding classification	Individuals	6,261	81.42	11,518,491	4.04			
	Nominee companies	1,338	17.40	272,555,908	95.51			
	Trusts (pension funds etc)	8	0.11	92,734	0.03			
	Others	82	1.07	1,202,855	0.42			
		7,689	100.00	285,369,988	100.00			
Key dates		(1.01.0)						
6 May 2016	2016 Annual General Meeting Half-year results announced v		anany's wobsite					
27 July 2016	In the interests of reducing pr			isted anvironmental i	mpact			
	the half-year results have bee			ialeu environnientari	mpact,			
Dividend payment dates	1							
27 November 2015	An interim cash dividend of 4	.0 pence per Ordinary s	hare of 25 pence eac	h was paid to shareh	olders registered			
	at the close of business on 6 l		· · · · · · · · · · · · · · · · · · ·					
27 May 2016	Subject to shareholders' approval at the 2016 AGM, a final cash dividend of 7.0 pence per Ordinary share of 25 pence each will be paid to shareholders registered at the close of business on 6 May 2016.							
April 2016 and	Dividend payment dates in re	-		,				
October 2016	Cumulative Second Preference							
Other information								
Capital gains tax	The market values of quoted	shares and stocks at 31 1	March 1982 were:					
	Ordinary shares of 25 pence	each	122.5 pence	2				
	5.5% Cumulative First Prefer		30.5 pence					
	5.0% Cumulative Second Pre							
	For capital gains tax purposes		1		auga Any capital			
	gains arising on disposal will al depend on individual circums	so be adjusted to take a	ccount of indexation a	allowances. Since the	adjustments will			
Share price	The price can be obtained or							
	GB0006027295		and the second sec					
ISIN Code								
Ticker symbol	MGAM							
Company details								
Company name change	The Company changed its na on 27 March 2013.	me to Morgan Advanced	d Materials plc (from <sup>*</sup>	The Morgan Crucible	e Company plc)			
	Following this change, share c valid (replacement share certi existing shareholders).							
Registered office	Quadrant, 55-57 High Street, Windsor, Berkshire SL4 ILP Registered in England No. 286773 Telephone: +44 (0)1753 837000 Fax: +44 (0)1753 850872							
Website	www.morganadvancedmaterials.com The Company's website provides information about the Group including the markets in which it operates, its strategy and recent news from the Group. The Investors section is a key source of information for shareholders, containing details of our financial results, shareholder meetings and dividends, and access to frequently asked questions. Current and past Annual, Half-Year and EHS Reports are also available to view and download.							

### SHAREHOLDER INFORMATION

continued

Company registrars	Capita Asset Services, The Registry, 34 Beckenham Road, Beckenham, Kent BR3 4TU Telephone (in the UK): 0871 664 0300 (calls cost 12p per minute plus your phone company's access charge; lines are open Monday – Friday, 9.00am – 5.30pm, excluding public holidays) Telephone (from outside the UK): +44 (0)20 8639 3399 Email: shareholderenquiries@capita.co.uk Website: www.capitaassetservices.com
	Shareholders with queries relating to their shareholding should contact Capita directly. Alternatively, shareholders may find the Investors section of our website useful for general enquiries.
Share Portal	The Share Portal is a secure online site where you can manage your shareholding quickly and easily, reducing the need for paperwork and providing 24-hour access for your convenience. Through the Share Portal you can view your holding and get an indicative valuation, change your address, arrange to have dividends paid into your bank account and view your dividend payment history. To register for the Share Portal visit <b>www.capitashareportal.com</b> . All you need is your investor code, which can be found on your share certificate or your dividend tax voucher.
Dividend payments	You can choose to receive your dividend in a number of ways. Dividends will automatically be paid to you by cheque and sent to your registered address unless you have chosen one of the options below:
Direct payment to your bank	Cash dividends can be paid directly to a UK bank or building society account. This means that your dividend reaches your bank account on the payment date, it is more secure (cheques can sometimes get lost in the post), you don't have the inconvenience of depositing a cheque and it helps reduce cheque fraud. If you have a UK bank account you can sign up for this service on the Share Portal (by clicking on 'your dividend options' and following the on screen instructions) or by contacting Capita.
International payments service	If you live outside the UK, Capita has partnered with Deutsche Bank to provide you with a service that will convert your sterling dividends into your local currency at a competitive rate. You can choose to receive payment directly into your local bank account or, alternatively, you can be sent a currency draft. You can sign up for this service on the Share Portal (by clicking on 'your dividend options' and following the on screen instructions) or by contacting Capita.
	For further information contact Capita by telephone in the UK on 0871 664 0385 (calls cost 12p per minute plus your phone company's access charge; lines are open Monday – Friday, 9.00am – 5.30pm, excluding public holidays) or from outside the UK on +44 (0)20 8639 3405, or by email (ips@capita.co.uk).
Multiple accounts on the shareholder register	If a shareholder receives two or more sets of AGM documents, this means that there is more than one account in their name on the shareholder register, perhaps because either the name or the address appears on each account in a slightly different way. If you have multiple accounts and would like them to be combined, please contact Capita Asset Services, as detailed above under Company registrars.
Buying and selling shares	Capita Asset Services provide a simple and competitively priced service to buy and sell shares. There is no need to pre-register and there are no complicated application forms to complete. For more information visit <b>www.capitadeal.com</b> or call +44 (0)371 664 0445. Calls are charged at the standard geographic rate and will vary by provider. Calls outside the UK will be charged at the applicable international rate. Lines are open Monday – Friday, 8.00am – 4.30pm, excluding public holidays. This is not a recommendation to buy and sell shares and this service may not be suitable for all shareholders. The price of shares can go down as well as up and you are not guaranteed to get back the amount you originally invested. Terms, conditions and risks apply. Capita Asset Services is a trading name of Capita IRG Trustees Limited which is authorised and regulated by the Financial Conduct Authority. This service is only available to private shareholders resident in the European Economic Area, the Channel Islands or the Isle of Man.
Donate your shares to charity	If you have only a small number of shares which are uneconomical to sell, you may wish to consider donating them to charity, free of charge, through ShareGift (registered charity 1052686), a charity that specialises in the donation of small, unwanted shareholdings to good causes. You can find out more by visiting <b>www.sharegift.org.uk</b> or by telephoning +44 (0)20 7930 3737.
Unsolicited telephone calls and mail	Shareholders in companies may receive unsolicited phone calls or correspondence concerning investment matters If you are offered unsolicited investment advice, discounted shares, a premium price for shares you own, or free company or research reports, please check the company or person contacting you is properly authorised by the Financial Conduct Authority (FCA) before getting involved. Further information about what you should do is available on our website in the Shareholder Centre under Investors.





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