

Advancing materials science

Annual Report 2020

2020 highlights

ADJUSTED PERFORMANCE¹

Revenue

£910.7m

2019: £1,049.5m
2018: £1,033.9m

Group adjusted operating profit¹

£91.7m

2019: £134.2m
2018: £124.8m

Adjusted EPS¹

19.0p

2019: 28.0p
2018: 26.7p

Total dividend per share

5.5p

2019: 4.0p
2018: 11.0p

STATUTORY PERFORMANCE

Operating (loss)/profit

£(1.8)m

2019: £126.1m
2018: £107.3m

(Loss)/profit before tax

£(13.1)m

2019: £109.7m
2018: £94.9m

Continuing EPS

(8.6)p

2019: 25.2p
2018: 20.0p

Continuing and discontinued EPS

(7.9)p

2019: 25.7p
2018: 16.2p

HEALTH, SAFETY AND ENVIRONMENTAL PERFORMANCE

Lost-time accident frequency per 100,000 hours worked

0.18

2019: 0.14
2018: 0.22

Energy intensity MWh/£m revenue

1,057

2019: 1,080
2018: 1,130

1. Throughout the Annual Report, including the Strategic Report, adjusted measures are used to describe the Group's financial performance. These adjusted measures are not recognised under IFRS or other generally accepted accounting principles (GAAP). The Executive Committee and the Board manage and assess the performance of the business on these measures and believe that they are more representative of ongoing trading and facilitate year-on-year comparisons; and hence provide additional useful information to shareholders. Throughout this Report these non-GAAP measures are clearly identified by an asterisk (*) where they appear in text, and by a footnote where they appear in tables and charts. Definitions and reconciliations of these non-GAAP measures to the relevant GAAP measures can be found in the Group Financial Review on pages 43 to 45.

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COVID-19

Throughout the report this symbol is used to denote content related to the COVID-19 pandemic.



There are significant trends shaping our modern world. Resources are becoming scarce and harder to access, and the pace of change is adding to the demand for new advanced materials.

At Morgan Advanced Materials, utilising carbon and ceramics we develop advanced materials to make the world more sustainable, and to improve the quality of life. This purpose drives our people to solve complex customer problems: from managing heat and enabling greener technologies, to supporting improved medical diagnostics and protecting life.

Our purpose 'to use advanced materials to make the world more sustainable, and to improve the quality of life', is underpinned by our safe, ethical and inclusive culture, embraced by our nearly 7,500 employees spanning 30 countries. Working across many industries and in a number of markets, we deliver the materials science and technologies the world needs now.

Our diversified and resilient business supports growth and enables us to achieve long-term success.

OUR STRATEGY

We are a global advanced manufacturing organisation with leading capabilities in three areas: materials science, application engineering and customer focus.

➔ [Read more on page 7](#)

OUR BUSINESS MODEL

Our diversified business model is at the core of our strategy. We operate as two global divisions and five global business units. A strength during the pandemic has been our local and regional approach, enabling us to apply our global skills and capabilities whilst manufacturing locally to our customers.

➔ [Read more on pages 8 to 9](#)

OUR ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) CREDENTIALS

In line with our purpose we are becoming a more sustainable business, while simultaneously helping our customers to also become more sustainable through the products we design and manufacture. We have stretching environmental goals that we are working hard to achieve. At the same time, we are improving social factors to keep our people safe and to ensure we provide meaningful work that contributes to an improved society and enables the communities where we live and work to thrive.

➔ [Read more on page 11](#)

“
In a year of unprecedented change we have remained focused on protecting our colleagues, serving our customers and delivering on our purpose.”

Pete Raby
Chief Executive Officer

“

I am pleased to introduce Morgan's annual report for 2020. In common with many businesses, 2020 for Morgan was a difficult year that presented challenges on a number of fronts.”

Douglas Caster CBE FIET
Chairman



The year was dominated by the effects of the worldwide COVID-19 pandemic. As a global company, no aspect of our activity was untouched. The spread and impact of the virus have been widely reported with national lockdowns impacting global economic activity.

The initial uncertainty of how severe the decline in our markets might have been immediately forced us to focus sharply on conserving liquidity to assure the cash resources to ride out financial impacts on the business. Unfortunately, we were compelled to suspend the payment of dividends so as an indication to shareholders that we understood the gravity of this all directors took a voluntary 30% cut in pay and fees. To demonstrate that we were 'all in it together'. In addition, a 20% pay cut was taken by the executive team. Happily, the Company did not have to rely on any UK governmental financial support despite taking precautions to access such support if it became necessary, and cash husbandry was so effective that by the year end we felt able to resume dividend payments, albeit at a lower level. The Group's diligence in collecting and managing cash resulted in excellent free cash flow performance which underpins the quality of the Group's earnings.

The first imperative was the safety of our people. To this end, regimes including working from home wherever possible, plant disinfection and improved hygiene, the provision of personal protection equipment and safe operator separation were rapidly introduced. Once these protocols were in place, we were able to keep our plants operating, as much of Morgan's output is critical to the continued working of essential industries, such as healthcare, water and energy supply and transport.

In such straitened times, limiting the Group's organic-constant-currency year on year revenue decline to just 11.4% while achieving double digit margins is a testament to the resilience and commitment of our people. I thank all our employees for their hard work, and the perseverance and dedication they have exhibited in the particularly difficult circumstances of 2020.

Driven by the impacts on our markets such as aerospace, automotive and industrial, we took prompt action to contain costs and maximise the utilisation and efficiency of our plants. Inevitably this led to closing underutilised plants through a process of restructuring, of which more will be said in the operating review of this report. This restructuring, which is progressing well and will be completed within a relatively short timeframe, will ensure that Morgan emerges from the current depressed markets in a leaner and fitter state able to benefit more fully from any eventual economic recovery.

GOVERNANCE AND SOCIAL CARE

As Chairman, corporate governance is one of my main concerns. Key to this is keeping in touch with our operating units which we have continued to do via electronic forums. My non-executive colleagues have joined me in 'virtual' meetings with employees at all levels which, in a time of severe travel restrictions, are the next best way of keeping an independent finger on the pulse of the organisation. We were also able to take a view on the mental health impacts of the lockdowns and isolation of working from home and how people were being supported by their local management. We had some interesting and candid exchange of views which we have been able to take up with the Executive Directors, who will be taking action as a result.

We have continued to stress the importance of health and safety as well as emphasising our ethical standards and at all times state the mantra that good governance is key to good business. The Board takes the ESG agenda very seriously and

has created a new role with a Group Environment and Sustainability Director reporting directly to the CEO to lead and implement our ESG agenda throughout the Group.

During the year we have transitioned to new Group auditors with Deloitte taking on the role. This has been a thorough and successful transition with no surprises emerging.

ENVIRONMENTAL

Morgan is an energy intensive business, but our products benefit the environment by making the operations of our customers significantly more energy efficient. Over the last five years we have made steady reductions to our own CO₂ emissions and water consumption. Building on these improvements, the Board has now set an aspiration to align with the UK Government's commitment as a signatory to the Paris Agreement and achieve net zero carbon emissions by 2050, and has set an intermediate target of reducing our absolute scope 1 and 2 CO₂ emissions by 50% by 2030. This will require intense energy efficiency work across our business, and process change: by progressively moving away from fossil fuels and adopting new technologies.

OUTLOOK

With new strains of the COVID-19 virus emerging, the outlook is still uncertain with lockdowns and travel restrictions being maintained around the world. The great hope is the efficacy of the vaccine roll-out but this will take time, well into 2021 in the UK and potentially beyond in other countries. Nevertheless, in the last quarter of 2020 we experienced a rising trend in order intake which has persisted into 2021.

Morgan's strategy implementation and investment in research and development for new products and processes continue. These coupled with the rationalisation already in train give some optimism that progress can be achieved in 2021.

Douglas Caster CBE FIET
Chairman



SECTION 172 STATEMENT

STATEMENT BY THE DIRECTORS IN PERFORMANCE OF THEIR STATUTORY DUTIES IN ACCORDANCE WITH SECTION 172(1) COMPANIES ACT 2006

The Board is committed to the creation of value through sustainable growth. When making decisions and considering key matters of business, the Board considers the implications of its decisions for the long term; takes account of the interests of the Group's key stakeholders and how decisions might impact them; and has regard to the need to maintain high standards of business conduct and our commitment to environmental, social and governance (ESG) matters.

HOW THE BOARD TAKES STAKEHOLDER INTERESTS AND OTHER MATTERS INTO ACCOUNT

All decisions and business conducted by the Board are considered in the context of Morgan's overriding purpose to ensure alignment.

During 2020 the Board reviewed the Group's key stakeholders and confirmed that they continue to be its investors, customers, employees, suppliers, pensioners and pension trustees and communities. The key stakeholders, why they are significant, the main methods used to engage with them, and the issues of interest to the stakeholders are set out on pages 4 to 5.

Further information on the mechanisms used by the Board to engage with key stakeholders, in particular with investors and the workforce, the issues raised by the stakeholders as a result of the engagement and the effectiveness of the methods of engagement can be found on page 4 of the Sustainability and Responsibility Report and pages 50 to 57 of the Corporate Governance Report.

HOW THE BOARD TAKES DECISIONS

A robust governance framework ensures that the right decisions are referred to the Board for consideration. Further information on the governance structures, delegation of authority and how the Board operates is set out in the in the Corporate Governance Report on pages 50 to 57. The Board reviews the Group's principal and emerging risks regularly and takes into account the Group's appetite for risk when taking decisions.

The Board has spent time during 2020 engaging with a diverse cross-section of employees, as well as monitoring and assessing the Group's culture. These insights have informed the Board's discussion when assessing progress in relation to fostering a safe, ethical and diverse workplace. These interactions have also enabled the Board to understand the capabilities of the current and future leadership team and the extent to which employees understand and are aligned with the Group's strategic direction.

The principal matters and key decisions considered by the Board during 2020 are set out on pages 56 and 57 of the Corporate Governance Report.

CONSEQUENCE OF ANY DECISION IN THE LONG TERM

The Board considers the long-term success of the Group when conducting its business, for example, when monitoring the implementation of the Group strategy, approving investments in new product development, approving capital expenditure to upgrade plant and equipment and in overseeing the development of Morgan's people. Information on the Group's purpose and strategy, and how these serve to guide the long-term direction of the Group, is set out on page 7.

COVID-19

The spread of COVID-19 brought into sharp focus the need to act quickly to address the immediate impact, consider the needs of key stakeholders, whilst having regard to the longer-term consequences of decisions taken. A number of significant decisions were taken by the Board as a result of COVID-19:

1. Implementation of Group-wide safety protocols and hygiene measures to protect our people working in our facilities and enable trading to continue in order to fulfil requests from customers for critical products.

How stakeholder interests were taken into account:

- Workforce – The Board ensured that implementation of standard safety protocols across all manufacturing sites was consistent and that guidance issued on safety measures was clear.
- Customers – The Board monitored the reopening of sites where possible in order to fulfil orders of products deemed critical.
- Investors – The swift introduction of safety measures lessened disruption of trading.

2. Suspension of dividend payments on Ordinary and Preference shares and other financial measures to preserve liquidity and conserve cash, and subsequent resumption of dividend payments.

How stakeholder interests were taken into account:

- Investors – The Board determined that it was in Shareholders' interests to take these measures in order to preserve the long-term financial health of the Group.
- Pensioners and pension trustees – The Board took into account the Company's ability to continue to make contributions to the Group's pension schemes.

3. Approval of a Group-wide restructuring programme to improve performance and support long-term growth.

How stakeholder interests were taken into account:

- Employees – The Board considered the restructuring activities taken to be in the interests of employees in order to promote sustainable performance of the Group for the long-term. The Board ensured that executive management provided clear and timely communication of the decisions which impacted specific sites, and that there was meaningful dialogue on the changes between employees, their representatives and management.
- Investors, customers, suppliers, pensioners and pension trustees and communities – The Board determined that the restructuring activities served these stakeholder groups' interests for the longer term.

Further information on these significant decisions can be found throughout this Annual Report: specifically, the Chairman's Statement on page 2 and the CEO Report on pages 6 to 7 provides information on the strategic context; the Review of Operations on pages 32 to 37 contains information on the restructuring programme; the Financial Review on pages 38 to 40 provides information on measures taken in relation to the Group's financial performance; and pages 16 and 17 of the Sustainability and Responsibility section contain information on measures taken to safeguard employee safety in the pandemic.



Our stakeholders

Our stakeholders are key to the delivery of our strategy. Below we set out the many ways we engage with stakeholders and why their engagement matters.

WHO ARE OUR STAKEHOLDERS?	INVESTORS Those who own shares or wish to own shares in Morgan	CUSTOMERS Those who have purchased our products or will do so in the future
WHY OUR STAKEHOLDERS ARE IMPORTANT TO US	<p>Our investors provide capital for our business. We value this commitment and want to ensure investors have a deep understanding of our business, our strategy, the market environment and our governance arrangements.</p> <p>It is important to us that we foster an open and transparent relationship to enable investors to make effective investment decisions.</p>	<p>We aim to deliver great service so that our customers feel valued and choose us as their 'go to' supplier. To do this effectively we need to listen and engage with them.</p> <p>We develop relationships with our customers based on mutual trust and constructive dialogue.</p> <p>We have a diverse customer base across the globe, which we serve directly, through joint venture partnerships and through local suppliers.</p> <p>We are seeing growing demand for advanced materials as customers push the boundaries of technology.</p> <p>We have been working closely with our customers to develop new solutions for their next generation of products and processes.</p> <p>We are providing products that are differentiated from those of our competitors.</p>
WHAT MATTERS TO OUR STAKEHOLDERS?	<ul style="list-style-type: none"> → Capital gain through share price appreciation → Capital return via dividends → Profitability and business growth potential → Quality of governance → Responsibility and fairness → Environmental, social and governance (ESG) factors 	<ul style="list-style-type: none"> → Reliable and consistent service → Quality products → Product and process innovation → Ability to solve complex problems → Application engineering capabilities → How we source our raw materials → Environmental impact of the products we produce
HOW WE ENGAGE WITH STAKEHOLDERS	<p>We engage with our investors directly through the formal presentation of results and through biannual investor roadshows (delivered on a virtual basis given the environment in 2020). We also use these opportunities to talk about the future and the longer-term plans for our business. When asked, we complete investor questionnaires which give a further insight into key aspects of our business performance.</p> <p>We provide a dedicated section on our website which offers timely information on how we are performing and provides guidance on ESG factors.</p>	<p>The relationship with our customers starts from the moment they look to find out about our products. We keep customers updated on the progress of our innovation and new product applications through digital channels.</p> <p>Our sales and service colleagues also keep customers updated on the progress of manufacturing; sometimes working alongside the customer to fine-tune the application engineering process.</p> <p>We also gather key feedback from customers about the service we provide and use this to help improve relationships and secure future business.</p> <p>During 2020 our technology teams continued to make progress in the development of new materials and products. Despite the pandemic, we carried on working with our customers, providing new materials samples, supporting product qualification, cooperating with strong application engineering and introducing new products. Each of our global business units has new products coming to market in the next 12 months, including in the electric vehicles, healthcare, semiconductors and renewable energy markets.</p>

EMPLOYEES Anyone directly employed by Morgan	SUPPLIERS Those who have a direct or contractual relationship with us	PENSIONERS AND TRUSTEES	COMMUNITIES Those who live in areas where we work – for example residents, businesses and charities
<p>Having people who bring a diverse range of talents and perspectives, and who feel engaged in their role, is of paramount importance to our long-term success.</p> <p>Our employees have been instrumental in making Morgan the company it is today. They are key to driving the brand forward and ensuring it remains relevant in the future.</p> <p>We work to attract, develop and retain the right people and ensure they are in the right roles.</p>	<p>We believe in an open and collaborative business approach and seek opportunities for innovation. This collaborative approach is particularly important to ensure a more sustainable supply chain.</p> <p>We aim to use all our resources as efficiently as possible, minimising the impact on ourselves, our suppliers, our customers and the world around us.</p>	<p>After more than 160 years in business, we would not be as strong as we are today without the combined efforts of all those who went before. By keeping our pension commitments, we honour the hard work and dedication of both current and past employees.</p>	<p>Our people live and work within wider communities and relationships with these communities are key in supporting our business for the future.</p> <p>Our relationship with local communities is mutually beneficial, offering us the ideal place to find the talent of tomorrow, while enabling our people to get involved in activities which directly benefit these communities.</p> <p>We seek to build trust by understanding the issues core to our communities, operating responsibly and addressing concerns that are material to them.</p> <p>We aim to create long-term partnerships that drive positive change and help build a more sustainable future through the development and application of advanced materials.</p>
<ul style="list-style-type: none"> → Meaningful roles linked to our purpose → Flexible working → Focus on wellbeing → Career development → A diverse and inclusive culture 	<ul style="list-style-type: none"> → Human rights → Environmental and climate impact → Quality management → Cost-efficiency → Ethical trading policies and sustainable sourcing → Developing long-term relationships 	<ul style="list-style-type: none"> → The commitment of the Company to ensure the pension scheme is fully funded and any deficit reduction plan is maintained 	<ul style="list-style-type: none"> → Our commitment to the local environment → Our conduct as a socially responsible organisation → The positive impact we can have on the community living and working around us → Employment opportunities
<p>The Board is committed to fostering a safe, ethical and inclusive workplace and spends time engaging with a diverse cross-section of employees, as well as monitoring and assessing the Group's culture. These insights help inform the Board's discussions on health, safety and environmental matters, in monitoring progress in relation to embedding ethical conduct and implementation of the Morgan Code, and in strengthening the capabilities of the current and future potential leadership team.</p> <p>At a local level, leadership teams use feedback from 'pulse' surveys, focus groups, pilot groups, manager one-to-one conversations and employee communications to shape engagement activities with employees.</p> <p>The COVID-19 pandemic has resulted in a programme to ensure we are the right size and fit for our key markets in the future. A key principle of the programme has been to keep our people informed and engage them with the process. Although this has sometimes involved difficult discussions, we have worked productively with our people, union representatives and others to keep employee welfare and fairness at the centre of our decision-making.</p>	<p>We treat our suppliers as an extension of our business and therefore expect them to uphold the same high standards we set for ourselves. To achieve this, we are in constant dialogue with our suppliers to address any issues and maintain productive relationships.</p> <p>Our next step, targeted for the end of 2021, is to widen our Morgan Code (a set of principles which govern how we conduct business) to include a new supplier code.</p>	<p>We engage both with current pensioners and those yet to retire through regular pension communications in conjunction with our pension trustees.</p> <p>New employees receive communications about our pension schemes in a bid to promote financial wellbeing.</p>	<p>Our aim is to have a positive impact on the communities we serve, from supporting job creation and skills advancement, to reducing energy and water consumption at our plants. All our efforts and engagements are governed by the Morgan Code, our purpose and our policies on the environment.</p> <p>As our sites and operations are spread across the globe, we have the opportunity to work with many communities. We pride ourselves on engaging at a local level and look to understand each community's priorities and concerns. We also support our employees' involvement in their local community, from charity giving to local fundraising, and from volunteering to health and wellbeing initiatives.</p>



“

In a year overshadowed by external events I am very proud of how our people have pulled together globally and adapted to deliver for our customers, and I remain confident in our strategic direction and trajectory.”

Pete Raby
Chief Executive Officer



2020 was a very challenging year, with the COVID-19 pandemic impacting every part of our business. We saw the initial effects in China in January, with our eight plants in China closed for an extended period over the Chinese New Year holidays. This quickly spread to Europe, the Americas, wider Asia and the rest of the world. During the first half of the year, we saw a small number of plants closed for multi-week periods in each region as local, regional or national governments took steps to control the spread of the virus.

MANAGING THE IMPACT OF COVID-19

The safety of our people has always been our top priority and our immediate focus at the outset of the pandemic was to ensure their safety and wellbeing, as well as the safety of our customers and communities. We implemented a range of measures at all our facilities to protect our employees, including physical changes to layout and people flow, social distancing, requirements for additional protective equipment, and additional hygiene, cleaning and disinfection protocols. We introduced flexible working for all roles that could do so, encouraging working from home where possible.

I am very proud of the way our employees have responded through this crisis. They have shown great professionalism and commitment, adjusting quickly to new ways of working and looking out for one another. It is with sadness that I report that we have lost a small number of employees to the virus, and many employees have lost friends and loved ones. Our thoughts are with them and their families.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE

We continue to work to reduce our environmental impact and deliver robust environmental, social and governance (ESG) practices.

We made further progress in reducing our environmental impact during the year, with total energy use reduced by 11%, total water use reduced by 20% and total waste generation reduced by 27%. These results were particularly pleasing given the inefficiency caused by the pandemic, as we had to stop and start our plants more frequently, in addition to running with lower levels of utilisation. Our percentage of waste recycled declined to 51% (2019: 57%), reflecting changes in product mix (as some of our products have higher recyclable waste than others).

In support of global efforts to reduce climate change I am delighted that we have set an aspiration as a business to reduce our CO₂ emissions to net zero by 2050, in line with the Paris Agreement, with a 2030 goal of reducing CO₂ emissions by 50%. We are a relatively energy-intensive business (although our products are designed to save significant amounts of energy for our customers) and this will be a big challenge for us, but it is one that we commit to wholeheartedly.

From a safety perspective our performance was mixed. Our lost-time accident rate¹ worsened to 0.18 (2019: 0.14) reflecting more lost-time accidents (2020: 29, 2019: 27) and fewer hours worked due to the reduction in business activity. However, our accident rate² improved to 2.46 (2019: 2.66). We remain focused on improving our safety culture and performance through our 'thinkSAFE' programme, and in 2021 we will be rolling out virtual training to our sites as part of our work to improve behavioural safety.

We have continued to reinforce and embed our ethical standards across the Group during the year. We completed 38,400 training courses for 3,218 employees during the year covering our Code of Conduct, anti-bribery and corruption, anti-trust, cybersecurity and data protection, and conflicts of interest. We also had 87 issues raised by our employees through our 'Speak Up' hotline. We have completed investigations into 71 of those, with 16 still under investigation, and for 34 we concluded that there was a substantive issue and action has been taken as a result.

More details of our ESG performance and future plans are included on page 11.

GROUP RESULTS

Trading conditions were very difficult during the year, reflecting the impact of the pandemic on global economies. We took rapid action to reduce our discretionary cost base and focused on protecting our cash position. We also launched a restructuring programme during the year to reduce capacity across the Group, reflecting the sharp reduction in activity levels and the expected lower medium-term volume levels in the aerospace market in particular.

1. A lost-time accident (LTA) is defined as an accident or work-related illness which results in one or more days' lost time.
2. Defined as total time lost due to health and safety accidents in the year, divided by the number of lost-time accidents reported in the year.



Through this programme we are closing eight manufacturing sites. We are ahead of our plans and have increased our targets, aiming to deliver structural cost reductions of £23m per year by 2022 for a cash cost of £30m.

Through our careful management of cost and cash, and the implementation of our restructuring programme, we have contained the profit drop-through on the revenue decline to our goal of around 30% and delivered an improved free cash flow. Against this difficult market backdrop, I am pleased with the resilient performance that we have delivered as a Group.

The results show the improvements to our execution following investment in our capabilities over the last four years and the benefit of our relatively diverse end markets.

- Group revenue in 2020 was £910.7m, 13.2% below the prior year at reported rates and 11.4% lower on an organic constant-currency basis
- The 2020 adjusted operating profit margin was 10.1%, a 270bps decline over the prior year
- On a statutory reporting basis operating loss was £(1.8)m and loss before tax was £(13.1)m (see pages 32 to 40 for more details)
- Group adjusted earnings per share* were 19.0p (2019: 28.0p)
- Net capital expenditure was £28.6m (2019: £54.9m), with investment focused on critical health, safety and environmental improvements, completion of inflight investment plans and select efficiency improvements
- Free cash flow* was £72.4m (2019: £59.2m)
- Net debt* excluding lease liabilities* was £101.0m, with a net debt* excluding lease liabilities to EBITDA* ratio of 0.8x

Overall, our results demonstrate the improvements we have made to the business in the last five years. We are maintaining our long-term investments in research and development, sales and other infrastructure to support the future growth of the business, and we are well positioned to grow quickly and expand our margins as our markets recover.

STRATEGY AND PURPOSE

Before the outbreak of the pandemic our business performance was on track and our strategy was delivering. We made further progress with the implementation of our strategy during the year:

- We continued to enhance our sales effectiveness, through further deployments of our customer relationship management (CRM) tool, its integration into our sales and pipeline management processes, completion of sales training and further pricing work.

- We have continued to progress our technology and product developments, with new products in early-stage trials with a number of customers. We have seen some delays to new product launches as our customers were impacted by the pandemic, but we expect those to pick up pace in 2021 as markets recover.
- While plant activity has been somewhat disrupted, we have made further improvements to operational performance and operating costs through the deployment of lean production techniques, Kaizen events and procurement improvements.
- We have completed our in-flight leadership development programmes with a very successful series of virtual events, and completed a number of key appointments to strengthen our leadership teams.

Given today's uncertain global outlook, however, we recognise the importance of agility and we remain alert to the myriad of short and long-term changes that could impact our business. We are also guided by our purpose: a purpose which is increasingly relevant, and guides our decision-making and approach to business, and a purpose which is helping us to better engage our people.

OUTLOOK

Looking forward, we saw order momentum improving steadily during the fourth quarter of 2020 and we are expecting the business to return to growth from the second quarter of 2021, with the pace of recovery dependent on vaccination progress and virus containment in the large industrial geographies. Morgan is well placed to grow over the medium term, as the benefits of our capability investments support faster growth and margin expansion, with margins further supported by the structural cost reductions we are delivering through our restructuring programme.

Our technology teams have continued to make progress with the development of new materials and products. We are working with our customers, providing new materials samples, supporting product qualification and facilitating the introduction of new products. Each of our global business units has new products coming to market in the next 12 months, including in the faster growing clean transportation, healthcare, semiconductor and clean energy markets.

I would like to thank our employees for their engagement, care and support in 2020. On behalf of everyone at Morgan, I hope that you, our shareholders, and your loved ones keep safe and healthy as we navigate these extraordinary times.

Pete Raby
Chief Executive Officer

STRATEGY AND PURPOSE

We have a strategy to make sure that we are the leaders in our field, with the customer and materials insight to apply our capabilities quickly and effectively.

OUR STRATEGY

Our strategy builds on our strengths and focuses the Group on scalable businesses in attractive markets, and on the development of three core capabilities:



OUR PURPOSE

Our purpose is to use advanced materials to make the world more sustainable, and to improve the quality of life. This purpose guides our actions: it underpins our work to reduce our environmental impact, informs how we treat our people, and ensures we fulfil our responsibility for good corporate governance.

We deliver on our purpose through the products that we make and the way that we make them.

- We improve the quality of life by supporting medical diagnostics with our power tubes in medical scanners. Our feedthroughs are at the core of cochlear implants and our seals are used in blood pumps. These products transform people's lives.
- Our products help keep people safe. We are proud to design fire protection in everything from cars to tunnels, and ships to oil platforms.
- We design and manufacture our products to help customers save energy.
- Our carbon brushes are integral to wind turbines and power generators and enable electrified rail transport. Our ceramic rollers are used to make thin-film solar panels, our insulation is used in solar towers and steam turbines, and our ceramic cores are used to make more efficient industrial gas turbines. These are all products which promote a more sustainable and environmentally secure future for our planet.

Our purpose is to use **advanced materials** to make the world more **sustainable**, and to improve the **quality of life**.

This purpose guides our actions: it underpins our work to reduce our environmental impact, informs how we treat our people, and ensures we fulfil our responsibility for good corporate governance.

We play an important role in society, using our deep materials science capability and process knowledge to solve customer problems and deliver on our purpose.

→ **WE SUPPORT THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS**

→ **OUR ASPIRATION IS TO BE A CO₂ NET ZERO BUSINESS BY 2050**

We utilise our distinct competencies...



Our strategy builds on our strengths and focuses the Group on scalable businesses in attractive markets.

We have three core capabilities:

- Materials science
- Application engineering
- Customer focus

We serve markets that are growing and where we have room to grow, and where our customers value our differentiated products and services.

The Group's products are produced within two global divisions and five global business units.

Thermal Products division, organised in two global business units:

Thermal Ceramics

Molten Metal Systems

Carbon and Technical Ceramics division, organised into three global business units:

Electrical Carbon

Seals and Bearings

Technical Ceramics

To service markets ranging from industrial to healthcare.



Our thermal products are used in high-temperature industrial processing of metals, petrochemicals, cement, ceramics and glass, and by manufacturers of equipment for automotive, marine, aerospace, and domestic applications in insulation and fire protection.

Our electrical carbon products are used in the rail industry, for power generation, in the mining of iron and steel and to enable wind power generation.

Our seals & bearings products are used in pumps for industrial and domestic use, or other sealing applications. We use advanced carbon/graphite, silicon carbide, alumina and zirconia materials to engineer lightweight, low-friction bearings and seals.

Our technical ceramics products are used in selected segments of the electronics and semiconductor, energy, healthcare, industrial, petrochemicals, security and transport markets, typically in close collaborative customer relationships.

Our products deliver on our purpose...



We manufacture advanced ceramic materials, products and systems for thermal insulation in high-temperature environments.

We engineer systems for the safety of people and equipment in demanding applications. Our products help customers, especially those operating energy-intensive processes, to reduce energy consumption, emissions and operating costs.

We manufacture an extensive range of high-performance, energy saving crucibles and foundry consumables for non-ferrous metal melting applications.

We produce a wide range of products which are used to transfer electrical current between stationary and rotating or linear moving parts in motor, generator, and current collector applications.

We create high-performance self-lubricating bearing and seal components, used predominantly in pumps.

We engineer high-performance functional and structural ceramic materials, components and sub-assemblies to address customer-specific technical challenges.

Contributing to the economy and supporting an improved society for our people, customers, and investors.



The economic value we generate includes wages to our people, purchases from local and global suppliers, taxes, and dividends, in addition to indirect benefits from expenditure by our suppliers, customers and employees.

Societal benefits come from our treatment of our people and communities, and the interaction we have with our environment through the products we design and manufacture, (products which make more efficient use of resources and can improve the quality of life).

TO FIND OUT HOW

our people work with our communities visit our website at www.morganadvancedmaterials.com/community

TO FIND OUT MORE

about our products and services visit www.morganadvancedmaterials.com/whatwedo

NON-FINANCIAL INFORMATION STATEMENT

The information which follows is intended to explain our non-financial information, the relevant Group policies, the due diligence processes we follow to embed these policies and their effectiveness.

Our business model on pages 8 and 9 provides an insight into the key resources and relationships that support the generation and preservation of value within Morgan.

	Policies	Due diligence in pursuance of policies	Outcome of policies and impacts of activities	Related principal risks
ENVIRONMENTAL MATTERS	Our Environmental Policy sets out the Group's commitment to the protection of the environment in the communities where we operate, work and live. The policy sets out our intention to reduce energy and water use, reduce our dependence on natural resources, and the aim to maximise the positive impact of our products. Detailed information on implementation of our Environmental Policy is set out on pages 12 to 15 of the Sustainability and Responsibility section.	<ul style="list-style-type: none"> → Data gathering on GHG emissions and our environmental KPIs → Our submission to CDP → Annual self-certification → Internal audit processes. 	See pages 12 to 15 of the Sustainability and Responsibility section for information on our GHG emissions, and progress in 2020 in respect of CO ₂ intensity, total energy use, water use and withdrawal, and waste intensity and waste generation. Minimising our environmental impact helps us to attract talented employees and to win new business from customers.	See pages 26 to 31 of the Risk Management section.
EMPLOYEES	<p>The EHS Policy is designed to promote a culture of zero harm for our employees, contractors and visitors and to pro-actively eliminate and control health risks.</p> <p>A detailed description of our safety programme and safety performance is set out on pages 16 and 17 of the Sustainability and Responsibility section.</p>	<ul style="list-style-type: none"> → Audits under the EHS programme → Annual self-certification process → 'Speak Up' hotline → All other applicable regulatory reporting. 	<p>Our KPI in relation to Lost Time Accident Frequency is set out on page 25.</p> <p>Our safety performance is set out in detail on pages 16 to 17 of the Sustainability and Responsibility section.</p>	See page 28 of the Risk Management section.
	The Group has an overarching policy designed to attract, retain and engage talented people and support an inclusive, safe and ethical workplace. The Group policy is supplemented by a wide range of detailed policies specific to the business or jurisdiction.	A detailed description of the methods used to support the Group's people policies is set out on pages 18 to 21 of the Sustainability and Responsibility section.	<p>Our performance in relation to our KPI on employee retention is set out on page 25.</p> <p>Our workforce composition and information on gender diversity is set out on page 21.</p>	The attraction, retention and engagement of people is not considered a principal risk.
SOCIAL MATTERS	We do not have formal policies on community engagement, but employees are encouraged to support their community through a range of activities, for example volunteering and fundraising for good causes.	Activities are reported internally, including on our social media platforms.	Employees are more motivated and feel connected to their local environment. The local community supports Morgan and views us as a responsible employer.	Although not a principal risk, social risk, and specifically potential difficulties in recruiting to replace an ageing direct workforce in parts of the business, is an emerging risk. See page 26 of the Risk Management section.
HUMAN RIGHTS	Our Human Rights Policy establishes our commitment to protect the human rights of everyone who works for the Company and all those who have dealings with us. Supplemented by the Morgan Code.	<ul style="list-style-type: none"> → Monitoring of compliance with the Morgan Code. → Due diligence processes associated with new suppliers and our supply chain. → Publication of our Modern Slavery Statement on our website. → More information is contained on page 23 of the Sustainability and Responsibility section. 	No incidents of human rights abuse or modern slavery were identified during 2020.	See page 31 of the Risk Management section.
ANTI-BRIBERY AND ANTI-CORRUPTION	Bribery Corruption and Facilitation Policy, Ethical Trading Policy, Conflicts of Interest Policy, the Morgan Code. Together these policies seek to prevent bribery and ensure that our business is undertaken in an ethical manner and in compliance with all applicable anti-bribery and anti-corruption laws. More information on the policies and processes to prevent bribery and corruption are contained on page 23 of the Sustainability and responsibility section.	<ul style="list-style-type: none"> → Detailed procedures in place designed to prevent anti-bribery and anti-corruption, supported by explanatory manuals and the ethics & compliance programme of work. → Regular training for relevant employees is undertaken. → Any reports of breaches in compliance are investigated, reported to the Audit Committee and appropriate action is taken. → A description of the control environment, the internal audit function and the processes for the review of investigations by the Audit Committee are set out in the Report of the Audit Committee on pages 58 to 62. 	<p>During the year 3,218 relevant employees participated in the Group's ethics e-learning programme, which included specific training modules on bribery and corruption. A 99% completion rate was obtained.</p> <p>87 reports were made to the Group's whistleblowing hotline during 2020, including reports on concerns relating to potential unethical conduct. The reports varied in their nature and materiality, with certain matters requiring the support of external advisers and giving rise to disciplinary action against employees for breaches of Group policies.</p>	See page 31 of the Risk Management section.



OUR APPROACH TO ENVIRONMENTAL, SOCIAL AND GOVERNANCE

As we further develop our management of environmental, social and governance (ESG) factors, we have appointed a Group Director responsible for environment and sustainability. That individual leads our efforts to define priorities, set targets, establish plans and track and communicate progress.

TO FIND OUT MORE

about our commitment to the UN Sustainable Development Goals visit our website at www.morganadvancedmaterials.com/UNSDG



At the end of 2020, the Group Executive Team went through a process to define Morgan's ESG priorities through to 2030. In order to identify material and emerging issues we performed a dual materiality assessment that included a review of more than one hundred ESG topics and provided an opportunity for our employees to express their views via a survey. Dual materiality speaks to the fact that risks and opportunities can be material from both a financial and non-financial perspective. The internal insights gleaned were then mapped against external stakeholder priorities. These were captured through a comprehensive data-driven process for monitoring external risks, including peer corporate reports, mandatory regulation, voluntary regulation, and public opinion gathered from news and social media outlets.

These inputs were used by the Executive Team and the Board to define our ESG priorities (as shown below):

Moving forward, we are using real-time analytics on strategic, regulatory and reputational risks and opportunities, to strengthen our understanding of ESG, geopolitical, technology and emerging issues. Everything we do is underpinned by the highest ethical standards.

In the latter part of 2020, we introduced energy teams to many of our sites, allowing us to continually review and improve upon our position. These teams are looking to further reduce Scope 1 and 2 Greenhouse Gas emissions as part of our emission reduction programme. From 2021, GHG emissions will be tracked and reported monthly. We are also looking to develop strong relationships and a collaborative approach with suppliers to focus on Scope 3 emissions (raw materials emanating from our supply chain).

ESG PRIORITIES

	Our aspiration	Our 2030 goals ²
<p>PROTECT THE ENVIRONMENT</p>	<ul style="list-style-type: none"> → A CO₂ net zero business by 2050¹ → Use water sustainably across our business <p><small>1 Excludes indirect emissions generated by our supply chain, distribution network and employee travel.</small></p>	<ul style="list-style-type: none"> → 50% reduction in Scope 1 and Scope 2 CO₂ emissions² → 30% reduction in water use in high and extremely high stress areas → 30% reduction in total waste usage <p><small>2 Reduction targets shown are compared to a 2015 baseline.</small></p>
<p>PROVIDE A SAFE, FAIR AND INCLUSIVE WORKPLACE</p>	<ul style="list-style-type: none"> → Zero harm to our employees → A workforce reflective of the communities in which we operate → A welcoming and inclusive environment where employees can grow and thrive 	<ul style="list-style-type: none"> → 0.10 lost time accident rate → 40% of our leadership population will be female → Top quartile engagement score

ENVIRONMENT

At Morgan we are committed to a sustainable future. Our aim is to ensure that our products and manufacturing processes are designed, built and managed in a way that enhances their value to society and our environment.

With our purpose at the heart of what we do, we are dedicated to helping our customers manage and reduce heat, enabling green energy generation and electrification for cleaner public transport, and reducing CO₂ emissions.

Morgan's products can be found in a number of renewable technologies today. For example, our Electrical Carbon business has partnered with customers in the wind power market to produce customised parts and bespoke systems which operate more efficiently, while reducing overall maintenance and costs.

In the US, our Technical Ceramics teams in Massachusetts and California have collaborated to eliminate TCE, an industrial solvent previously used in cleaning parts. Through this effort we have reduced our environmental impact, improved working conditions for our people and removed a significant volume of raw materials from the process.

How we use resources matters to us. As part of our aspiration to be a net zero CO₂ business by 2050, in line with the Paris Agreement, we have set an intermediate goal to reduce our absolute scope 1 and 2 CO₂ emissions by 50% by 2030. We have ambitious water use reduction goals, targeting a 30% reduction in total water use by 2030, and a 30% water use reduction in areas of high and extremely high water stress by 2030. We have programmes in place to deliver against these goals and have additional targets in place for waste reduction and recycling.

TO FIND OUT MORE

Visit our website to learn more about how we are becoming a more sustainable business www.morganadvancedmaterials.com/sustainablebusiness



50% reduction

In support of global efforts to reduce climate change, we have made the commitment to reduce our Scope 1 and 2 CO₂ emissions by 50% by 2030, as part of our aspiration to be a net zero CO₂ business by 2050. As a relatively energy-intensive business this presents a huge challenge for us, but we are committed to improving our environmental impact.

OUR PROGRESS IN 2020

Our approach to sustainability continues to evolve as we encompass more and more elements related to our operations, processes and products.

The Group achieved improvements (as compared to 2019) in the following environmental metrics:

- CO₂ intensity improved by 4% and absolute CO₂ reduced by 15%.
- Total energy use reduced by 12%, with a 1% reduction in overall energy intensity.
- Water use intensity improved by 8%, while total water withdrawal was reduced by 20%.
- Waste intensity improved by 17%, while total waste generation improved by 27%.

However, as a Group we did not achieve our full recycling targets in 2020. Total recycling efforts were reduced from 56% in 2019 to 50% in 2020. Our efforts were in some part dampened by the COVID-19 pandemic, resulting in restricted recycling opportunities (for example, some recycling providers ceased operating) across the globe. It is also the case that during the pandemic several of our sites were shut down temporarily, resulting in less waste generation, less energy use and less water usage.

As part of our continuous improvement commitment in environmental management, we apply 'lean' principles to our processes, resulting in year-on-year improvements in all Group environmental metrics. We are constantly evaluating and improving our operations to optimise energy efficiency, and we are reducing our overall consumption of fossil fuels and standard electricity through the utilisation of renewable energies.

USE OF ENERGY IN OUR MANUFACTURING

During 2020 we focused on driving energy efficiency improvements within our operations through process efficiency. Sites continued converting fluorescent and high-energy intensity lighting to LED lighting. Furnace melt efficiency and heat containment within our kilns, furnaces and ovens also improved. Overall, these projects have not only provided an increase in energy efficiency but have also led to enhanced safety and a lower environmental impact.

Furthermore, instead of relying on master-metering systems, we invested in and installed additional energy meters. This approach allows us to monitor individual buildings and energy-intensive equipment in order to identify efficiency improvements, target energy use reductions and identify retrofitting opportunities.



WATER FOOTPRINT

We are reducing our water usage through investment and employee engagement programmes.

Based on a three-year average (2018-2020), our Thermal Ceramics site in Augusta, Georgia, US accounts for 44% of all water use across the Group. In 2020 we therefore introduced an improved water monitoring system, which has allowed us to better track and control high water use areas within the site. We have invested in and installed additional water meters, improving efficiency and water recycling opportunities. This one site has reduced its absolute water use (m³) by 51% and water intensity (m³/£k) by 42% as compared to 2016.

At our facility in Stourport, UK water used in production processes comes from on-site wells. After engaging engineers to evaluate and control the amount of water used by each process, total water usage has been brought down by 20%. Water flow (used to cool our presses) is down by 30% as compared to 2019. Even greater reductions are expected in 2021 when the additional controls see a full-year effect.

Our CDP (a global disclosure organisation for investors, companies, cities, states and regions) Water Security submission, available at www.cdp.net, contains extensive disclosure on our water risks, opportunities, impacts and mitigating actions.

To further preserve our natural resources and reduce our environmental impact, we are also focusing on water reductions in areas of high or extremely high-water stress. Water withdrawal in water stress areas accounts for 5-6% of our total water withdrawals. Water management plans will be integrated into regular facility assessments to proactively engage our workforce in reduction activities in order to address water-related issues within the watershed of these local communities.

WASTE

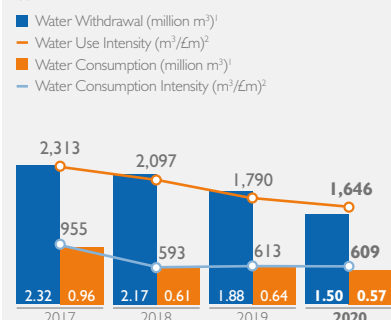
Waste generation improvements have been made at several sites, through an increased focus on waste segregation and by improving waste by category. This allows each site to better understand its waste streams in order to evaluate improvement opportunities. With a continued focus on improvements in production scheduling, and improved planning during production trials, in 2020 our businesses reduced waste intensity by 18% compared to 2019, with an overall waste generation reduction of 27% (on an absolute basis).

In 2020, a 'Go Green' initiative was set up by our UK Seals and Bearings business, to drive lasting change and improvements in our environmental accountability. From reduced energy use, to switching to recycled options and implementing overall waste reduction, the team is working hard to make positive changes to their approach. Since introducing the recycling programme at our Stourport facility, 3.9 tonnes of waste have been diverted from landfill. Additionally, the site added further recycling bins to support and give back to the community.

TO FIND OUT MORE

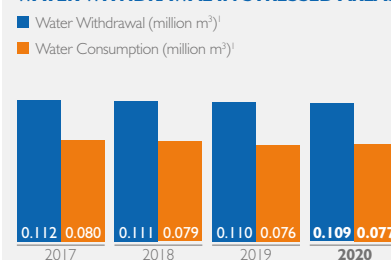
Our CDP, Water Security submission, available at www.cdp.net, contains extensive disclosures on our water risks, opportunities, impacts and mitigating actions.

WATER



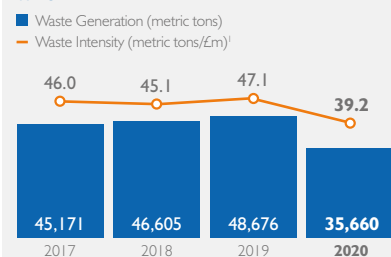
1. Water from all sources, including process, irrigation and sanitary use.
2. Constant-currency* revenue basis, updated to reflect clarifications and changes in reporting methodology to ensure year-on-year consistency.

WATER WITHDRAWAL IN STRESSED AREAS



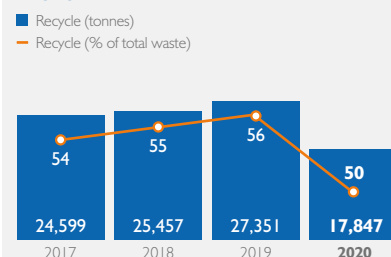
1. Water from all sources, including process, irrigation and sanitary use in countries of high and extremely high water stress as identified by the World Resource Institute.

WASTE



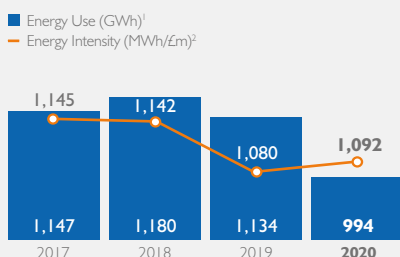
1. Constant-currency* revenue basis, updated to reflect clarifications and changes in reporting methodology to ensure year-on-year consistency.

RECYCLE



1. Energy from all sources.
2. Constant-currency* revenue basis, updated to reflect clarifications and changes in reporting methodology to ensure year-on-year consistency.

ENERGY



1. Energy from all sources.
2. Constant-currency* revenue basis, updated to reflect clarifications and changes in reporting methodology to ensure year-on-year consistency.

ENVIRONMENT *continued*

GREENHOUSE GAS EMISSIONS

Morgan's greenhouse gas (GHG) emissions, such as carbon dioxide (CO₂), are mostly generated by the combustion of fossil fuels at various stages of our manufacturing processes. We track these using a reporting methodology based on the internationally recognised Greenhouse Gas Protocol. This stipulates the source for the global warming potential (GWP) rates that we use to convert non-carbon dioxide emissions into the standard measure of carbon accounting, i.e. carbon dioxide equivalents (CO₂e). The Group uses emission factors for standard grid electricity by country and year from the International Energy Agency, together with other factors published by the UK Department for Environment, Food and Rural Affairs, to calculate the CO₂e emissions included in this Report.

To standardise and provide transparency in our reporting, we report GHG emissions for all our manufacturing operations, but provide minimal tracking of our sales offices and warehouses as these have a comparatively small carbon footprint. We disclose our emissions from the combustion of biomass (both process and fugitive emissions) in addition to our emissions from energy use. Our reporting includes the material emission sources from the operations and activities covered by the Group's consolidated financial statements, but excludes 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 (estimated to account for less than 1% of total emissions).

We continue to report climate data to CDP and were awarded a 'C' (awareness) score in 2020, in the climate category. Our score dropped from a 'B' (management) the previous year. A few reasons for the drop in score were noted as our emission reduction target was mistakenly assigned as 2018 instead of 2015 and we did not mention adoption of a science-based approach to target setting and/or set a specifically noted SBTi approved target(s). This will be our focus in 2021. We reported we have target(s) to increase low carbon energy consumption/production, however we did not provide specific details as to what those are. Additionally, we must disclose and report on the % of revenue earned from low carbon product(s). For detailed information on how we calculate our carbon footprint, including Scope 1 and 2 emissions, please download our Climate Change Disclosure statement available at www.cdp.net. Our CDP climate submission also contains extensive disclosures on our climate risks, opportunities, impacts and mitigating actions.

Ongoing modernisation and optimisation initiatives are helping to further reduce our carbon footprint. We are pleased to report that our absolute GHG emissions (~Scopes 1 and 2) are down by 22% compared to 2018 levels and 15% compared to 2019 levels. The composition of our carbon footprint is shown in the table below.

Metric	2018	2019	2020
Tonnes CO₂¹			
Scope 1	163,866	149,084	125,048
Scope 2 ²	202,289	185,499	160,126
Total	366,155	334,583	285,170
Total Energy (MWh)	1,161,389	1,112,597	988,962
Intensity (metric tonnes CO₂/£m)³	356	319	305

1. For Scopes 1 and 2 we report our CO₂ emissions only, not other GHG emissions as these are not material. Carbon emission factors are used to convert energy used in our operations to emissions of CO₂. Carbon emission factors for fuels are provided by the Intergovernmental Panel on Climate Change (IPCC). We report our emissions with reference to the latest Greenhouse Gas Protocol Corporate Accounting and Reporting Standard. Emissions are excluded from steam supplied by two sites in China and one in Europe.
2. Carbon emission factors for grid electricity are calculated according to the 'location-based method', which reflects the average emissions intensity of the grids on which energy consumption occurs (using mostly grid-average emission factor data).
3. For manufacturing, we have selected an intensity ratio based on sales (constant-currency basis). This aligns with our longstanding reporting of manufacturing performance. Emissions from the combustion of biogenic fuels (biomass, coffee husks etc.) within our operations are reported separately to other Scope 1 and 2 emissions, as recommended by the GHG Protocol, and are excluded from our intensity ratio calculation. The data also excludes Scope 3 emissions, and emissions from Company-owned and leased vehicles.

SINGLE-USE PLASTIC

In the second half of 2020, our global Thermal Products division launched an initiative to phase out approximately 500,000 single-use plastic bottles. Sites installed purified drinking water stations and provided our people and contractors with refillable drinking bottles to drive this initiative.



STREAMLINED ENERGY AND CARBON REPORTING

We comply with the Streamlined Energy and Carbon Reporting (SECR) requirements.

We also support the recommendations of the Financial Stability Boards Taskforce on Climate-related Financial Disclosures (TCFD) and will be taking action to implement these.

The table below represents our energy use and associated GHG emissions from fuel and electricity in the UK for the 2018, 2019 and 2020 reporting years, in compliance with the mandatory reporting requirements by the UK Government's SECR policy. The scope of this data includes six manufacturing sites and two non-manufacturing sites based in the UK.

In 2020, the UK accounted for 4% of our global total Scope 1 and 2 emissions, as outlined in our mandatory GHG reporting. Our absolute GHG emissions (Scopes 1 and 2) for our UK operations were down by 22% compared to 2018 levels and 11% compared to 2019 levels.

UK OPERATIONS

	2018	2019	2020
Biogas (MWh)	0	0	0
Natural Gas (MWh)	45,661	42,210	36,253
LPG (MWh)	23	31	24
Fuel Oils (MWh)	0	0	0
Coal (MWh)	0	0	0
Standard Electricity (MWh)	17,705	16,894	986
Green Electricity (MWh)	215	200	14,687
Total (MWh)	63,604	59,245	51,434
Total Scope 1 Emissions (tonnes CO ₂)	8,380	7,750	6,670
Total Scope 2 Emissions (tonnes CO ₂) ¹	4,919	3,818	3,657
Total Emissions (tonnes CO ₂)	13,299	11,568	10,324

1. Carbon emission factors for grid electricity are calculated according to location-based method.

OUR POLICIES AND PROCESSES

Morgan's Environmental Policy sets out the Group's commitment to protect and enhance the environment, to minimise the environmental impacts of our activities and to maximise the positive effects of our products and services. Our Policy is regularly reviewed and is communicated across all sites within the Group and is applied to all businesses worldwide.

Our manufacturing processes have environmental impacts arising from the consumption of resources, air emissions, waste generation and water discharge. We seek to minimise these impacts and to go beyond minimum legal requirements, by focusing on continuous improvement and establishing certified environmental management systems (EMSs) at our operating facilities. Our policy and framework set minimum standards and provide guidance on what is expected of our sites. The policy is regularly reviewed, and our priorities are communicated across all sites within the Group and applied to all businesses worldwide.

Environmental performance is managed at the local level, with top-level oversight by the Group. Guided by our Policy, designated EHS personnel are responsible for compliance with local laws and regulations and for facilitating continuous improvement at a site level. The Chief Executive Officer, global business unit leadership teams and site management teams are responsible and accountable for environmental performance. There are environmental leaders and resources in each of the global business units. Our Group-level environmental management processes include a monthly review of performance and progress in the implementation of our improvement plans by the Executive Committee and business leaders, and regular review of performance by the Board. An audit programme is conducted against the environmental framework, systems and KPIs with a focus on high-risk items.

25% reduction in fossil fuels

We have taken part in the CDP global disclosure programme since 2010. During those ten years we have taken steps which have resulted in a reduction of our CO₂ from fossil fuels by 25% across the Group.

HEALTH AND SAFETY

We are committed to conducting all our activities in a manner that achieves high standards of health and safety for all employees and stakeholders. Our aspiration is 'zero harm' to our employees.

Preventing fatalities and serious injuries continues to be a focus. We are pleased to report that we have had no employee or contractor fatalities in the past five years.

TO FIND OUT MORE

Visit our website to find out more about how we operate and our safety policies www.morganadvancedmaterials.com/safety

WORKING SAFELY DURING THE PANDEMIC

Although our teams have now settled into new ways of working, we have not lost sight of the requirement to always work safely. Every action we take has this ethos at its core.

We have put in place stringent physical and procedural COVID-19 control measures to ensure the safety of our people, contractors and visitors. Every Morgan location provides a COVID-19 secure environment, in line with World Health Organization and local jurisdictional guidance.

In 2020, we were also able to continue our more established global employee involvement activities and delivered three Group-wide employee training topics: manual handling, challenging positively and 'We care, we check'. All of these activities were delivered safely with COVID-19 measures in place, utilising virtual learning where possible and social distancing and enhanced cleaning measures when delivered face to face. The activities were well received by our people and we achieved, for example, 85% completion of our Q2/3 safety topics.

Our traditional safety week was adapted to become a COVID-19 secure safety week. Teams engaged in a week of virtual activities, daily prize draws and 'thinkSAFE' bingo. Our people spent time learning about a host of safety topics, from workplace fatigue to driving safely and education on Morgan's support of the UN Sustainable Development Goals.

Our site teams also pulled together to provide additional supplies of non-medical face coverings for some locations at the start of the pandemic. In-house teams used their facilities to manufacture face coverings and distributed them to other sites within the Group and externally. These were greatly appreciated by our people and organisations in our communities.

Despite the pandemic, we have continued to investigate near misses proactively and generated a safety alert focusing on high-risk activities related to COVID-19. As the pandemic moved across the world, so did this focus. We began in our Chinese and Korean facilities and subsequently rolled out to the wider population in Europe and the Americas. The safety alert generated a number of actions that have been appropriately verified and closed, while others are planned for completion in 2021.

OUR 2020 PERFORMANCE

Our key metric, the lost-time accident (LTA) rate (namely, the number of LTAs per 100,000 hours worked) increased to 0.18. There was a rise in the number of LTAs (+2 vs 2019), but they resulted in a greater LTA rate due to the lower working hours.

We have performed well against leading indicator metrics. Our near miss reporting has been maintained (2.9 per employee vs target of 2.5), our site 'find/fix it' programmes have been very successful with a 99% action closure rate, our audit action closure rate was 84%, and all businesses achieved their visual safety leadership targets.

The Group's lost-time accident frequency in 2020 was 0.18 (2019: 0.14). The number of reported LTAs in 2020 increased to 29 (2019: 27).

	2020	2019	2018	2017
Lost-time accidents¹				
Number of LTAs	29	27	42	73
Lost-time accident frequency²				
LTAs/100,000 hours worked	0.18	0.14	0.22	0.38

1. A lost-time accident (LTA) is defined as an accident or work-related illness which results in one or more days' lost time.
2. Defined as total time lost due to health and safety accidents in the year, divided by the number of lost-time accidents reported in the year.



'THINKSAFE' – OUR BEHAVIOURAL SAFETY PROGRAMME

At the outset of 2020 our focus was the global rollout of our 'thinkSAFE' programme refresh, emphasising our five commitments to safety. The programme (delivered predominantly through group activities) aimed to positively impact our behaviours and drive improved decision-making to reach our aspiration of 'zero harm'. As the full implications of the global pandemic became known, however, we paused this refresh. It is restarting in a COVID-19 secure way in 2021.

POLICY AND FRAMEWORK

Our Health and Safety Policy provides all our locations with minimum standards, advice and guidance. Our minimum standard is based on current requirements from the UK and US legislative codes and associated best practice. If a local in-country standard is higher than these, the sites are required to achieve the local standard. There are a number of key sub-policies. The compliance audit programme is conducted against the health and safety framework, systems and KPIs, with a focus on high-risk items. All our manufacturing facilities are reviewed on a four-year rolling cycle.

TO FIND OUT MORE

Visit our website to find out more about our Health and Safety Policy

www.morganadvancedmaterials.com/policy

POLICY GOVERNANCE

Governance of Policy is achieved through performance monitoring and the management and mitigation of identified risks, to drive continuous improvement in our health and safety performance.

We are committed to providing effective leadership in pursuit of a safe and healthy workplace. The Chief Executive Officer, global business unit leadership teams and site management teams are responsible and accountable for health and safety performance. The Group's Health and Safety Director is responsible for Group direction and the oversight of the Group's strategic programmes. There are health and safety leaders and resources in each of the global business units and their locations.

Our Group-level processes include a monthly review of performance and progress in the implementation of our improvement plans by the Executive Committee, and regular review of performance by the Board.

2021 FOCUS

We have developed and agreed to a five-year health and safety plan that will drive us towards achieving our aspiration of 'zero harm'. The programme focuses on two areas:

1. ACHIEVING CULTURAL MATURITY PRIORITIES FOR 2021

- 'thinkSAFE' refresh – developing and delivering a number of pilot sessions using COVID-19 secure methods and virtual learning. After learning from the pilot, we will roll out the programme globally.
- Capability – we are focusing on strengthening our technical health and safety teams, by providing additional resources and enhancing skills and competence through coaching and training.

2. DRIVING RISK DOWN

Working with a third party, we are constructing a framework and methodology to further improve our approach to managing health and safety risks. We are working hard to identify and control our existing 'known' risks better, while simultaneously working to identify new risks.



Image taken at site during 'safety week'.

SAFETY METRICS

The Group's lost time accident frequency in 2020 was

0.18

2019: 0.14

The number of reported LTAs in 2020 increased to

29

2019: 27



PEOPLE

Our people are responsible for the culture and are the driving force behind our success. In return we aim to be an open and engaging organisation where everyone feels valued and appreciated.

Our key principle is that ‘it is not just what you do, but how you do it that is important’. We use our leadership behaviours and the Morgan Code to guide the actions we take. This helps us to achieve our strategic aim of delivering performance and value creation for our stakeholders.

“

When a customer requested increased volume during the coronavirus pandemic, the site manager worked with the commercial team, customer and operations team to scale volume and deliver for the customer. It was collaborative and engaging in the way the teams came together, all helped by being on the [leadership] programme.”

CULTURE

Our Board and governance systems, aligned to our purpose, safeguard our approach. There is commitment from both the Board and the Executive Committee to demonstrating both the leadership behaviours and the principles of the Code, and this underpins the ‘tone from the top’.

In 2019, Board members met with our people through site visits, development programmes and engagement events. In 2020, due to COVID-19, virtual site-based focus groups were created to ensure the Board was still able to hear direct feedback on our culture and employee engagement.

The Board also received additional resources to help measure and monitor our culture, which included:

- areas of culture highlighted in ethics reporting, including any dismissals as a result of breach of the Morgan Code
- safety and environmental updates and performance metrics
- talent reviews with a focus on key talent retention, employee turnover, diversity and inclusion metrics and initiatives
- updates on training and development programmes – including ethics, leadership development programmes and on-the-job training.

The feedback is giving us a better picture of our culture as a Group.

PEOPLE POLICIES

We support the UN Universal Declaration of Human Rights, and our Human Rights Policy commits us to protect the rights of everyone (who works for us) and all those who have dealings with us. The principles of the Policy cover child labour, forced labour, health and safety, freedom of association, discrimination, discipline, working hours and compensation. The Policy is published on our website.

We do not unfairly discriminate, and we respect human rights. Our employee policies are set locally to comply with local law and are within the overall Group framework. We operate a ‘Speak Up’ hotline which enables individuals who are aware of, or suspect, issues contravening Morgan’s Human Rights Policy, or wider concerns on policy adherence, to report these confidentially. All issues are investigated, individuals responded to, where contact information is given and progress is tracked to conclusion.

We have increased our use of internal social media to reinforce messaging with employees.

UK GENDER PAY GAP REPORTING

We are continuing our efforts to improve equality and transparency across the business.

The UK Government requires gender pay gap reporting for companies with more than 250 employees. In 2020, the average gender pay gap for our UK workforce was 19.4% (2019: 21.5%, 2018: 18.6%, 2017: 24.7%). Although we have achieved a year on year improvement we recognise there is more work to do in this area.

Our gender pay gap exists because a greater proportion of our senior leadership is male; however, the gap has decreased compared to last year. We continue to work hard to increase the number of women we employ, develop and promote, to improve our gender balance and to become a more diverse organisation. For example, we ensure that our candidate lists are diverse when hiring, and we also take gender into consideration when selecting participants for our development programmes.

We are proud that 30% of our leaders are female which is higher than the percentage of women in our workforce.



ATTRACTION AND RETENTION

We need to recruit a diverse range of professionals to help solve our customers' challenges, including materials scientists, application engineers, functional specialists and salespeople. We are evolving our strategies for recruiting and developing talent, to promote our culture and to ensure diverse representation across the Group. This year, we have identified diverse talent in disciplines which are historically male dominated, assisted by an improved capability for direct sourcing. Our successes include hiring female engineers in Quality and IT project management in the US, and female European IT delivery leaders.

INCLUSION

We promote equal opportunities for all employees and job applicants, and do not unlawfully discriminate on the grounds of gender, pregnancy/maternity leave, marriage/civil partnership status, gender reassignment, race, disability, sexual orientation, age, religion or belief.

We make reasonable adjustments to accommodate any employee who may have a disability within the meaning of all global equality legislation, and where the Company is aware of such disability.

See our Board Inclusion & Diversity Policy on page 54.

TO FIND OUT MORE

To hear from our people and find out more about their stories, visit our website at www.morganadvancedmaterials.com/people

DEVELOPING OUR PEOPLE

We want every employee to perform at their best, reach their full potential and feel rewarded for what they do. In 2020 each employee received on average 8.0 hours of training (2019: 14.1, 2018: 17.0 hours). Although our face-to-face training per person has decreased (in part due to the pandemic), we have widened our virtual learning offering across our employee population. Specific training on enhanced protective measures to combat the COVID-19 has been prioritised. In addition, we have provided wider access to e-learning resources, which employees can utilise on an ad-hoc basis to develop. These resources are aligned to role and career aspirations.

We also identify and develop individuals with the potential to take on bigger or more complex roles in the future, and in 2020 we expanded our succession planning scope. We continue to review our senior leadership population, as well as looking further down and across the organisation. We identify successors with the potential to take on senior or middle leadership roles in the near term, as well as those individuals (with potential) earlier in their career.

In 2019 we launched two global leadership programmes – Catalyst and Ignite – to drive greater global consistency in leadership behaviours and improve alignment to our future capability needs. In 2020 we adapted these programmes to run virtually to enable the development of participants to continue.

Participants having completed the programmes, have developed greater alignment to our strategy and purpose, have expanded their network and are demonstrating enhanced leadership capability and resulting business impact. Thirty-eight per cent of participants have been promoted or have expanded their roles thanks to their involvement in the programmes. Externally we have also received recognition, winning a Silver award at the Learning Technologies Awards in November 2020.

We have also continued to support leadership and management development through promotion of our global e-learning platform. With significantly more of our people working from home, use of this platform has increased as a way to continue employee development. Over a six-month period in 2020, over 1,200 courses were completed.

Our supervisor training is similarly being upgraded to run virtually, or socially distanced if face to face. In 2021, we will also increase the support for line managers of programme participants, to ensure that supervisor learning is embedded, applied successfully in the workplace and the return on investment realised.

STRENGTHENING AND ENGAGING OUR LEADERSHIP TEAMS THROUGH 'VIRTUAL' LEARNING

HR Manager Monika is developing her leadership skills remotely, using our next-generation digital learning system. Morgan's new remote learning programmes have provided an accessible development opportunity for leadership teams in Morgan during 2020.

Monika commented on her recent experiences: "Online learning has helped me to develop my leadership capability, teaching me how to effectively articulate a vision that motivates people and drives business results."



PEOPLE *continued*

REMOTE WORKING AND LEARNING

Our Global Product Manager, Gaurang, was one of the first to take part in our new approach to learning, adapted for the pandemic. Reflecting on the realities of learning while all your family is also working from home, Gaurang shares his experience.

“We are living in an era of ‘forced change’, so the idea of remote learning sounded difficult at the beginning. As we have slowly caught up with the realities of the new normal, the digital world has gained more popularity. With each member of my family occupying a different room in our home to work virtually every day it was difficult to start with, but slowly we have acclimatised ourselves.

When I was nominated for online training, as part of my home-working, I realised that this could be an ‘in-demand skillset’ and I was keen to equip myself for the future. I found the tool very flexible, allowing me to learn at my own pace and challenge myself with new chapter tests and topics. My excitement of scoring highly for each chapter motivated me, as it reminded me of my university days.

My nomination to the training, alongside my fellow mentor group, made me feel excited about the journey. Throughout the experience I have learned valuable project management skills which will make me more efficient and effective in my project execution.”

PERFORMANCE MANAGEMENT AND REWARD

Since 2020, all employees in professional roles now participate in our globally consistent performance management process. This process measures both what is achieved and how it is achieved, through assessment against our leadership behaviours. We set clear expectations for our leaders and managers, aimed at driving a culture of constructive feedback, and we provide development coaching to improve performance in role. Our employees in manufacturing roles follow a job-based approach to setting expectations and feedback.

The principle of pay for performance underpins our compensation approach and we set compensation levels using external benchmarking and relevant commercial considerations (i.e. that are both competitive in the countries in which they operate and affordable). We offer short-term performance incentives globally to managers and to technical and functional experts.

The Executive Committee and senior management also have long-term incentives tied to business performance. At manufacturing site level, most sites offer incentives to their people, with payments based on meeting locally-set performance targets. We regularly review bonus arrangements and benefits to ensure they encourage and reward commercial and personal performance.

ENGAGING OUR EMPLOYEES

Effective engagement enables our employees to contribute to improving Morgan's business performance. We keep employees informed about what is happening across the business, including Company results, major business decisions, and other matters which affect them. We seek to maintain constructive relationships with all trade and labour unions across the geographies in which we work.

In 2020, the COVID-19 pandemic sharply elevated the need for strong employee communications and two-way feedback for our people. As a result, we provided regular updates using a variety of communication channels and media, to keep our people updated on our mitigating actions to deal with the pandemic. Our principle has been to reach our people first to discuss the impact on the business of what is happening locally and globally. To address any concerns at the height of the pandemic, the executive team created personal videos, recognising the situation as it unfolded.

To better understand how our people feel about working at Morgan, we conduct formal biennial employee engagement surveys. The overall employee engagement score from our last survey, in 2019, was 55%. Our people highlighted that they wanted us to focus on connecting them better with the direction our Company is taking, on improving our infrastructure to support greater collaboration, and on supporting further career development.

In 2020 we therefore increased our efforts to engage with employees and in 2021 we will be communicating across the organisation on our future direction and aspiration. In addition, virtual development resources were made more widely available and we also increased the variety of materials available in other languages. In 2021, we will conduct the next iteration of our engagement survey to identify areas of improvement and those where continued focus is required.

In 2020, we used online internal polls and sent out short questionnaires to gather more personal feedback about how our people were feeling as a result of the pandemic. In addition, our leadership community received monthly briefings from the executive team, where they were also able to share their feedback and provide critical challenges.

The pandemic has impacted the end-markets we serve. As a result, we have undertaken a restructuring programme which has led to a decline in our workforce overall. Throughout our principle has been to keep our people informed and engage them in the process, and we have worked productively with employees, union representatives and others to keep employee welfare and fairness at the centre of our decision-making.

“

After attending the leadership development programme:

“I have modified my meeting structure to incorporate more time with individuals so that we can spend time discussing their goals and interests. We work as a team to align the required project tasks with individuals’ needs. Overall, it has helped to improve the team.”



WORKFORCE BY GEOGRAPHY

Number of employees as at 31 December 2020

US

2020

31.1%

2019: 32.8%
2018: 32.7%**OTHER EUROPE**

2020

19.7%

2019: 18.0%
2018: 18.2%**CHINA**

2020

14.8%

2019: 14.2%
2018: 14.8%**REST OF WORLD**

2020

13.8%

2019: 12.8%
2018: 12.6%**UK**

2020

9.1%

2019: 9.5%
2018: 9.8%**OTHER NORTH AMERICA**

2020

9.0%

2019: 10.1%
2018: 8.9%**SOUTH AMERICA**

2020

2.5%

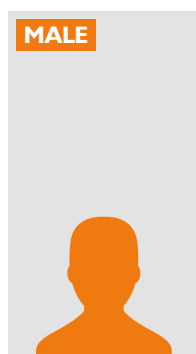
2019: 2.6%
2018: 3.0%**TOTAL WORKFORCE**

2020

7,466

2019: 8,560
2018: 8,720**WORKFORCE BY GENDER**

Members as at 31 December 2020

MALE

Board

4

Male 57%

Executive Committee

6

Male 67%

Senior leaders

48

Male 73%

All leaders
(includes Executive
w/o CEO/CFO plus
2nd to 4th tier)

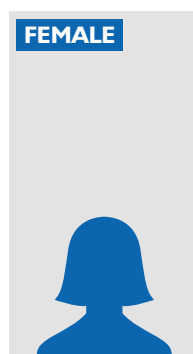
315

Male 70%

All employees

5,450

Male 73%

FEMALE

Board

3

Female 43%

Executive Committee

3

Female 33%

Senior leaders

18

Female 27%

All leaders
(includes Executive
w/o CEO/CFO plus
2nd to 4th tier)

132

Female 30%

All employees

2,016

Female 27%

WELLBEING, COMMUNITY AND ETHICS

At Morgan we recognise the importance of our people, and we strive to support their wellbeing. We have built up a grass-roots wellbeing programme called 'Better You, Better Life', which supports our purpose of improving the quality of life. In a similar way to our Morgan safety week, the programme runs activities across the Group to promote healthy choices and encourages our people to take part.

THE IMPORTANCE OF WELLBEING

With the uncertainty that accompanied COVID-19, we also kick-started an awareness programme to support better mental health. We provided resources and links to charities and organisations across the globe, and we started a conversation with our people on the importance of recognising mental health at work. In 2021, we are looking to train our first mental health first-aiders and provide further support to our sites and remote employees.

SUPPORTING OUR COMMUNITIES

We aim to have a positive impact on the communities we serve, from supporting job creation and skills advancement to reducing energy and water consumption at our plants. All our efforts and engagements are driven by our Morgan Code, our purpose and our Group policies.

As our sites and operations are spread across the globe, we have the opportunity to work with many communities. We get involved at a local level and look to understand each community's priorities and concerns.

We also pride ourselves on having some of the most passionate and inspiring people working at Morgan. Not only do our people have a real love of science, maths and technology, but many also follow that passionate spirit through into other aspects of their lives – by giving back to their local communities.

We want our people to have the freedom to support what they care about most. We share these stories through our internal social media platform, Yammer, where you will often see the generous spirit and nature of our employees displayed: from bake sales to cultural celebrations, and from charity donations to sponsorship events.

TAX

Morgan has approximately 75 manufacturing sites across more than 30 countries and has approximately 7,500 employees. The Group's business activities incur a substantial amount and variety of taxes including corporate income taxes, excise duties, employment and other taxes. The Group also collects and pays employee taxes and other indirect taxes such as VAT.

Morgan is committed to complying with tax laws in the jurisdictions in which we do business. We work closely with tax authorities and support initiatives to increase trust in tax systems around the world. The Group's tax strategy applies to all Group entities and the latest update was approved by the Board of Directors on 11 December 2020.

BLOOD BANK DONATIONS

Our employees in China participated in a voluntary blood donation scheme organised by the Red Cross of Jingmen. This was a positive way for the team to give vital blood resources to those in need in their local area.



CELEBRATING CHILDREN'S DAY

Our Brazil team celebrated Children's Day by sending a small gift to employees' children. Children's Day was established in 1954 and aims to promote international awareness among children worldwide, and to improve children's welfare.

ENGAGING AT A LOCAL LEVEL TO ADDRESS LOCAL NEEDS

Since 2014, our Dunn team in the United States have completed an annual collection of vital food supplies for children in the school system; supporting those who do not have enough food at home over the weekend and holiday periods via the local 'Backpack Buddies' scheme.

The Morgan team make their donation just ahead of Thanksgiving each year, to support children in the community through the whole festive period. The donation of essential food fosters a great sense of pride in all the employees involved and strengthens ties to the community.

TO FIND OUT MORE

Visit our communities page on our website at www.morganadvancedmaterials.com/community



SUPPORTING AN ETHICAL CULTURE

Our Morgan Code underpins our commitment to our people, our communities, our customers, our suppliers and our shareholders. It defines how we do business and gives us our licence to operate. Living by this Code has never been more important to us as we look to grow stronger following a year of unprecedented global turmoil.

Our Code is a set of principles (supported by Group policies) that lay out how we should conduct ourselves. It applies to all employees and, to the extent appropriate, to Morgan's business partners including agents, joint venture partners and third-party representatives.

Our Code has four sections: working safely; working ethically; treating our people fairly; and protecting our business. The Code is available to all employees in multiple languages. It requires our people to operate not only in accordance with applicable laws and regulations, but also in line with internal rules and reporting requirements relating to areas such as ethical business behaviour, trade compliance, hospitality, gifts, donations and sponsorships. Our Code is brought to life through a suite of Group policies which set out our expectations in more detail.

Processes are in place at the site level to ensure our policies are effectively implemented. Beyond this, Morgan's internal audit function monitors compliance with key ethics and compliance processes and ensures that the 'Speak Up' hotline and its availability are adequately promoted. In 2020, updated explanatory manuals on the Group policies covering anti-bribery and corruption, and anti-trust and anti-competition, were launched, accompanied by webinar training for senior leaders. Divisional and global business unit presidents are also required (on an annual basis) to certify that the businesses and functions they are responsible for have complied in full with Group policies, or declare any exceptions. This certification forms an integral part of the Group's system of internal control. No material exceptions were declared in respect of 2020.

We provide ethics and compliance training for our people appropriate to the nature of their role. As a start, all our people are required to complete mandatory online training on the Morgan Code. Topics covered in 2020 included

anti-bribery and corruption, anti-trust and anti-competition, conflicts of interest, whistleblowing, GDPR, US trade controls, diversity and cybersecurity. Overall, our training completion rates continue to exceed 99%, with 3,218 employees trained, completing more than 38,400 courses during the year. Although our planned face-to-face training halted early in the year due to COVID-19 restrictions, we have continued with webinar training for specific topics, including cybersecurity anti-bribery and corruption, anti-trust and anti-competition and US trade controls.

Employees, contractors or other third parties who have a question about our Code, or witness something that they feel is unethical or unsafe, can raise any concerns with their managers or supporting teams, or through the 'Speak Up' hotline (a confidential helpline operated by an independent company). A total of 87 concerns or enquiries were recorded in 2020 through this channel, up from 69 reports in 2019 and highlighting a growing desire to put things right where they may be going wrong. Commonly raised concerns were about the fair treatment of people, workplace harassment, ethical working, COVID-19, and protecting the Company's assets. We work hard to identify and correct areas of non-compliance and take disciplinary action where appropriate. The programme was refreshed in December 2020 to ensure awareness remains strong.

ANTI-BRIBERY AND ANTI-CORRUPTION

- In some parts of the world where Morgan operates, bribery and corruption present a high risk. We have a responsibility to our employees, our shareholders and the countries and communities in which we do business to be ethical and lawful in all our work. The Code explicitly prohibits engaging in bribery or corruption in any form.
- A total of 3,186 employees completed anti-bribery and anti-corruption training in 2020, covering 100% of the relevant employees.
- During 2021 we will complete an update of our bribery risk assessment for each of our entities, which will help shape our anti-bribery corruption programme for the following 12 months.

HUMAN RIGHTS

- As an international business, the Group supports the UN's Universal Declaration of Human Rights, and the Group's Human Rights Policy applies to all our businesses worldwide. The Policy is available on our website and covers child labour, forced

labour, health and safety, freedom of association, discrimination, discipline, working hours and compensation.

- The Director of Human Resources reports to the Chief Executive Officer and is responsible for the development of the Human Rights Policy and related matters, with the Presidents of each global business unit having responsibility for policy implementation within their respective businesses.
- The Group's Modern Slavery Act Transparency Statement, which is published annually on our website, details action taken to support the elimination of modern slavery and human trafficking.

2021 ETHICAL PRIORITIES

- Quarterly training aligned to categories within the Code will remain at the centre of the ethics programme, with a new training supplier helping to bring a refreshed look.
- We are looking to launch an associated code of conduct for our suppliers, and an update of our third-party management process.

MEET SUSI

Key Account Co-ordinator Susi has worked in our Seals and Bearings business for over 12 years. Originally from Germany, Susi relocated to the UK in the early 90's and was recruited by Morgan to support directly with the customers in mainland Europe. Her role is focused on supporting customers from initial query, to production timeline and delivery of the goods to meet their needs. We are delighted to have skilled team members such as Susi, to support our customers directly.



"My role can be challenging at times, keeping me on my toes."

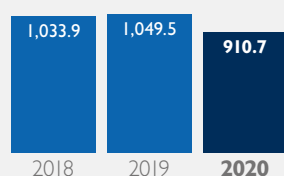


Key performance indicators

We assess our performance across a wide range of metrics. 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).

FINANCIAL KPIs (STATUTORY AND ADJUSTED PERFORMANCE KPIs)

REVENUE (£M)



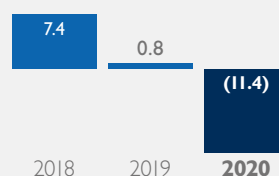
WHY A KPI?

Creating consistent long-term value for shareholders. Focus on higher-growth markets.

PERFORMANCE COMMENTARY

On a reported basis, revenue declined £138.8 million, 13.2%. See Review of operations on pages 32 to 37 for more detail.

ORGANIC CONSTANT-CURRENCY REVENUE GROWTH/(DECLINE)^{1,2} (%)



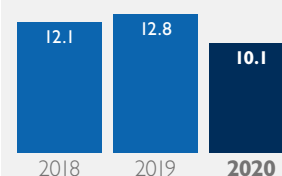
WHY A KPI?

Creating consistent long-term value for shareholders. Focus on higher-growth markets.

PERFORMANCE COMMENTARY

On an organic constant-currency* basis revenue declined £117.2 million, 11.4%. See Review of operations on pages 32 to 37 for more detail.

ADJUSTED OPERATING PROFIT MARGIN¹ (%)



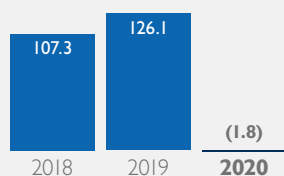
WHY A KPI?

Creating consistent long-term value for shareholders. To have a culture of operational excellence and cost-efficiency.

PERFORMANCE COMMENTARY

Margin decline due to the lower revenue, partially offset by operational efficiency and restructuring actions.

OPERATING PROFIT (£M)



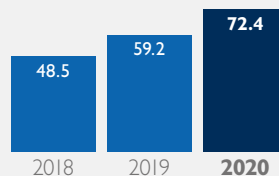
WHY A KPI?

Creating consistent long-term value for shareholders. To have a culture of operational excellence and cost-efficiency.

PERFORMANCE COMMENTARY

Profit declined due to the lower revenues, partially offset by operational efficiency and restructuring actions.

FREE CASH FLOW BEFORE ACQUISITIONS, DISPOSALS AND DIVIDENDS¹ (£M)



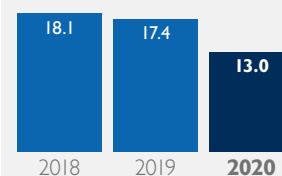
WHY A KPI?

Creating consistent long-term value for shareholders.

PERFORMANCE COMMENTARY

Lower cash from operations (from lower volume due to COVID-19) was partially offset by reduced net capital expenditure and lower net interest and tax paid.

RETURN ON INVESTED CAPITAL¹ (£M)



WHY A KPI?

Creating consistent long-term value for shareholders.

PERFORMANCE COMMENTARY

The decline in return on invested capital is primarily driven by the decline in adjusted operating profit*. See page 45 for more details.

* Pro forma

1. Definitions of these non-GAAP measures, and their reconciliation to the relevant GAAP measure, are provided on pages 43 to 45.
2. This KPI uses revenue at constant currency¹ in its calculation.



Our KPIs provide a balanced set of metrics that give emphasis to both financial and non-financial measures. These help the Board and the Executive Committee assess performance and progress against our strategic priorities and business plans. Divisional and global business unit management use these and additional benchmarks and other KPIs to evaluate operating performance and make financial, strategic and operating decisions.

In order to measure the organic* performance of the business, management further review the adjusted KPIs after excluding the impacts of acquisitions and foreign exchange.

Financial and non-financial performance is reviewed in more detail in the Sustainability and responsibility, Review of operations and Group financial review sections of this Report.

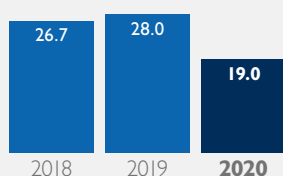
REMUNERATION

To help align the focus of the Board and the Executive Committee with the interests of our shareholders, certain measures are used for executive remuneration.

Measures for employee annual bonus are focused on both Group financial and personal performance. Measures for performance shares (long-term share incentive programmes), are focused on

shareholder value and future growth. For more information on Executive Directors' remuneration please see the Remuneration Report on pages 66 to 86.

ADJUSTED EPS¹ (P)



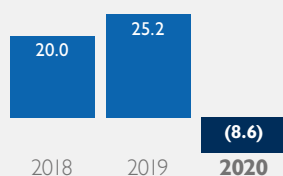
WHY A KPI?

Creating consistent long-term value for shareholders.

PERFORMANCE COMMENTARY

The decline in adjusted EPS is due to the lower profitability in the year.

CONTINUING EPS (P)



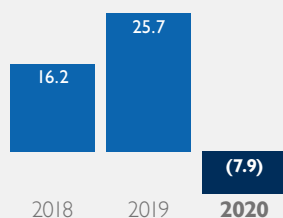
WHY A KPI?

Creating consistent long-term value for shareholders.

PERFORMANCE COMMENTARY

The loss for the year was caused by the lower adjusted profitability as well as charges for restructuring and impairment – see note 6 for more details.

CONTINUING AND DISCONTINUED EPS (P)



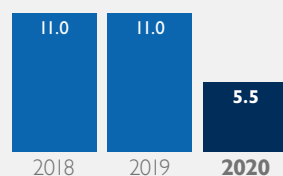
WHY A KPI?

Creating consistent long-term value for shareholders.

PERFORMANCE COMMENTARY

The loss for the year was caused by the lower adjusted profitability as well as charges for restructuring and impairment – see note 10 for more details.

DIVIDEND PER SHARE (P)



WHY A KPI?

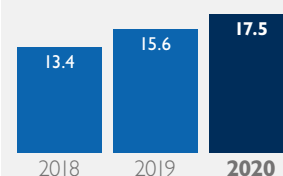
Creating consistent long-term value for shareholders.

PERFORMANCE COMMENTARY

Looking forward, the Board is looking to grow the dividend as the economic environment improves, targeting a dividend cover of around 3 times on average over the medium term.

NON-FINANCIAL KPIs

EMPLOYEE TURNOVER (%)



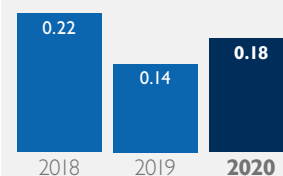
WHY A KPI?

To attract, retain, and develop the right people in the right roles.

PERFORMANCE COMMENTARY

The increase in employee turnover in 2020 was driven by activities to adjust the cost base to the lower demand levels caused by COVID-19.

LOST-TIME ACCIDENT FREQUENCY² (PER 100,000 HOURS WORKED)



WHY A KPI?

To maintain a workplace that focuses on the health and safety of its employees and others affected by the Group's operations.

PERFORMANCE COMMENTARY

A small increase in lost time accidents occurred across the business, which combined with the reduction in hours worked, led to an increase in this measure.

* Pro forma

1. Definitions of these non-GAAP measures, and their reconciliation to the relevant GAAP measure, are provided on pages 43 to 45.
2. This KPI uses revenue at constant currency¹ in its calculation.



We have an established risk management methodology which seeks to identify, prioritise and mitigate risks, underpinned by a ‘three lines of defence’ model comprised of an internal control framework, internal monitoring and independent assurance processes.

The Board considers that risk management and internal control are fundamental to achieving the Group aim of delivering long-term sustainable growth in shareholder value.

Principal and emerging risks are identified both ‘top down’ by the Board and the Executive Committee and ‘bottom up’ through the Group’s global business units (GBUs) and divisions. The severity of each risk is quantified by assessing its inherent impact and mitigated probability, to ensure that the residual risk exposure is understood and prioritised for control throughout the Group.

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 2020, the Board reviewed the status of all principal risks with a significant potential impact at Group level. Additionally, the Audit Committee carried out focused risk reviews of each GBU. These reviews included an analysis of the principal risks, and the controls, monitoring and assurance processes established to mitigate those risks to acceptable levels.

As a result of these reviews, a number of actions were identified to continue to improve internal controls and the management of risk, including:

- swift adoption of protocols to protect the workforce from COVID-19;
- increased focus on the environment with the appointment of a Group Environment & Sustainability Director in November 2020;
- strengthening of information security and compliance function by operating an IT and cybersecurity programme called ‘thinkSECURE’, including comprehensive security awareness training;

- focused actions within each business unit to mitigate risks.

The Board reviewed its appetite for the Group’s principal risks and concluded its appetite for these risks was unchanged from the previous year. The Group is willing to take considered risks to develop new technologies, applications, partnerships and markets for its products and to meet customer needs. The Group strives to eliminate risks to product quality and health and safety, as is essential to the success of our products and the safety of our people and contractors.

The appetite for risk in the areas of legal and regulatory compliance is extremely low and the Group expects its businesses to comply with all laws and regulations in the countries in which they operate. The Group also has a low appetite for financial risk. Certain risks, such as pension funding, are likely to take a longer period of time to mitigate. During the year, the Board monitored the Group’s current risk exposure relative to the Board’s appetite for different risks. There were no risks where the current risk exposure exceeded the Board’s risk appetite.

EMERGING RISKS

As part of the ongoing risk management process, the Board and the GBUs identified and assessed emerging risks. The key emerging risk areas identified were:

- Environmental risk: climate change – including the potential impact of rising sea levels on low-lying or coastal sites and our role in protecting and enhancing the environment. Energy intensity was also considered – including ways of adjusting our production processes to reduce usage of fossil fuels. Raw materials and potential issues with their continued availability was also judged an area to be monitored.

- Regulatory risk: pension regulations, due to the evolving regulatory environment.
- Social risk – parts of the business have an ageing direct workforce; this could lead to potential loss of skills and know-how (in the future) as it becomes more difficult and expensive to attract the next generation of workers.
- Longer-term changes to end-markets – redirecting effort to new end-markets when, for example, gas boilers are phased out and replaced by other forms of heating, or petroleum-fueled vehicles are phased out in favour of electric vehicles.

These emerging risks have been recorded and will be continually monitored so that their potential impact can be understood and mitigated. They will also be considered as an integral part of the strategic planning process.

The following are the Group’s principal risks and uncertainties and represent the risks that the Board feels could have the most significant impact on achieving the Group’s strategy of building a sustainable business for the long term, and could impact the delivery of strong returns to the Group’s shareholders. An indication of the Board’s assessment of the trend of each principal risk – whether the potential severity has increased, decreased or is broadly unchanged over the past year – is provided.

RISKS



Risk Key

▲ INCREASED ▶ UNCHANGED ▼ DECREASED

OPERATIONAL RISKS

Technical leadership

SEVERITY: MODERATE

TREND: UNCHANGED ▶

Risk description, assessment and trend from 2019

The Group's strategic success depends on maintaining and developing its technical leadership in materials science over its competitors.

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 advanced technological nature of the Group requires people with highly differentiated skillsets. Any inability to recruit, retain and develop the right people would negatively impact the Group's ability to achieve its strategic goals.

Mitigation

The Group has a dedicated technology team within each GBU which monitors relevant technology and business developments, using technology roadmaps linked to 20 major technology families, to ensure it remains at the leading edge of development. The Group also has four Centres of Excellence. These Centres focus Morgan's expertise and research resources on further developing core technologies and identifying new opportunities and applications.

The GBU leadership teams proactively monitor their technology priorities and R&D investments and have implemented a stage-gate process to manage this effectively. These projects are also regularly reviewed by the Executive Committee and the Board.

Where Group products are designed for a specific customer, they are developed in partnership with the customer in order to maintain leading-edge differentiation. The Group seeks to secure intellectual property protection, where appropriate, for its existing and emerging portfolio of products and has an in-house counsel dedicated to intellectual property protection, with the support of external advisors.

The Group continued its global leadership programme adding an advanced programme to develop more high-potential commercial, functional and technical leaders.

Further detail on our people can be found on pages 18 to 21.

OPERATIONAL RISKS

Operational execution/ organisational change/ sales effectiveness

SEVERITY: LOW

TREND: INCREASED WITHIN SEVERITY BAND ▲

Risk description, assessment and trend from 2019

As part of the Group's strategy to improve the efficiency of its operations and organisation, various changes have been made to operational processes at individual sites, to the Group's structure, and to the structure of and incentives for our sales force. Further improvements and changes are planned for future years. Failure to manage these changes adequately could result in interruption to operations or customer service, or a failure to maximise the Group's opportunities.

Mitigation

Changes to operational processes are carefully considered by site, GBU and divisional management before implementation. Operational improvements and savings are monitored against budget by the GBUs and the Executive Committee to ensure that changes deliver the savings promised without disruption to business operations. New capital investments are approved at appropriate levels of the Group and delivery of these is overseen by GBU and Group management.

Organisational changes are assessed by the Chief Executive Officer, the Executive Committee and sometimes the Board before being implemented in line with local employment regulations.

A number of functionalisation initiatives commenced within the GBUs in 2020 to align and standardise data and processes. The rollout of these projects will continue in 2021.

Changes to our sales structures and incentives are reviewed at various levels of the organisation before being launched.

Further detail on our strategy can be found on page 7.

OPERATIONAL RISKS

Portfolio management

SEVERITY: MODERATE

TREND: UNCHANGED ▶

Risk description, assessment and trend from 2019

The Group operates across a range of product and technology families. These are subject to long-term market trends which may lead to either obsolescence or opportunities to further expand the Group. Failure to manage the Group's portfolio of businesses proactively and in line with this technology profile could lead to the value of the Group's businesses being eroded over time or to a failure to exploit opportunities to acquire businesses with the capability to add further value to the Group.

Mitigation

The Board performs regular reviews of the Group's portfolio. During 2020, the Group launched a COVID-19-related restructuring and efficiency programme. This accelerated existing plans to simplify the Group's portfolio and align capacity with the anticipated demand across the business. The Group has announced closure of Technical Ceramics ceramic cores manufacturing sites (in response to the downturn in aerospace demand) and closure of under-utilised production lines in Thermal Ceramics.

Opportunities to acquire businesses are reviewed on a continuing basis.



OPERATIONAL RISKS

Macro-economic and political environment

SEVERITY: HIGH

TREND: INCREASED WITHIN SEVERITY BAND ▲

Risk description, assessment and trend from 2019

The Group operates in a range of markets and geographies around the world and could be affected by political, economic, social or regulatory developments or instability, for example an economic slowdown or issues stemming from oil and natural resource price shocks.

Whilst a 'no-deal' Brexit was avoided and new tariffs have not currently been introduced, the UK's exit from the EU impacts border controls, product standards, and controls around the flow of data. The current value of Group's UK exports to the EU is approximately £24 million and imports into the UK from the EU are approximately £17 million.

Mitigation

The Group's broad market and geographic spread helps to mitigate the effects of political and economic changes.

Budgets and forecasts for Morgan's different businesses are used to monitor delivery against expectations and anticipate potential external risks to performance. These are subject to regular review by the Executive Committee and the Board.

The overall macro-economic environment has weakened compared with the previous year. However, the Group's daily order intake has improved during the second half of 2020. Cost-control measures have been effective, and the Group has sustained a strong balance sheet.

Global issues considered by the Board this year included the continuing impact and uncertainty relating to the trade negotiations between the US and China, as well as Russia/Iran and Korea/Japan trade relations. The impact of the UK's exit from the EU has been reduced by the avoidance of a 'no-deal' Brexit; however, tariffs could be introduced in the future.

OPERATIONAL RISKS

Environment, health and safety (EHS)

SEVERITY: HIGH

TREND: UNCHANGED ▶

Risk description, assessment and trend from 2019

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 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. Given the long history of many of the operations of the Group, there is also a risk that historical operating and environmental standards may not have met today's environmental regulations. In addition, the Group may have obligations relating to prior asset sales or closed facilities.

Mitigation

Managing its operations safely is the Group's number one priority. The Group has a comprehensive EHS programme managed by the Group H&S Director and the Group Environment & Sustainability Director, with clear EHS standards and a refreshed programme of audits to assess compliance.

The Group H&S Director and the Group Environment & Sustainability Director, working with the Global EHS Leads, set annual priorities for EHS which are approved by the Executive Committee. These form the basis for individual sites' own EHS priorities and plans and complement the Group's 'thinkSAFE' behavioural safety programme.

EHS performance is monitored by the Group Executive Committee and the Board. EHS metrics are regularly assessed. Overall EHS performance deteriorated slightly during 2020.

As at 31 December 2020, the Group was managing projects to remediate legacy contamination at a number of former operational sites in conjunction with external specialists and relevant authorities.

The Group's commitment to protecting and enhancing the environment is set out on pages 12 to 15.

Details of the Group's provisions and contingent liabilities can be found in note 25 to the consolidated financial statements.

OPERATIONAL RISKS

Coronavirus (COVID-19) pandemic

SEVERITY: MODERATE

TREND: NOT APPLICABLE. NEW RISK IN 2020.

Risk description, assessment and trend from 2019

Communicable disease impacts ways of working, the supply chain and the ability of employees to travel to work in affected areas.

Our priority is to take all actions and precautions necessary to ensure the safety and wellbeing of our employees. The pandemic led to the shutdown of a number of our manufacturing facilities during the year.

Mitigation

In all our manufacturing sites, we have successfully adapted our ways of working to respond to the pandemic – introducing social distancing, hygiene measures and additional PPE – to keep our people safe. Flexible working from home was also introduced for all roles that could do so.

We have continued to supply our key customers operating in essential sectors, including healthcare and power generation.

The Group has provided clear and timely communication to reinforce the importance of following safety measures in every part of the organisation.



OPERATIONAL RISKS

Product quality, safety and liability

SEVERITY: HIGH

TREND: UNCHANGED 

Risk description, assessment and trend from 2019

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.

Some of our products are used in potentially high-risk applications, for example in the aerospace, automotive, medical and power industries.

Mitigation

Many of the Group's products are designed to customer specifications. Our businesses' quality management systems and training help ensure that all our products meet or exceed customer requirements and national/international standards.

The Group Legal Policy requires that contracts relating to products used in potential high-risk applications are subject to legal review to ensure that appropriate protections are in place for product quality risks.

The Group insurance programme includes product liability insurance; this Group-level insurance is reviewed annually by the Board.

OPERATIONAL RISKS

IT and cybersecurity

SEVERITY: HIGH

TREND: INCREASED 

Risk description, assessment and trend from 2019

The COVID-19 pandemic resulted in a rise in remote working and an accelerated shift to cloud platforms, thereby increasing the cyber risk severity due to threats such as email-propagated attacks (phishing, cyber-fraud, impersonation, malware, ransomware).

If the Group were to lose critical information (such as IP or regulatory data) or if critical systems availability were affected through cyber-attacks, the business would be impacted or could suffer reputational damage.

The effective management of the Group's IT infrastructure is important in enabling our businesses to deliver customer requirements reliably. If a key business system were to fail or core systems implementation were to be ineffective, the ability of the business to deliver on its strategic goals might be impacted.

Mitigation

During 2020 we strengthened our information security and compliance function. We are currently operating to a three-year approved security programme and introduced the 'thinkSECURE' internal brand as an awareness programme.

The Group has continued to monitor the regulatory and compliance landscape and is working towards certification against emerging regulations, such as the US Department of Defense's Cybersecurity Maturity Model Certificate (CMMC), and the EU-GDPR and UK Data Protection Act (DPA) 2018.

We will mitigate residual and emerging risks through continuation of our IT strategy and information security programme, including 'thinkSECURE' and implementation of the related cybersecurity projects.

OPERATIONAL RISKS

Supply chain/business continuity

SEVERITY: MODERATE

TREND: UNCHANGED 

Risk description, assessment and trend from 2019

The Group has a number of potential single-point exposure risks, which include:

- Single-point supplier – a significant interruption of a key internal or external supply could impact business continuity.
- Single-point customer – the unmitigated loss of a major customer could have an impact on Group profit. The Group's largest customer represents circa 3% of Group revenue.
- Single-point site – a key site exposed to a strike, a natural catastrophe or serious incident, such as fire, could impact business continuity. One Group site, Hayward, is situated in the California earthquake zone (US). Certain of the Group's businesses are important for intercompany supply purposes.

Mitigation

The Group has a diversified manufacturing, customer and geographic base which provides a level of resilience against single-point exposures. Were any site to be unavailable, production in many cases could be switched to other sites. A new Business Continuity Policy has been rolled out to support minimum standards at the Group's most important sites for intercompany supply.

Management of these risks also 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 maintenance of 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, US; this Group-level insurance is reviewed annually by the Board.



FINANCIAL RISKS

Treasury

SEVERITY: MODERATE

TREND: INCREASED WITHIN SEVERITY BAND 

Risk description, assessment and trend from 2019

The Group's global reach means that it is exposed to uncertainties in the financial markets, the fiscal jurisdictions where it operates, and the banking sector. These heighten the Group's funding, foreign exchange, tax, interest rate, credit and liquidity risks as well as the risk that a bank failure could impact the Group's cash.

Mitigation

The Group's treasury function operates on a risk-averse basis. Required controls over selection of banks, cash management and other treasury practices and payments globally are documented in Morgan's Treasury Policy and related procedures. The Group treasury team manages 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 and Audit Committee.

In 2020, the Group was confirmed as an eligible issuer under the UK Government's 'COVID-19 Corporate Financing Facility' (CCFF) with an issuer limit of £300 million, providing additional liquidity headroom. The facility was undrawn and expired in March 2021.

As at 31 December 2020, the Group had an undrawn Revolving Credit Facility of £200 million, which matures in September 2024. Further detail on our Treasury Policy is set out in the Group Financial Review, which can be found on pages 38 to 40.

FINANCIAL RISKS

Pension funding

SEVERITY: HIGH

TREND: UNCHANGED 

Risk description, assessment and trend from 2019

The Group sponsors several defined benefit pension arrangements (the Schemes), whose liabilities are subject to fluctuating interest rates, investment values and inflation. This coupled with the increased longevity of members and a tougher regulatory funding regime will result in increased funding burdens on the Group in the future.

The deficit in Morgan's global defined benefit pension schemes calculated on the basis required for IAS 19 accounting disclosures increased from £156.8 million as at 31 December 2019 to £176.3 million as at 31 December 2020.

The Group also participates in two multi-employer defined benefit schemes in the US, both of which have significant funding deficits.

Mitigation

Morgan's primary means of mitigating pensions funding risk is proactive management of the pension scheme assets and liabilities through an integrated pension strategy focusing on funding, investment and benefit risk. This involves both internal management within the Group and also external management through the Schemes' trustees, corporate actuaries and professional advisers.

In the UK, both Schemes are closed to the future accrual of benefits. In consultation with the Company, the trustees have adopted a proactive approach to the management of risk in the Schemes' investment portfolios, significantly reducing their unhedged interest and inflation rate exposure. Following the most recent Scheme valuations in March 2019, Company contributions increased to £16.5 million pa from 2020 (further increasing by 2.75% pa) for the length of the current recovery plans (2025 and 2027).

The impact of the evolving regulatory environment for UK occupational pensions, and in particular the likely passing of the Pensions Bill in Parliament, will continue to be monitored closely in 2021.

Risk for both of the defined benefit Pension Plans in the US has been reduced. One completed a full legal termination (in June 2016). For the other Scheme, a formal offer of a present-value-equivalent, lump-sum cash payment was made to members. Following a \$36 million additional contribution (in December 2017) and a move to a significantly de-risked investment portfolio, this Scheme is now almost fully funded on an accounting basis.

A liability management strategy for one the US multi-employer plans has been agreed and a proposal for withdrawal made to the Trustees of the more severely underfunded arrangement.

No significant funding obligations exist in any other individual country although German legacy defined benefit schemes are unfunded, in accordance with local practice, with benefits being met by the Group as they are due.



FINANCIAL RISKS

Tax

SEVERITY: MODERATE

TREND: UNCHANGED www.morganadvancedmaterials.com/tax

Risk description, assessment and trend from 2019

The Group operates in many jurisdictions around the world and could be affected by changes in tax laws and regulations within the complex international tax environment.

The OECD's Base Erosion and Profit Shifting (BEPS) framework is generating additional obligations and filing requirements for the Group as countries continue to implement the actions in the framework. These could have an impact on the tax paid by the Group.

Mitigation

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 also enabling efficient management of the tax liability. The Group's Head of Tax reports to the Audit Committee on key tax issues and initiatives.

The Group has published its tax strategy on its website in line with UK corporate governance requirements.

LEGAL AND COMPLIANCE RISKS

Contract management

SEVERITY: SIGNIFICANT

TREND: UNCHANGED 

Risk description, assessment and trend from 2019

As a global advanced materials business, supplying components into critical applications, the Group may be exposed to liabilities arising from the use of its products. Ineffective contract risk management could result in significant liabilities for the Group and could damage customer relationships.

Mitigation

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. The Policy requires Chief Executive Officer approval before a business can enter into an unlimited liability contract or one where the liability cap exceeds £5 million.

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

LEGAL AND COMPLIANCE RISKS

Compliance

SEVERITY: HIGH

TREND: INCREASED 

Risk description, assessment and trend from 2019

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 activities.

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 and reputational damage.

Mitigation

The Group is committed to the highest standards of corporate and individual behaviour. To support this, in 2018 the Group issued the Morgan Code, which has been continuously in force since then. The Code defines the Group's approach to doing business ethically and confirms Morgan's commitments to high standards of ethical behaviour. The Code is supported by a range of documents and mechanisms: policies, standards and guidance; training materials; the provision of a 'Speak Up' hotline for employees; and systems to support effective screening of and due diligence on third parties.

Mandatory ethics training for staff covers topics including anti-bribery and anti-corruption, competition law, harassment and bullying, and trade controls. In-depth face-to-face training has also been held in some of the Group's higher risk regions. The Group's 'Speak Up' methods enable staff to report concerns anonymously.

The Group also has an Export Compliance Director in the US whose role is dedicated to ensuring compliance with export controls.

In addition to Group-level compliance specialists, our businesses are required to establish compliance officer roles, which are responsible for supporting local training and monitoring. Morgan also employs country-specific trade and export compliance specialists in higher-risk businesses and jurisdictions.

Further details on ethics and compliance can be found on page 23.

Review of operations

GROUP PERFORMANCE

GROUP REVENUE AND OPERATING PROFIT

Group revenue was £910.7 million (2019: £1,049.5 million), a decrease of 13.2% on a reported basis compared with 2019, driven by a decline in the underlying business, foreign exchange headwinds and the impact of divestments. On an organic constant-currency* basis revenue decreased by 11.4%.

Group adjusted operating profit* was £91.7 million (2019: £134.2 million). Adjusted operating profit margin* was 10.1%, compared to 12.8% for 2019.

Throughout the economic downturn associated with the COVID-19 pandemic we have taken appropriate action to reduce costs, improve cash flow and increase liquidity. These actions included reductions to capital expenditure, other than for vital health, safety and environmental matters, a temporary hiring freeze for all but the most critical roles, a curtailment of discretionary expenditure and temporary salary reductions for the Board and our Executive team.

Operating loss was £(1.8) million (2019: profit £126.1 million) and loss before tax was £(13.1) million (2019: profit £109.7 million). Specific adjusting items in 2020 before tax were net pre-tax charge of £87.4 million (2019: net nil), primarily relating to restructuring charges and the impairment of assets. Further detailed are included under 'Specific adjusting items'.

SPECIFIC ADJUSTING ITEMS

In the consolidated income statement, the Group presents specific adjusting items separately. In the judgement of the Directors, as a result of 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 an understanding of the financial information and the underlying performance of the Group.

Details of specific adjusting items arising during the year and the comparative period are given in note 6 to the consolidated financial statements. Specific adjusting items in relation to discontinued operations are disclosed in note 9 to the consolidated financial statements.

In 2020 specific adjusting items were £87.4 million (2019: net £nil) and comprised the following:

	Revenue		Operating profit ¹		Margin % ¹	
	2020 £m	2019 £m	2020 £m	2019 £m	2020 %	2019 %
Thermal Ceramics	344.3	418.4	26.7	52.2	7.8%	12.5%
Molten Metal Systems	41.2	49.1	3.2	5.9	7.8%	12.0%
Thermal Products division	385.5	467.5	29.9	58.1	7.8%	12.4%
Electrical Carbon	151.4	164.2	23.6	21.9	15.6%	13.3%
Seals and Bearings	146.4	144.3	27.5	26.4	18.8%	18.3%
Technical Ceramics	227.4	273.5	14.8	33.7	6.5%	12.3%
Carbon and Technical Ceramics division	525.2	582.0	65.9	82.0	12.5%	14.1%
Divisional total	910.7	1,049.5	95.8	140.1	10.5%	13.3%
Corporate costs			(4.1)	(5.9)		
Group adjusted operating profit¹			91.7	134.2	10.1%	12.8%
Amortisation of intangible assets			(6.1)	(8.1)		
Operating profit before specific adjusting items			85.6	126.1	9.4%	12.0%
Specific adjusting items included in operating profit ²			(87.4)	–		
Operating (loss)/profit			(1.8)	126.1	(0.2)%	12.0%
Net financing costs			(11.9)	(16.9)		
Share of profit of associate (net of income tax)			0.6	0.5		
Loss/profit before taxation			(13.1)	109.7		

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 170, reconciliations of the statutory results to the adjusted measures can be found on pages 43 to 45.
2. Details of specific adjusting items can be found in note 6 to the consolidated financial statements.

➔ Read more about our Thermal Products division on pages 34 to 35 and our Carbon and Technical Ceramics division on pages 36 to 37.

	2020 £m	2019 £m
Specific adjusting items		
Impairment of assets	(65.6)	–
Restructuring costs	(24.0)	–
Profit on disposal of business	2.2	–
Business closure and exit costs	–	(0.7)
Release of provisions related to previous business exits and disposals	–	0.7
Total specific adjusting items before income tax	(87.4)	–
Income tax credit from specific adjusting items	13.3	–
Total specific adjusting items after income tax	(74.1)	–



People

2020

IMPAIRMENT OF ASSETS

Technical Ceramics, ceramic cores

A significant downturn in aerospace demand has resulted in impairment losses of £28.8 million relating to the ceramic cores business. The impaired assets comprise intangible assets recognised upon the acquisition of the Carpenter business in 2008, and property, plant and equipment.

Technical Ceramics, China

On 15 June 2020 the Group announced the closure of its Suzhou manufacturing facility in China and has recognised £1.1 million relating to the impairment of property, plant and equipment.

Thermal Ceramics

The continuing reduced demand in the aerospace, automotive and industrial market segments has resulted in impairment losses of £35.7 million in Thermal Ceramics, which relates to the closure of sites and under-utilised product lines, as well as the impairment of intangible assets recognised upon the acquisition of Porextherm in Germany in 2014.

RESTRUCTURING COSTS

Following the announcement of the Group's restructuring programme the Group has recognised £24.0 million related to staff redundancies, site closure costs, legal and professional fees and the exit of certain multi-employer defined contribution pension plans. The balance of these costs occur in 2021 and 2022.

PROFIT ON DISPOSAL OF BUSINESS

On 31 August 2020, the Group completed the sale of its Diamonex business, based in Allentown, US. The transaction was structured as a sale of the business and related assets for total consideration of up to £6.5 million. The consideration comprises £5.6 million paid in cash on completion, £0.3 million of deferred consideration due in 2021 and up to £0.6 million of consideration contingent on the future performance of the disposed business which, if earned, would also be payable in 2021. A gain of £2.2 million was realised on disposal – see note 2 for more details.

2019

RELEASE OF PROVISIONS RELATED TO PREVIOUS BUSINESS EXITS AND DISPOSALS

In 2019, certain liabilities relating to previous business exits and disposals lapsed and the Group released £0.7 million of legal and other provisions.

BUSINESS CLOSURE AND EXIT COSTS

China, Technical Ceramics

In 2019, the Group completed the exit of the ceramic cores operations within China, initiated in 2018. The Group recognised £0.7 million of costs in relation to this exit relating to staff redundancies and legal and professional fees.

INVESTMENT IN PEOPLE MANAGEMENT AND DEVELOPMENT

We have been strengthening our leadership capabilities, deepening functional capabilities and connecting our people with our purpose right across our business. Despite a year of change, we are seeing the return on this investment and so are our people.

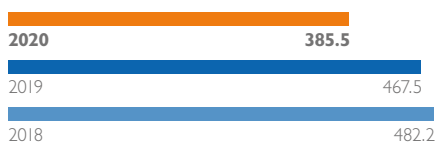
Our Global Operations Director Suranjan Ghosh has been recognised in the 2020 Manufacturer's Magazine Top 100 People list, for his work ethic and approach to making a positive impact in manufacturing. This is a fantastic achievement.

Suranjan commented: "What fires me up is to make the most of this one chance I have in life to make a positive impact on the world. To do so, I am constantly learning – learning about science, technology and the impact it has on mankind through business and social change. Also learning about people, teams, leadership and cultures, be it organisations or countries. Marrying these two elements to positively touch the lives of the people that I work with, while we serve our customers, is what drives me."

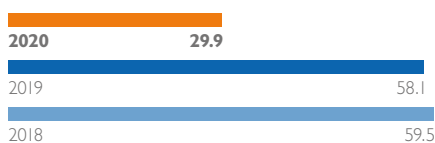
DIVISIONAL AND GLOBAL BUSINESS UNIT PERFORMANCE

THERMAL PRODUCTS

Revenue (£M)



Divisional adjusted operating profit* (£M)



HIGHLIGHTS

- The Thermal Products division's 2020 reported revenue was £385.5 million (2019: £467.5 million), a decrease of 17.5% compared to 2019.
- On an organic constant-currency* basis, revenue decreased by 15.3% compared to 2019.
- Divisional adjusted operating profit margin* was 7.8% (2019: 12.4%).

BUSINESS DESCRIPTION

The Thermal Products division comprises the Thermal Ceramics and Molten Metal Systems global business units.

Thermal Ceramics manufactures advanced ceramic materials, products and systems for thermal insulation in high-temperature environments.

We engineer systems for the safety of people and equipment in demanding applications.

Our products help customers, especially those operating energy-intensive processes, to reduce energy consumption, emissions and operating costs.

Our products are used in high-temperature industrial processing of metals, petrochemicals, cement, ceramics and glass, and by manufacturers of equipment for aerospace, automotive, marine and domestic applications. Our core strength is our ability to address individual customer problems, using our materials and our applications expertise to design, manufacture and install optimum thermal solutions.

Our product range includes high-temperature insulating fibre products, microporous products, firebricks, monolithic products, heat shields, fired refractory shapes and structural block insulation products.

Molten Metal Systems manufactures an extensive range of high-performance crucibles and foundry consumables for non-ferrous-metal melting applications. We provide melting solutions for foundries, die-casters and melting facilities working with zinc, precious metals, aluminium, copper, brass, bronze and other non-ferrous metals.

With its extensive applications experience and process knowledge, Molten Metal Systems helps customers put together the optimal system for their needs. The global business unit works with customers in non-ferrous castings, metal powder production, refining and recycling of precious metals, and the production of pure aluminium for electronics applications.

Our product range includes crucibles and foundry products.

FOOTPRINT

As at 31 December 2020 Thermal Products comprised 28 operating sites employing approximately 2,810 people, with manufacturing sites across the world. It 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 crucible product ranges, are made through a well-established distributor network.

PERFORMANCE AND BUSINESS REVIEW

Revenue for Thermal Products for the year was £385.5 million, representing a decrease of 17.5% compared with £467.5 million in 2019. On an organic constant-currency* basis, year-on-year revenue decreased by 15.3%. Divisional adjusted operating profit* for Thermal Products was £29.9 million (2019: £58.1 million) with a divisional adjusted operating profit* margin of 7.8% (2019: 12.4%). Divisional operating loss £12.6 million (2019: profit £55.6 million) primarily as a result of impairments and restructuring activities recognised in specific adjusting items, see note 4 for further details.

Revenue for Thermal Ceramics for the year was £344.3 million, representing a decrease of 17.7% compared with £418.4 million in 2019. On an organic constant-currency* basis, year-on-year revenue decreased by 15.5%. Revenue was lower due to a reduction in the transportation segment, in particular the aerospace impact of the COVID-19 pandemic, as well as a broad-based market decline in the industrial segment across Europe and North America.

Thermal Ceramics' 2020 adjusted operating profit* was £26.7 million (2019: £52.2 million) with adjusted operating profit margin* of 7.8% (2019: 12.5%). Margin decline was driven by the impact of lower volume, partially offset by efficiency actions, as well as a £2m charge for an increase in the expected credit loss provision.

Revenue for Molten Metals Systems for the year was £41.2 million, a decrease of 16.1% compared with £49.1 million in 2019. On an organic constant-currency* basis, year-on-year revenue decreased by 13.8%. The lower demand was driven by reduced demand for crucibles in the core aluminium market.

Molten Metal Systems' 2020 adjusted operating profit* was £3.2 million (2019: £5.9 million) with adjusted operating profit margin* of 7.8% (2019: 12.0%). During 2020, margins declined due to the lower volumes, partially offset by cost control actions.



Technology

STRATEGY

The priorities for the division remain in line with the execution priorities of the Group. We have put increased emphasis on growth markets where we bring clear technological differentiation. We have invested in changes in our customer-facing organisation to improve our understanding of customer needs and market drivers and to develop sales effectiveness as a distinctive capability.

We recognise the key advantages we have in the markets we serve and will build on these: our global manufacturing footprint, broad product range, application experience, and technological advancements. We will continue to drive operational excellence through lean manufacturing, process efficiency, and automation. We are investing in product and process technology to optimise our products and processes to serve the challenging performance needs of our customers. We will continue to invest in this differentiation, as we see increasing competition which is putting pressure on margins for our standard products.

INCREASING OUR TECHNICAL DIFFERENTIATION

We have been increasing our investment in research and development (R&D) to build our technical lead and to accelerate new product development.

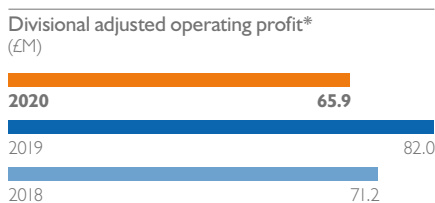
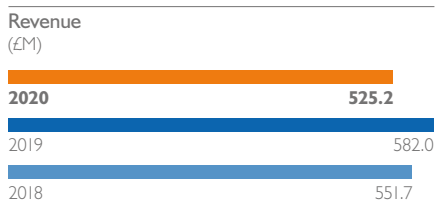
In our Thermal Ceramics business, we used our R&D capabilities to look at the ethylene cracking process: the process of breaking down large molecules into smaller ones at very high temperatures. The goal of this work is to help our customers reduce CO₂ emissions.

After partnering with customers on material selection and furnace design, we have been able to deliver savings ranging from approximately 27 to 60+ times the CO₂ required to manufacture lining materials.

+ These figures exclude indirect emissions such as transportation of goods, waste, water, etc. They also assume a weight of lining materials appropriate to the typical radiant section of an ethylene cracker single cell, and the use of natural gas as an energy source.

DIVISIONAL AND GLOBAL BUSINESS UNIT PERFORMANCE

CARBON AND TECHNICAL CERAMICS



HIGHLIGHTS

- The Carbon and Technical Ceramics division's reported revenue for 2020 was £525.2 million (2019: £582.0 million), a decrease of 9.8% compared to 2019.
- On an organic constant-currency* basis, revenue decreased by 8.3% compared to 2019, with an increase in Seals and Bearings partially offsetting declines in Technical Ceramics and Electrical Carbon.
- Divisional adjusted operating profit margin* was 12.5% (2019: 14.1%).

BUSINESS DESCRIPTION

The Carbon and Technical Ceramics division comprises the Electrical Carbon, Seals and Bearings and Technical Ceramics global business units.

Electrical Carbon develops and manufactures a wide range of products which are used to transfer electrical current between stationary and rotating or linear moving parts in motor, generator, and current-collector applications. Our products are engineered for specific customer applications and they are often required to operate in harsh or extreme environments. Electrical Carbon's main markets are rail, industrial drives, power generation, iron and steel, mining and wind-power. The business' core strength is its longstanding materials and applications experience and its ability to engineer appropriate, reliable solutions for individual customer requirements.

Our product range includes electrical carbon brushes and collectors, brush holders, slip rings and linear transfer systems.

Seals and Bearings makes high-performance self-lubricating bearing and seal components, used predominantly in pumps – industrial and domestic – or other sealing applications. We use advanced carbon/graphite, silicon carbide, alumina and zirconia materials to engineer lightweight, low-friction bearings and seals. These materials help solve the problems associated with use of lubricants in extreme temperatures, corrosive or hygienic environments and where access is restricted, and are engineered into products which provide customer-specific solutions.

The business's components often help to extend the operating life of customers' equipment and make it more energy efficient. The main markets served are specialist applications in the oil and gas, automotive, industrial, water pump, aerospace and home appliance sectors.

Our product range includes seals, bearings and general pump components (shafts, vanes, rotors and washers).

Technical Ceramics engineers high-performance functional and structural ceramic materials, components and sub-assemblies to address customer-specific technical challenges. The business employs advanced materials science

and applications expertise to produce parts that enhance reliability or improve the performance of its customers' products. Much of what the global business unit makes is used in demanding, harsh or critical environments. The global business unit works in selected segments of the semiconductor, energy, healthcare, industrial, petrochemicals, security and transport markets, typically in close collaborative customer relationships.

Our product range includes structural ceramic components, engineered coatings, ceramic-to-metal assemblies including brazed and metallised assemblies, ceramic cores, braze alloys and ceramic tubes and rollers.

FOOTPRINT

As at 31 December 2020 the Carbon and Technical Ceramics division comprised 47 operating sites employing approximately 4,520 people, with manufacturing sites across the world. As a result of the customer-specific nature of most of the products sold and the importance of staying very close to the market, most sales are made directly by the division's sales force and application engineers, with limited use being made of distributors. The global spread of operating sites supplemented by a comprehensive network of sales offices allows immediate access to and facilitates direct working with customers and the products' end-users.

PERFORMANCE AND BUSINESS REVIEW

Revenue for the Carbon and Technical Ceramics division for the year was £525.2 million, representing a decrease of 9.8% compared with £582.0 million in 2019. On an organic constant-currency* basis, year-on-year revenue decreased by 8.3%. Divisional adjusted operating profit* for the Carbon and Technical Ceramics division was £65.9 million (2019: £82.0 million), with divisional adjusted operating profit margin* of 12.5% (2019: 14.1%). Divisional operating profit was £15.4 million (2019: £76.4 million) the year-on-year reduction primarily as a result of impairments and restructuring activity recognised in specific adjusting items, see note 4 for further details.

Revenue for the Electrical Carbon global business unit in 2020 was £151.4 million, representing a decrease of 7.8% compared with £164.2 million in 2019. On an organic constant-currency* basis, year-on-year revenue declined by 6.3%. Growth in the semiconductor and electronics end market segments was offset by the year-on-year decline driven primarily by economic weakness in a number of segments in our core industrial markets.

Electrical Carbon adjusted operating profit* was £23.6 million (2019: £21.9 million) with an adjusted operating profit margin* of 15.6% (2019: 13.3%). Despite the revenue decline, adjusted operating profit margins* were expanded through strong operational efficiency actions as well as a £2 million one-off benefit from an insurance settlement.

Progress

Revenue for the Seals and Bearings global business unit in 2020 was £146.4 million, representing an increase of 1.5% compared with £144.3 million in 2019. On an organic constant-currency* basis, year-on-year revenue increased by 1.5%. The business growth was driven by a continuation of contract awards in ceramic armour (2020: £49 million; 2019: £35 million). This was largely offset by a decline in the industrial, petrochemical and aerospace segments.

Seals and Bearings' adjusted operating profit* was £27.5 million (2019: £26.4 million), with an adjusted operating profit margin* of 18.8% (2019: 18.3%).

Margins improved with the benefit of increased volume and from continuous improvement efficiency savings.

Revenue for the Technical Ceramics global business unit in 2020 was £227.4 million, a decrease of 16.9% compared with £273.5 million in 2019. On an organic constant-currency* basis, year-on-year revenue decreased by 14.8%, primarily driven by declines in the transportation segment, in particular aerospace, and with wider industrial market declines.

Technical Ceramics' adjusted operating profit* was £14.8 million (2019: £33.7 million), with an adjusted operating profit margin* of 6.5% (2019: 12.3%). Margins declined with the impact of lower volumes, partially offset by cost control measures.

STRATEGY

The priorities of the Carbon and Technical Ceramics division, and of the three global business units which it comprises, remain in line with the execution priorities of the Group. The division remains focused on delivering operational efficiencies to support reinvestment in product development and sales effectiveness, to support growth in our selected markets and to drive margin expansion.

The focus on operating costs is reflected in the division's results, most notably in the improved adjusted operating profit margins*. Plant-specific initiatives include a focus on reducing scrap and improving yields, which when combined with the benefits of global footprint management, and the increased use of low-cost manufacturing operations, underpin the reductions in the operational cost base of the business. A significant part of the division's capital expenditure is on investments which will improve the operational efficiency of the division.

Carbon and Technical Ceramics has two global Centres of Excellence – Carbon Science, and Metals and Joining. Their focus will be on ensuring a strong pipeline of innovation for the businesses within the Carbon and Technical Ceramics division.

During 2020, our UK Seals and Bearings business tested the use of new automation technologies on our material-forming processes. This successful trial involved the use of collaborative robotics to increase the efficiency and output of component manufacture. Now a permanent feature, these collaborative robots are purpose-built to work alongside our operators, fitting seamlessly into site operations.

IMPROVING AND INNOVATING OUR OPERATIONAL EXECUTION

We look across our businesses to improve operational execution. Resource and capital are allocated to support specific improvements to efficiency and effectiveness on a business-by-business basis.

FOREIGN CURRENCY IMPACT

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

	2020		2019	
	Closing rate	Average rate	Closing rate	Average rate
GBP to:				
US dollar	1.37	1.28	1.33	1.28
Euro	1.12	1.13	1.18	1.14

The potential impact of changes in foreign exchange rates is given in note 22 to the consolidated financial statements on page 136.

Retranslating the 2020 full year results at the February 2021 closing exchange rates would lead to revenue of £863.8 million and adjusted operating profit* of £85.0 million.

For illustrative purposes, the table below provides details of the impact on 2020 revenue and Group adjusted operating profit* if the actual reported results, calculated using 2020 average exchange rates were restated for GBP weakening by 10 cents against US dollar in isolation and 10 cents against the Euro in isolation:

	Revenue £m	Adjusted operating profit ¹ £m
Increase in 2020 revenue/adjusted operating profit ¹ if:		
GBP weakens by 10c against the US dollar in isolation	33.9	4.3
GBP weakens by 10c against the Euro in isolation	17.4	1.8

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 170, reconciliations of the statutory results to the adjusted measures can be found on pages 43 to 45.

AMORTISATION OF INTANGIBLE ASSETS

The Group amortisation charge was £6.1 million (2019: £8.1 million).

FINANCE COSTS

The net finance charge was £11.9 million (2019: £16.9 million) comprising net bank interest and similar charges of £6.5 million (2019: £9.3 million), net interest on IAS 19 pension obligations of £2.6 million (2019: £4.6 million), and the interest expense on lease liabilities of £2.8 million (2019: £3.0 million) resulting from IFRS 16 Leases.

The impacts of potential changes in interest rates on profit or loss are stated in note 22 to the consolidated financial statements on page 135.

Looking forward to 2021, we anticipate that the net finance charge will reduce to around £12 million, comprising: net bank interest and similar charges of £7 million; net interest on IAS 19 pension obligations of £2 million; and net interest expense on lease liabilities of £3 million.

TAXATION

The Group tax charge, excluding specific adjusting items, was £20.2 million (2019: £29.9 million). The effective tax rate, excluding specific adjusting items, was 27.2% (2019: 27.3%). Note 8 to the consolidated financial statements, on page 120, provides additional information on the Group's tax charge.

Looking forward to 2021, we anticipate that the effective tax rate will be around 27-28%, with cash tax paid slightly higher than the charge to the income statement.

On a statutory basis, the Group tax charge was £6.9 million (2019: £29.9 million), lower than the prior year due to the tax credit arising on the specific adjusting items.

EARNINGS PER SHARE

Adjusted earnings per share* was 19.0 pence (2019: 28.0 pence) and basic loss per share from continuing operations was 8.6 pence (2019: earnings per share 25.2 pence). Details of these calculations can be found in note 10 to the consolidated financial statements on page 121.

FINAL DIVIDEND

The Board is recommending a final dividend, subject to shareholder approval, of 3.5 pence per share on the Ordinary share capital of the Group, payable on 21 May 2021 to Ordinary shareholders on the register at the close of business on 30 April 2021. The ex-dividend date is 29 April 2021.

Together with the interim dividend of 2.0 pence per share paid on 11 December 2020, this final dividend, if approved by shareholders, brings the total distribution for the year to 5.5 pence per share (2019: 4.0 pence).

A total dividend of 5.5 pence per share represents a dividend cover of adjusted EPS* 3.5.

Looking forward, the Board is looking to grow the ordinary dividend as the economic environment and the Group's earnings improve, targeting a dividend cover of around 3 times on average over the medium term.

This level of cover ensures sufficient resources are available to continue to invest to support the Group's long-term prospects, as well as meet the needs of other stakeholders of the Group, including deficit contributions to the Group's defined benefit pension schemes.

Note 42 to the Company financial statements, on page 163, provides additional information on the Company's distributable reserves.

CASH FLOW

Cash generated from continuing operations was £146.3 million (2019: £164.8 million).

Free cash flow before acquisitions, disposals and dividends* was £72.4 million (2019: £59.2 million).

Net debt* at the year end was £155.6 million (2019: £221.6 million), with no term debt maturities until 2023, representing a net debt* to EBITDA* ratio of 1.2x (2019: 1.3x).

The Group has net cash* and cash equivalents* of £75.8 million and undrawn headroom on its revolving credit facility of £200 million.

Net debt* excluding lease liabilities was £101.0 million (2019 restated: £157.3 million), representing a net debt* to EBITDA* ratio excluding lease liabilities of 0.8x (2019: 1.0x).

The Group applied for the UK Government's 'Covid Corporate Financing Facility' (CCFF) with an issuer limit of £300 million, which was confirmed as successful on 10 June 2020. The facility was undrawn throughout the period. Additionally, the Group received £0.5 million from the UK Government under the 'Coronavirus Job Retention Scheme' (CJRS) for employees placed on furlough. The Group repaid the £0.5 million in full to the UK Government in the third quarter of the year once the economic impact of the pandemic became clearer.



Commitments for property, plant and equipment and computer software for which no provision has been made are set out in note 26 to the consolidated financial statements on page 149.

	2020 £m	2019 restated ¹ £m
Cash generated from continuing operations	146.3	164.8
Net capital expenditure	(28.6)	(54.9)
Net interest on cash and borrowings	(6.6)	(9.3)
Tax paid	(26.0)	(28.8)
Lease payments and interests	(12.7)	(12.6)
Free cash flow before acquisitions, disposals and dividends¹	72.4	59.2
Dividends paid to external plc shareholders	(5.7)	(31.3)
Net cash* flows from other investing and financing activities	(7.8)	(12.1)
Net cash* flows from divestments and discontinued operations	(0.1)	1.1
Exchange movement and other non-cash movements	(2.5)	6.1
Opening net debt ² excluding lease liabilities	(157.3)	(180.3)
Closing net debt ² excluding lease liabilities	(101.0)	(157.3)
Closing lease liabilities	(54.6)	(64.3)
Closing net debt²	(155.6)	(221.6)

- 2019 has been restated to classify the Group's cumulative preference shares, totalling £0.4 million, as borrowings. See note 1 to the condensed consolidated financial statements.
- Definitions of these non-GAAP measures can be found in the glossary of terms on page 170, reconciliations of the statutory results to the adjusted measures can be found on pages 43 to 45.

NET CASH AND CASH EQUIVALENTS

Net cash and cash equivalents is defined as cash and cash equivalents less bank overdrafts. The Group also discloses this measure as it provides an indication of the net short term liquidity available to the Group.

	2020 £m	2019 £m
Cash and cash equivalents	147.8	132.8
Bank overdrafts	(72.0)	(64.1)
Net cash and cash equivalents	75.8	68.7

CAPITAL STRUCTURE

At the year end total equity was £240.0 million (2019 restated: £311.7 million) with closing net debt* of £155.6 million (2019 restated: £221.6 million).

Non-current assets were £514.1 million (2019: £589.3 million) and total assets were £860.7 million (2019: £985.1 million).

Details of undiscounted contracted maturities of financial liabilities and capital management are set out in note 22 to the consolidated financial statements on page 139.

Capital structure is further discussed in note 22 to the consolidated financial statements on page 139 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 US, and the majority of the others in continental Europe.

The charge incurred in relation to the Group's defined benefit arrangements is summarised in the table below.

	2020 £m	2019 £m
Operating costs:		
Current and past service cost	(2.9)	(2.6)
Administration expenses recognised outside the pension liabilities	(1.2)	(1.4)
Curtailments and settlements	0.3	0.2
Total operating costs	(3.8)	(3.8)
Net interest on net defined benefit liability	(2.6)	(4.6)
Total	(6.4)	(8.4)

Defined benefit pension plans

The Group pension deficit has increased by £19.5 million since last year end to £176.3 million on an IAS 19 (revised) basis as employer contributions and investment gains were more than offset by the impact of lower discount rates:

- The UK Schemes deficit increased by £18.8 million to £120.3 million (2019: £101.5 million), (discount rate 2020: 1.23%; 2019: 2.06%).
- The US Schemes deficit decreased by £3.3 million to £7.3 million (2019: £10.6 million), (discount rate 2020: 2.34%; discount rate 2019: 3.21%).
- The European Schemes deficit increased by £5.2 million to £44.8 million (2019: £39.6 million), (discount rate 2020: 0.40%; discount rate 2019: 0.90%).
- The Rest of World Schemes deficit decreased by £1.2 million to £3.9 million (2019: £5.1 million), (discount rate 2020: 2.40%; discount rate 2019: 2.20%).

The most recent full actuarial valuations of the UK Schemes were undertaken as at March 2019 and resulted in combined assessed deficits of £120.3 million. Further details can be found in note 23 on page 141. 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 £16.5 million a year from January 2020, increasing by 2.75% pa until 2025, with further payments to the Morgan Pension Scheme for 2026 and 2027.

TREASURY POLICIES

The following policies were in place across the Group throughout the year. The manager of each global business unit is required to confirm compliance as part of the year-end 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

Currency transaction exposures exist as a result of the global nature of the Group. 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 on 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 currencies of the Group's financial liabilities become more aligned to the currencies of the trading cash flows which service them.

Interest rate risk

The Group seeks to reduce the volatility in its interest charge caused by rate fluctuations. 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 65% of the Group's revenue are managed centrally through a number of pooling arrangements. Credit risk is managed by investing in liquid assets and acquiring derivatives in a diversified way from high-credit-quality financial institutions. Counterparties are assessed through the use of rating agencies, systemic risk considerations, and regular review of the financial press. Credit risk is further discussed in note 22 to the consolidated financial statements on page 132.

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.

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 its maturity profile is detailed in notes 21 and 22 to the consolidated financial statements on page 132.

Tax risks

The Group follows a tax policy to fulfil local and international tax requirements, maintaining accurate and timely tax compliance whilst seeking to maximise long-term shareholder value. The Group adopts an open and transparent approach to relationships with tax authorities and continues to monitor and adopt new reporting requirements, for example those arising from the implementation of the OECD Base Erosion and Profit Shifting proposals within tax legislation across various jurisdictions.

The tax strategy is aligned to the Group's business strategy and ensures that tax affairs have strong commercial substance. Tax risks are set out in the Risk management section on page 31.

GOING CONCERN STATEMENT

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 2 to 45. The financial position of the Group, its cash flows, liquidity position and borrowing facilities, are described earlier in this Financial Review. In addition, note 22 to the consolidated financial statements, includes the Group's policies and processes for managing financial risk, details of its financial instruments and hedging activities and details of 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, which matures in September 2024. As at 31 December 2020 the Group had significant headroom on its covenants and available liquidity with the Group's £200 million multi-currency revolving credit facility being undrawn and net cash* and cash equivalents* available of £75.8 million. The Group applied for the UK Government's 'Covid Corporate Financing Facility' (CCFF) with an issuer limit of £300 million, which was confirmed as successful in June 2020. As a result of available liquidity and cash preservation measures taken the facility remained undrawn through the period. During 2020 the Group announced a restructuring and efficiency programme to reduce costs by a targeted £23 million per annum by 2022, with an anticipated cash cost of £30 million to deliver these savings. This has been implemented in 2020 and is expected to complete through 2021. No further restructuring activities have therefore been modelled into the sensitivity analysis performed. The Group's forecasts and projections, taking account of reasonably possible changes in trading performance, exchange rates and plausible downside scenarios as a result of COVID-19 and its impact on the global economy, show the Group operating within its debt financial covenants for the next 18 months.

The Board has also reviewed the Group's reverse stress testing performed to demonstrate how much headroom is available on covenant levels in respect of changes in net debt, EBITDA* and underlying revenue. Based on this assessment, a combined reduction in EBITDA* of 40% and an increase in net debt* of 80% would still allow the Group to operate within its financial covenants. The Board has reviewed this with management and is satisfied that this is appropriate and is supporting the Group as a Going Concern.

The current economic climate continues to have an impact on the Group, its customers and its suppliers. Due to the Group's broad-end-market base, as a result of the COVID-19, it is anticipated that some markets will continue to see reduced activity but others will continue to grow. The UK's exit from the EU may have an impact on the Group if tariffs are subsequently introduced or border controls negatively impact either the profitability of the Group's products or the ability to manufacture or distribute products on a timely basis. However, given the current value of the Group's UK exports to the EU (ca. £24 million) and imports into the UK from the EU (ca. £17 million), it is not considered that this will have a significant impact on the Group's overall liquidity or operations.

The Board and Executive Committee have regular reporting and review processes in place in order to closely monitor the ongoing operational and financial performance of the Group. These processes include the ongoing review of the impact of COVID-19 on the Group and its stakeholders.

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 this Annual Report and Accounts. Accordingly, they continue to adopt the going concern basis in preparing the Annual Report and Accounts.

VIABILITY STATEMENT

In accordance with provision 31 of the UK Corporate Governance Code, the Directors have assessed the prospects of the Company over a period significantly longer than 12 months. The Directors believe that a viability assessment period of three years to 31 December 2023 is an appropriate period over which to provide its viability statement based on management's reasonable expectations of the position and performance of the Company over this period. This is the period reviewed by the Board in the strategic planning process and is considered to be appropriate given the dynamics in the markets in which it operates. Taking into account the Group's current position and the potential impact of the principal risks documented on pages 26 to 31 of the Annual Report, the Directors 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 2023.

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. The resulting base case provides the Directors with an EBITDA*, net debt* and finance charge headroom relative to current bank covenants.

The Directors' assessment also included a review of the financial impact, on revenue, EBITDA*, net debt* and the adequacy of the financial headroom, relative to a severe but plausible combination of principal risks crystallising that could threaten the viability of the Company. The Directors also considered the likely effectiveness of the potential mitigations that management reasonably believes would be available to the Company over this period.

Viability statement continued over the page.

Directors' statements

While the review has considered all the principal risks identified by the Group, the following were focussed on for enhanced stress testing:

Scenarios modelled	Impacts modelled	Link to principal risks and uncertainties
Changes in the political environment Due to the geographical spread of the Group, it is exposed to a shifting landscape in cross-border trade. The impact of disruption in light of the UK's decision to leave the EU and the impact of trade tariffs being imposed between US and China were both considered.	Reduction in revenue linked to loss of sales, additional costs to move production with associated reduction in profitability.	Operational Risk
Changes in the macro-economic environment The sensitivity analysis considered a scenario where the global economy moves into deep recession in 2021/22.	Reduction in revenue with associated reduction in profitability.	Operational Risk
Compliance breach The Group operates in a number of different jurisdictions and 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 activities. The impact of a regulatory fine or penalty has been considered.	Increase in costs and net debt* from fines and legal fees. Reduction in revenue due to reputational impacts.	Legal and Compliance Risk

The geographical and product diversification of the Group's operations helps minimise the risk of serious business interruption or catastrophic damage to our reputation. The impact of the UK's exit from the EU was considered in the assessment, however given the footprint and small size of the UK operations it has not changed our overall assessment of the viability of the Group. Furthermore, the spread of the Group's end-markets is such that it is not reliant on one particular group of clients or sector. The current economic climate continues to have an impact on the Group, its customers and its suppliers. Due to the Group's diverse end-market base, as a result of the COVID-19, we anticipate that some markets will continue to see reduced activity but others will continue to grow.

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 2023.



Definitions and reconciliations of non-GAAP measures to GAAP measures

Reference is made to the following non-GAAP measures throughout this document. These measures are shown because the Directors consider they provide useful information to shareholders, including additional insight into ongoing trading and year-on-year comparisons. These non-GAAP measures should be viewed as complementary to, not replacements for, the comparable GAAP measures. As defined in the basis of preparation on page 112, these measures are calculated on a continuing basis.

ADJUSTED OPERATING PROFIT

Adjusted operating profit is stated before specific adjusting items and amortisation of intangible assets. Specific adjusting items are excluded on the basis that they distort trading performance. Amortisation is excluded as the charge arises includes externally acquired intangible assets since the adoption of IFRS and does not therefore reflect all intangible assets consistently.

	Thermal Ceramics £m	Molten Metal Systems £m	Thermal Products division £m	Electrical Carbon £m	Seals and Bearings £m	Technical Ceramics £m	Carbon and Technical Ceramics division £m	Corporate costs ¹ £m	Group £m
2020									
Operating (loss)/profit	(14.6)	2.0	(12.6)	19.2	26.5	(30.3)	15.4	(4.6)	(1.8)
Add back specific adjusting items included in operating profit	39.4	0.9	40.3	3.7	0.6	42.3	46.6	0.5	87.4
Add back amortisation of intangible assets	1.9	0.3	2.2	0.7	0.4	2.8	3.9	–	6.1
Group and divisional adjusted operating profit	26.7	3.2	29.9	23.6	27.5	14.8	65.9	(4.1)	91.7

1. Corporate costs consist of central head office costs.

	Thermal Ceramics £m	Molten Metal Systems £m	Thermal Products division £m	Electrical Carbon £m	Seals and Bearings £m	Technical Ceramics £m	Carbon and Technical Ceramics division £m	Corporate costs ¹ £m	Group £m
2019									
Operating profit/(loss)	50.0	5.6	55.6	21.2	26.0	29.2	76.4	(5.9)	126.1
Add back specific adjusting items included in operating profit	–	–	–	–	–	–	–	–	–
Add back amortisation of intangible assets	2.2	0.3	2.5	0.7	0.4	4.5	5.6	–	8.1
Group and divisional adjusted operating profit	52.2	5.9	58.1	21.9	26.4	33.7	82.0	(5.9)	134.2

1. Corporate costs consist of central head office costs.

ORGANIC GROWTH

Organic growth is the growth of the business excluding the impacts of acquisitions, divestments and foreign currency impacts. This measure is used as it allows revenue and adjusted operating profit to be compared on a like-for-like basis.

Commentary on the underlying business performance is included as part of the Operational review on pages 32 to 37.

Year-on-year movements in segment revenue

	Thermal Ceramics £m	Molten Metal Systems £m	Thermal Products division £m	Electrical Carbon £m	Seals and Bearings £m	Technical Ceramics £m	Carbon and Technical Ceramics division £m	Segment total £m
2019 revenue	418.4	49.1	467.5	164.2	144.3	273.5	582.0	1,049.5
Impact of foreign currency movements	(11.0)	(1.3)	(12.3)	(2.7)	(0.1)	(0.2)	(3.0)	(15.3)
Impacts of disposals and business exits	–	–	–	–	–	(6.3)	(6.3)	(6.3)
Organic constant-currency change	(63.1)	(6.6)	(69.7)	(10.1)	2.2	(39.6)	(47.5)	(117.2)
Organic constant-currency change %	(15.5)%	(13.8)%	(15.3)%	(6.3)%	1.5%	(14.8)%	(8.3)%	(11.4)%
2020 revenue	344.3	41.2	385.5	151.4	146.4	227.4	525.2	910.7

Definitions and reconciliations of non-GAAP measures to GAAP measures

Year-on-year movements in segment and Group adjusted operating profit

	Thermal Ceramics £m	Molten Metal Systems £m	Thermal Products division £m	Electrical Carbon £m	Seals and Bearings £m	Technical Ceramics £m	Carbon and Technical Ceramics division £m	Corporate costs ¹ £m	Group £m
2019 adjusted operating profit	52.2	5.9	58.1	21.9	26.4	33.7	82.0	(5.9)	134.2
Impact of foreign currency movements	(3.3)	(0.2)	(3.5)	(0.7)	(0.1)	–	(0.8)	–	(4.3)
Impact of disposals and business exits	–	–	–	–	–	(2.4)	(2.4)	–	(2.4)
Organic constant-currency change	(22.2)	(2.5)	(24.7)	2.4	1.2	(16.5)	(12.9)	1.8	(35.8)
Organic constant-currency change %	(45.4)%	(43.9)%	(45.2)%	11.3%	4.6%	(52.7)%	(16.4)%	–	(28.1)%
2020 adjusted operating profit	26.7	3.2	29.9	23.6	27.5	14.8	65.9	(4.1)	91.7

1. Corporate costs consist of the cost of the central head office.

GROUP EBITDA*

Group EBITDA* is defined as operating profit before specific adjusting items, depreciation and amortisation of intangible assets. The Group uses this measure as it is a key metric in covenants over debt facilities, these covenants use EBITDA* on a pre-IFRS 16 basis. A reconciliation of operating profit to Group EBITDA* is as follows:

	2020 £m	2019 £m
Operating (loss)/profit	(1.8)	126.1
Add back: specific adjusting items included in operating profit	87.4	–
Add back: depreciation – property, plant and equipment	32.7	32.3
Add back: depreciation – right-of-use assets	9.2	10.1
Add back: amortisation of intangible assets	6.1	8.1
Group EBITDA*	133.6	176.6
Group EBITDA* excluding IFRS 16 Leases impact	120.9	163.5

FREE CASH FLOW BEFORE ACQUISITIONS, DISPOSALS AND DIVIDENDS

Free cash flow before acquisitions, disposals and dividends is defined as cash generated from continuing operations less net capital expenditure, net interest (interest paid on borrowings, overdrafts and lease liabilities, net of interest received), tax paid and lease payments.

The Group discloses this measure of free cash flow as this provides readers of the consolidated financial statements with a measure of the cash flows from the business before corporate level cash flows (acquisitions, disposals and dividends).

A reconciliation of cash generated from continuing operations to free cash flow before acquisitions, disposals and dividends is as follows:

	2020 £m	2019 £m
Cash generated from continuing operations	146.3	164.8
Net capital expenditure	(28.6)	(54.9)
Net interest on cash and borrowings	(6.6)	(9.3)
Tax paid	(26.0)	(28.8)
Lease payments and interests	(12.7)	(12.6)
Free cash flow before acquisitions, disposals and dividends	72.4	59.2

NET DEBT*

Net debt* is defined as borrowings, bank overdrafts and lease liabilities, less cash and cash equivalents. The Group also discloses this metric excluding lease liabilities as this is the measure used in the covenants over the Group's debt facilities.

	2020 £m	2019 restated ¹ £m
Cash and cash equivalents	147.8	132.8
Non-current borrowings	(177.5)	(176.7)
Non-current lease liabilities	(43.1)	(52.6)
Current borrowings and bank overdrafts	(71.3)	(113.4)
Current lease liabilities	(11.5)	(11.7)
Closing net debt*	(155.6)	(221.6)
Closing net debt* excluding lease liabilities	(101.0)	(157.3)

1. As disclosed in note 1, 2019 has been restated to include the Group's cumulative preference shares within borrowings, this increased borrowings and net debt* by £0.4 million and decreased net assets by £0.4 million. Cash and cash equivalents and borrowings and overdrafts have been restated to meet the presentational requirements of IAS 32 as further described in note 1. This has had no impact on net assets or net debt*.

RETURN ON INVESTED CAPITAL

Return on invested capital (ROIC) is defined as the 12-month Group adjusted operating profit (operating profit excluding specific adjusting items and amortisation of intangible assets) divided by the 12-month average adjusted net assets (third-party working capital, plant and equipment, land and buildings, right-of-use assets, intangible assets and other balance sheet items). This measure excludes long-term employee benefits, deferred tax assets and liabilities, current tax payable, provisions, cash and cash equivalents, borrowings, overdrafts and lease liabilities.

	2020 £m	2019 £m
Operating profit before specific adjusting items	85.6	126.1
Add back: amortisation of intangible assets	6.1	8.1
Group adjusted operating profit	91.7	134.2
12-month average adjusted net assets:		
Third-party working capital	166.4	181.0
Plant and equipment	179.8	194.1
Land and buildings	114.0	122.9
Right-of-use assets	42.2	50.2
Intangible assets	198.2	211.4
Other assets (net)	7.5	12.4
12-month average adjusted net assets	708.1	772.0
ROIC	13.0%	17.4%

ADJUSTED EARNINGS PER SHARE

Adjusted earnings per share is defined as operating profit adjusted to exclude specific adjusting items and amortisation of intangible assets, plus share of profit of associate less net financing costs, income tax expense and non-controlling interests, divided by the weighted average number of Ordinary shares during the period. This measure of earnings is shown because the Directors consider it provides an indication of adjusted performance, which is less impacted by adjusting items and therefore reflects the underlying performance trends in the business.

Whilst amortisation of intangible assets is a recurring charge it is excluded from these measures on the basis that it primarily arises on externally acquired intangible assets and therefore does not reflect consistently the benefit that all of Morgan's businesses realise from their intangible assets, which may not be recognised separately.

A reconciliation from IFRS profit to the profit used to calculate adjusted earnings per share* is included in note 10 to the consolidated financial statements on page 121.

CONSTANT-CURRENCY REVENUE AND ADJUSTED OPERATING PROFIT

Constant-currency revenue and adjusted operating profit are derived by translating the prior year results at current year average exchange rates. These measures are used as they allow revenue to be compared excluding the impact of foreign exchange rates. Page 138 provides further information on the principal foreign currency exchange rates used in the translation of the Group's results to constant-currency at average exchange rates.

This Strategic Report, as set out on pages 2 to 45, has been approved by the Board.

On behalf of the Board

Stephanie Mackie
Company Secretary

3 March 2021

Governance

GOVERNANCE

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“
The guiding principle of the Board is to ‘do the right thing’ with respect to all our stakeholders and the environment.”

Douglas Caster CBE FIET
Chairman



This image was taken pre-COVID-19.

DEAR SHAREHOLDER

I am pleased to report that Morgan's governance framework served the Company well during 2020. Despite the backdrop of an unprecedented, challenging year my fellow Directors and I continued to support and guide executive management. The report which follows explains the governance framework and the workings of the Board and Committees and demonstrates how the Board continued to perform effectively.

Apart from the priorities I discussed in my introductory statement to this report the key governance priorities for the Board during 2020 were:

INFORMATION FLOW TO THE BOARD

The spread of COVID-19 across the globe meant that different parts of the business were impacted at different times and it was imperative to keep abreast of developments. The Board received regular reports from the CEO on the impact of COVID-19 on operations, trading performance and, not least, employee health, safety and well-being. In addition to receiving regular briefings from the CEO between Board meetings, the Board met more frequently and received commentary on the impact of the pandemic directly from the divisional and global business unit senior managers as well as representatives of the workforce at all levels in the organisation.

SUPPORT AND CHALLENGE OF EXECUTIVE MANAGEMENT

The role of a non-executive director is to support executive management but also to challenge proposals put forward for consideration by the Board. In this respect, a diverse board membership assists in ensuring that the assessments made and conclusions drawn have been fully considered and take the long-term sustainability of the business into account. My fellow non-executive directors and I drew on our individual areas of expertise, experience and different personal perspectives to probe and test to ensure that decisions taken in light of the impact of the pandemic on the business were robustly debated, balanced short and longer term considerations and will support the long-term performance of the Group.

CULTURE AND VALUES

The Board sets the tone from the top and ensures that the Group's culture is aligned with the values and behaviours which are underpinned by the Morgan Code. The Board has continued to monitor and assess Group culture during 2020 using a range of mechanisms. The Board was keen to ensure that the Group's focus on working safely and ethically was not compromised as a result of the pandemic.

ENGAGEMENT WITH KEY STAKEHOLDERS

This report explains how the Board engaged with key stakeholders. The Board was not able to fulfil the programme of site visits planned for 2020. However, as referred to in my statement at the start of this Annual Report, I was pleased that the non-executive Directors were able to speak directly to a diverse cross-section of employees in different locations across the world using video conferencing. The Directors heard first-hand employee accounts of the impact of COVID-19 on their site, the COVID-19 protocols and safety measures put in place, as well as broader issues, such as their views on investment and the future of Morgan. We have plans in place to continue to participate in 'virtual' employee engagement sessions during 2021. The CEO and CFO engaged with shareholders through meetings at the half and full year to discuss Company performance and provide explanation of the Company results where necessary. All of these meetings were on a 'virtual' basis.

BOARD EFFECTIVENESS

All Board meetings have been held 'virtually' since March 2020. I am pleased to say that the virtual model has worked very effectively and has not compromised Board effectiveness in any way. To assure this, in November the Board conducted an evaluation of its own performance. Despite the remote method of working throughout the year the outcome of the evaluation was very positive.

In conducting Morgan's business, the guiding principle will always be to 'do the right thing' within a framework of strong corporate governance. We will trade ethically within a culture that develops and values our people while looking for ways to support long term sustainability by minimizing the Company's environmental impact.

Douglas Caster CBE FIET
Chairman

Board of Directors

1. DOUGLAS CASTER CBE FIET

Non-executive Chairman

Appointed: Non-executive Director in February 2014. Non-executive Chairman and Nomination Committee Chairman on 1 January 2019.

Skills and contribution: Douglas is an experienced Chairman with leadership and governance experience and a strong track record of managing and driving growth within electronics businesses.

Career and experience: Douglas began his career as an electronics design engineer 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 was Chairman of Ultra from April 2011 until 28 January 2019. Douglas was non-executive Chairman of Metalysis Limited from January 2015 until June 2019. Douglas was Morgan Advanced Materials plc's Senior Independent Director from January 2015 until December 2017. He was appointed to the role of Chairman in January 2019.

Additional appointments: None

Committees:  

2. PETE RABY

Chief Executive Officer

Appointed: August 2015.

Skills and contribution: Pete has a strong technical background and extensive experience in planning and executing business strategy across global technology and manufacturing operations.

Career and experience: 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 demonstrated strong leadership across a range of senior strategy, technology and operational positions at Cobham over a nine-year period. Prior to Cobham, Pete was a partner at McKinsey & Company in London, specialising in strategy and operations in the aerospace, defence and power and gas sectors. He 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: Non-executive Director, Hill & Smith Holdings PLC.

3. PETER TURNER

Chief Financial Officer

Appointed: April 2016.

Skills and contribution: Peter has significant financial experience combined with a strong track record of driving improved business performance in multiple large-scale and complex organisations.

Career and experience: Peter joined Morgan Advanced Materials in April 2016 as Chief Financial Officer. Before this, Peter was Finance Director at Smiths Group plc from 2010 to 2015. During this time, he was responsible for

driving restructuring programmes across the Group to enhance operating margins, with a strong focus on improving operating cash flow. Prior to Smiths, Peter was Finance Director from 2007 to 2009 at Venture Production plc, before it was acquired by Centrica plc in 2009. From 1995 to 2006, Peter held several senior positions at The BOC Group plc, including Finance Director of the Industrial and Special Products division. Peter started his career as an auditor at Price Waterhouse. He holds a degree in chemistry from Oxford University.

Additional appointments: None.

4. JANE AIKMAN

Independent Non-executive Director

Appointed: Non-executive Director and Audit Committee Chair in July 2017.

Skills and contribution: Jane brings to the Board significant financial experience and knowledge of growing manufacturing and technology businesses gained in a variety of senior executive positions. Jane brings a valuable perspective from her current executive role in the technology marketing and advertising sector.

Career and experience: Jane has been Group Director and Group Chief Operating Officer of Inside Ideas Group Limited since July 2020. Up until May 2019, Jane was Chief Financial Officer of Arqiva Group Limited, a communications infrastructure company. Prior to this, she was the Chief Financial Officer of KCOM Group plc, a listed communications services and IT solutions provider. She was Chief Financial Officer and Chief Operating Officer of Phoenix IT Group plc until its acquisition by Daisy Group in 2015. Jane has also held Chief Financial Officer positions at Infinis plc, Wilson Bowden plc and Pressac plc and a senior finance position at Asia Pulp and



The image was taken pre-COVID.

Paper in south-east Asia. Jane was a non-executive Director of Halma plc from 2007 and chaired its audit committee from 2009 until her departure in July 2016. Jane holds a civil engineering degree and qualified as a Chartered Accountant with Ernst & Young.

Additional appointments: Group Director and Group Chief Operating Officer of Inside Ideas Group Limited.

Committees: **A** **N** **R**

5. HELEN BUNCH

Independent Non-executive Director

Appointed: Non-executive Director in February 2016. Remuneration Committee Chair on 1 January 2019.

Skills and contribution: Helen has significant experience of driving business performance and building businesses in new markets. Helen also brings to the Board a valuable perspective from her current executive role leading a business in the construction sector.

Career and experience: At the start of her career, Helen spent 17 years working in global businesses serving a wide variety of industries from automotive to household products, including 11 years with ICI and the remainder with a successor company, Lucite International Ltd. In 2006, Helen joined Wates Group, the privately-owned construction and property services company, as Group Strategy Director and became Managing Director of Wates Retail Limited in January 2011. From 2015 to July 2020 Helen was Managing Director of Wates Smartspace Limited, the enlarged property services business following a merger with another

Wates company and the acquisition of a facilities management business. In July 2020, Helen became Executive Managing Director of Wates Residential.

Additional appointments: Executive Managing Director of Wates Residential.

Committees: **A** **N** **R**

6. LAURENCE MULLIEZ

Senior Independent Director

Appointed: Non-executive Director in May 2016. Senior Independent Director in December 2017.

Skills and contribution: Laurence has significant experience in growing, simplifying and unifying complex international and industrial manufacturing businesses, and brings valuable knowledge of the energy (including renewables), steel and infrastructure industries, and insight into some of Morgan's key markets.

Career and experience: Laurence joined Banque Nationale de Paris in 1988 followed by M&M Mars Inc. in 1992 and then Amoco Chemical Inc. in 1993, which was acquired by BP p.l.c. in 1998. She spent a further 11 years at BP in a variety of roles including Chief Executive of Castrol Industrial Lubricants and Services. Laurence was Chief Executive of independent power producer Eoxis UK Limited from 2010 to 2013. Laurence is currently Chair of Voltalia S.A. and Globeleq Ltd, and a member of the supervisory boards of SBM Offshore N.V. and Siemens Energy AG.

Additional appointments: Chairman of Voltalia S.A., Chairman of Globeleq Ltd, member of the supervisory board of SBM Offshore N.V. and member of the supervisory board of Siemens Energy AG.

Committees: **A** **N** **R**

7. CLEMENT WOON

Independent Non-executive Director

Appointed: May 2019.

Skills and contribution: Clement has broad managerial experience in globally operating technology and consumer-related industries. He has a strong track record of renewing traditional industries and revitalising growth through strategic interventions, and in-depth experience and knowledge of markets within the Asia Pacific region.

Career and experience: From August 2016 to March 2020, Clement was Group CEO of Saurer Intelligent Technology Co. Ltd, a €1 billion textile machinery and components business listed on the Shanghai Stock Exchange. Clement continues to serve on the board of Saurer in the capacity of non-executive director. Prior to this, from April 2014 to July 2016, Clement was Advisor and Co-CEO of Jinsheng Industry Co Ltd, an industrial company in China with diverse interests including biotech, automotive and textiles. Previously Clement held various senior positions at companies based in Switzerland and Singapore including Division CEO of Leica Geosystems AG, President & CEO of SATS Ltd, and CEO Textile Division of OC Oerlikon AG. Clement has an MBA in Technology Management from Nanyang Technological University, Singapore, an MSc in Industrial Engineering and a BEng in Electrical Engineering from the National University of Singapore.

Additional appointments: Non-executive Director of Saurer AG and Chairman of PFI Foods Industries Pte. Ltd.

Committees: **A** **N** **R**



COMMITTEES

- Committee Chairman
- A Audit
- N Nomination
- R Remuneration



THE UK CORPORATE GOVERNANCE CODE

In July 2018 the Financial Reporting Council published the most recent version of the UK Corporate Governance Code (the Code), which is available on its website www.frc.org.uk.

Listed below are the Code Principles, and details of where we have addressed them in this Annual Report.

APPLICATION OF CODE PRINCIPLES:

Code Principle	Summary	Page(s)
A	Board Leadership and Company Purpose Principles A successful company is led by an effective and entrepreneurial board, whose role is to promote the long-term sustainable success of the company, generating value for shareholders and contributing to wider society.	51
B	The board should establish the company's purpose, values and strategy, and satisfy itself that these and its culture are aligned. All directors must act with integrity, lead by example and promote the desired culture.	8 to 23
C	The board should ensure that the necessary resources are in place for the company to meet its objectives, and measure performance against them. The board should also establish a framework of prudent and effective controls, which enable risk to be assessed and managed.	26 to 31
D	In order for the company to meet its responsibilities to shareholders and stakeholders, the board should ensure effective engagement with, and encourage participation from, these parties.	4, 5, 20, 51, 52
E	The board should ensure that workforce policies and practices are consistent with the company's values and support its long-term sustainable success. The workforce should be able to raise any matters of concern.	16, 17, 20 to 23 and 61
F	Division of Responsibilities Principles The chair leads the board and is responsible for its overall effectiveness in directing the company. He or she should demonstrate objective judgement throughout their tenure and promote a culture of openness and debate. In addition, the chair facilitates constructive board relations and the effective contribution of all non-executive directors, and ensures that directors receive accurate, timely and clear information.	54 to 56
G	The board should include an appropriate combination of executive and non-executive (and in particular, independent non-executive) directors, such that no one individual or small group of individuals dominates the board's decision-making. There should be a clear division of responsibilities between the leadership of the board and the executive leadership of the company's business.	48, 49, 53, 54
H	Non-executive directors should have sufficient time to meet their board responsibilities. They should provide constructive challenge and strategic guidance, offer specialist advice, and hold management to account.	55
I	The board, supported by the company secretary, should ensure that it has the policies, processes, information, time and resources it needs in order to function effectively and efficiently.	56
J	Composition, Succession and Evaluation Principles Appointments to the board should be subject to a formal, rigorous and transparent procedure, and an effective succession plan should be maintained for board and senior management. Both appointments and succession plans should be based on merit and objective criteria and, within this context, should promote diversity of gender, social and ethnic backgrounds, and cognitive and personal strengths.	63 to 65
K	The board and its committees should have a combination of skills, experience and knowledge. Consideration should be given to the length of service of the board as a whole and membership regularly refreshed.	48, 49, 54, 63 to 65
L	Annual evaluation of the board should consider its composition, diversity and how effectively members work together to achieve objectives. Individual evaluation should demonstrate whether each director continues to contribute effectively.	56 to 57
M	Audit, Risk and Internal Control Principles The board should establish formal and transparent policies and procedures to ensure the independence and effectiveness of internal and external audit functions and satisfy itself of the integrity of financial and narrative statements.	60 to 62
N	The board should present a fair, balanced and understandable assessment of the company's position and prospects.	60
O	The board should establish procedures to manage risk, oversee the internal control framework, and determine the nature and extent of the principal risks the company is willing to take in order to achieve its long-term strategic objectives.	26 to 31
P	Remuneration Principles Remuneration policies and practices should be designed to support strategy and promote long-term sustainable success. Executive remuneration should be aligned to company purpose and values and be clearly linked to the successful delivery of the company's long-term strategy.	66 to 76
Q	A formal and transparent procedure for developing policy on executive remuneration and determining director and senior management remuneration should be established. No director should be involved in deciding their own remuneration outcome.	66 to 86
R	Directors should exercise independent judgement and discretion when authorising remuneration outcomes, taking account of company and individual performance, and wider circumstances.	66 to 86

STATEMENT OF COMPLIANCE WITH THE CODE PROVISIONS

The Board confirms that during the year ended 31 December 2020, the Company has fully complied with the provisions of the Code.

BOARD'S MONITORING AND ASSESSMENT OF CULTURE AND WORKFORCE ENGAGEMENT

As set out in greater detail on pages 18 to 23 in the sustainability and responsibility section, Morgan's cultural objective is to build an organisation where collaboration and empowered decision-making at all levels of management (rather than in isolation locally) is more prevalent, and where the right outcomes are reached, in the right way (ethically, safely and inclusively). The Morgan Leadership Behaviours support the ethos that 'it is not just what you do, but how you do it that counts.'

The Board has monitored and assessed the development of Morgan's culture through the methods used for employee engagement as described below, supplemented by other resources to help assess the culture and which include:

- Employee insight gathered from site visits, virtual engagement sessions, and employee events
- Employee engagement survey metrics and verbatim employee comments
- Areas of culture highlighted in ethics reporting
- Safety updates and metrics – presented directly to the Board on a regular basis
- Additional insights with a focus on diversity and inclusion.

Workforce engagement

For the purposes of workforce engagement, the Board defines the workforce as all employees directly employed by the Group. The Board considers that the most appropriate mechanism for workforce engagement is a combination of methods, (as permitted by the Code), involving all Board members. This approach recognises the Group's global reach with facilities located in over 30 countries, and the fact that many employees are in operational and manufacturing roles without internet access in the workplace.

The mechanisms selected by the Board to engage with the workforce primarily comprise a number of meetings between the non-executive Directors with employees, (without senior management present), supplemented by other methods, to provide insight into employee views, which are summarised below. Due to the global COVID-19 pandemic which severely limited travel, most employee engagement that took place in 2020 was virtual, rather than via in-person meetings at the Group's manufacturing sites or offices.

Board attendee(s)	Date	Type of engagement	Location(s)	Who met
Helen Bunch and Clement Woon	Jan 2020	Site visit	Luxembourg (Seals & Bearings site)	Site visit, met local employees and management
Clement Woon	Oct 2020	Site visit	Singapore office	Site visit, met local and regional finance managers
All NEDs	Nov 2020	Virtual employee engagement session	Johannesburg, South Africa (Electrical Carbon facility)	Met local employees and management
All NEDs	Nov 2020	Virtual governance session	Johannesburg, South Africa	Met non-executive directors of Morganite South Africa
All NEDs	Nov 2020	Virtual employee engagement session	New Bedford, United States (Technical Ceramics facility)	Met local employees and management
Douglas Caster and Clement Woon	Dec 2020	Virtual employee engagement session	Bromborough, United Kingdom (Thermal Products – Thermal Centre of Excellence, warehouse and sales office)	Met local employees and management

During the engagement sessions, employees were encouraged to express their views on working on site during the pandemic, safety, culture, leadership, investment in the future of the site and any other matters they wished to raise, and the output from the discussion was reported back to the next Board meeting, which created greater awareness of employee views. In addition, follow up discussions were held to share employee feedback with managers, to address any concerns and to foster a positive culture.

The meetings between non-executive Directors and small groups of employees from one site creates an atmosphere of trust which encourages employees to speak openly and honestly about the issues they care about most. The Board is satisfied that the combination of (i) dedicated engagement sessions with diverse groups of employees which encourages meaningful discussion and frank feedback; (ii) meeting employees in their place of work during Board visits to Morgan facilities and non-executive Director site visits; and (iii) the varied encounters

with employees during other Morgan events provide a range of effective ways to engage with employees. Feedback from employees indicates that they appreciate these interactions, and that employees would like engagement to continue. During 2020, the inability to travel and visit sites prevented the anticipated level of engagement in person, and the Board instead held a number of virtual engagement sessions. This approach continues to evolve, and the Board will monitor its effectiveness and develop its approach during 2021.



Engagement with Shareholders

The Chairman and the executive Directors meet institutional investors and potential institutional investors.

The Company's brokers present to the Board annually, including reporting insights from investors and the market.

The Board also review the feedback provided by investors and potential investors following annual and half-year results presentations which sets out the issues that investors are interested in and whether they believe their expectations have been met.

Ordinarily, the Annual General Meeting (AGM) provides shareholders with the opportunity to ask questions of the Directors in person and to meet them informally after the meeting. This was not possible during 2020 due to COVID-19 and the UK Government's 'stay at home' measures. Instead, shareholders were asked to submit questions ahead of the Company's AGM for the Board to respond to, by contacting the Company Secretary.

The Investors section of the Company's website includes details of regulatory announcements, press releases, presentations, webcasts and other relevant Company and shareholder information.

Relations with customers and suppliers

The Board keeps abreast of relations with customers through regular reports from the Chief Executive Officer as well as insights provided by the Presidents of the divisions and global business units as part of their business presentations to the Board. During 2020, as a result of the Group's restructuring project, additional engagement and partnering with customers was required where site closures meant that manufacturing of products moved from sites in one country to another, with the need for additional quality control measures as a result.

Morgan ensures its interactions with suppliers, customers and competitors are always ethical, through the Morgan Code and specific Group policies, supported by risk assessment and due diligence. The Company seeks to ensure that suppliers and customers operate in a similarly responsible manner, by fostering long-term relationships built on trust, being truthful in communications, and meeting agreed payment terms. Morgan seeks to ensure that new suppliers operate in a responsible way, that their workers are safe and treated fairly, and ensures that environmental and social impacts are taken into consideration during its process for sourcing new suppliers.

Morgan publishes its Modern Slavery Act transparency statement annually, explaining steps taken by the Group to seek to ensure that there are no incidents of modern slavery within the business and its supply chain, in accordance with the UK Modern Slavery Act 2015. The Board reviews the Group's operational, legal and compliance framework to prevent modern slavery in its supply chain, which includes employee training, contractual terms and conditions and due diligence processes.

Engagement with pension trustees on behalf of pensioners

The Board met the Chair of the UK defined benefit pension scheme trustees in February 2020 and February 2021 and had the opportunity to ask questions. The Director of Pensions and the Chief Financial Officer also provide regular updates to the Board on pension issues and funding and regulatory developments affecting the Company's main defined benefit schemes around the world, including those in the US where, as in the UK, there are a significant number of pensioner members.



THE BOARD

The role of the Board

The Board is collectively and ultimately responsible to the Company's shareholders and oversees how the organisation generates and preserves the long-term success of the Company. The Board supervises and monitors progress against the key execution priorities, whilst ensuring that there is a robust framework of prudent and effective controls, which enables risks and emerging risks to be fully considered, assessed and managed.

The Board sets the tone from the top and monitors the Company's compliance with the Morgan Code (referred to on page 23 of the Sustainability and responsibility section of this Report), and in doing so all the Directors fulfil their duties under section 172 of the Companies Act 2006.

Matters reserved for the Board

- Overall leadership, culture, strategic aims, long-term objectives and risk appetite of the Group.
- Alignment of Group's culture with purpose and values.
- Any changes relating to Group capital structure.
- Oversight and approval of full-year and half-year financial results, including approval of the Annual Report and ensuring a 'fair, balanced and understandable' presentation of the Group's financial position.
- Approval of contracts and expenditure as specified in the Limits of Authority schedule.
- Stakeholder communication and engagement.
- Changes to Board membership following recommendations from the Nomination Committee.
- Determining remuneration policy for the Directors, Company Secretary and other senior executives following recommendations from the Remuneration Committee.
- Delegation of authority, approving levels of authority including for the principal committees, and approving their terms of reference.
- Corporate governance matters, including a review of its own performance, determining non-executive Director independence, and review of overall governance arrangements and authorising any conflicts of interest.
- Other specific matters.

THE COMMITTEES OF THE BOARD

(and key responsibilities)

Audit Committee

- Financial reporting
- External audit
- Internal audit
- Oversight of principal risks
- Oversight of ethics and compliance

Remuneration Committee

- Executive and senior management remuneration
- Incentive structure and target setting
- Setting remuneration policy
- Reviewing and considering wider workforce remuneration

Nomination Committee

- Succession planning (Board and senior management)
- Board and Committee composition
- Board recruitment/appointments
- Diversity and inclusion

Executive Committee

- Strategy implementation
- Delivery of operational and financial performance
- Approval of policies
- Assessment and control of risk
- Prioritisation and allocation of resources
- Monitoring of competitive forces in each area of operation

Disclosure Committee

- Assistance and information to the Board concerning the identification of inside information
- Recommendations as to how and when the Company should disclose such information
- Ensuring any such information is managed and disclosed in accordance with all applicable legal and regulatory requirements and the Company's procedures on controlling inside information

General Purposes Committee

- Approve opening of/changes to bank accounts
- Approve arrangements with financial institutions
- Approve guarantees and indemnities
- Approve substantive intra-Group loans
- Intra-Group dividends and capital restructuring
- Grant options/make awards under Company's share schemes (after Remuneration Committee approval) and any Employee Benefit Trust-related loans

The Company's governance framework is formally delivered through the following mechanisms: the Company's Articles of Association, the clearly defined role of the Board and the matters reserved for the Board, and the principal Committees of the Board (Audit, Remuneration and Nomination Committees) and their clearly defined terms of reference. The memberships, roles and activities of the principal Committees are described in their respective reports. The full terms of reference of the principal Committees are 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 two executive Directors together with the Group Human Resources Director, the Group General Counsel, the Group IT Director, and the divisional or global business unit Presidents form the Executive Committee. The Company Secretary acts as Secretary to the Committee and attends all meetings.

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

The Disclosure Committee meets on an ad-hoc basis during the year to assess whether information which directly concerns the Group is inside information (as defined by the UK (formerly EU) Market Abuse Regulation), and to discharge other responsibilities relating to the control and disclosure of inside information. The membership of the Disclosure Committee comprises the Directors and the Company Secretary, but meetings are generally attended by the executive Directors and the Company Secretary.

Board – roles and responsibilities

In 2020 the Board comprised five non-executive Directors (including the Chairman) and two executive Directors. This is considered to be the appropriate number of members for the Board, given the scale of the Group's operations at this time. Biographies of the Directors in post at the date of this Report, including details of their skills, career and experience and any other significant external commitments, are set out on pages 48 and 49.

There is a clear division of responsibilities between the Chairman and Chief Executive Officer, and each role is clearly defined.

The Chairman

Responsible for:

- Leading and ensuring the effectiveness of the Board and the individual Directors;
- Shaping boardroom culture;
- Ensuring the Board has effective decision-making processes and applies sufficient challenge to major proposals;
- Setting the Board's agenda;
- Ensuring sufficient time is available for all agenda items;
- Promoting a culture of open debate and constructive challenge which results in sound decision-making;
- Encouraging all Directors' effective contributions, drawing on their skills, experience and knowledge; and
- Ensuring constructive relationships between executive and non-executive Directors.

Chief Executive Officer

Responsible for:

- Management of the Group;
- Delivery of the Group's business plan;
- Formulation and implementation of Group strategy;
- Chairing the meetings of the Executive Committee; and
- Ensuring the implementation of the Group's policies, all within the authorities delegated by the Board.

The Chairman and Chief Executive Officer maintain a strong working relationship and open dialogue, which ensures cogent leadership of the Group.

Chief Financial Officer

→ Supports the Chief Executive Officer in the development and delivery of the Group strategy;

- Leads the Group's finance functions;
- Oversees effective financial reporting and ensures suitable processes and controls are in place; and
- In conjunction with the Chief Executive Officer, recommends the annual budget and long-term financial plans of the Group.

Senior Independent Director

→ Meets with the non-executive Directors (without the Chairman present) at least once a year to consider the Chairman's performance during the year and communicates the outcomes to the Chairman; and

- Acts as a trusted sounding board for the Chairman and as an intermediary for the other non-executive Directors.

Non-executive Directors

- Provide independent monitoring and review of management's performance;
- Provide alternative insight, expertise and assist with the development and review of the strategy;
- Engage with stakeholders and employees in relation to Morgan's culture; and
- Chair/attend meetings of and contribute to the work of the principal committees of the Board, reviewing remuneration, financial performance, internal audit and succession planning of senior management.

Company Secretary

- Supports the Board by ensuring information is made available in a timely manner;
- Supports the Board by facilitating induction, training and performance evaluations;
- Supports the Chairman in designing the annual Board programme; and
- Provides advice on corporate governance matters.

Board balance, experience, diversity 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 and update the knowledge and range of skills and experience of the Board, which are themselves regularly reviewed. The Board wishes to ensure that it maintains a blend of views and skills as well as a cohesive and informed decision-making process. The Board comprises members with a breadth and depth of professional and sector experience, and with varied and relevant backgrounds; it has Directors with skills in strategy, finance and technology, as well as global commercial experience, and working knowledge of other boards or executive roles.

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 considering 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 or with charities receiving material support from the Company.

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

Time 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. In accordance with the Code, Directors are asked to seek Board approval prior to accepting any additional external appointments.

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 commitments and to seek Board approval before accepting any additional external appointments, 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 annually, including any disclosed conflicts and authorisations. 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 must notify the Chairman (the Chairman would notify the Senior Independent Director) and the Director would be denied access to the relevant information and excluded from any associated debate and decision.

The 2020 review confirmed that no potential or actual conflicts had occurred during the year under review.

Should a Director have concerns about the running of the Company, or about 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.

Board meetings

In 2020, the Board met formally on 11 occasions, with a summary of the matters addressed in these meetings set out on pages 56 to 57. Meetings which took place from March 2020 onwards were held by video conference.

During the year, the Board considered the Company's response to the emerging global pandemic, with regular reports on the impact of COVID-19 on the Group's trading performance and operations. The Board was kept apprised of how employees were safeguarded through new site working practices and how customers' needs were met despite interruptions to manufacturing processes. The Board also received regular updates on the restructuring programme and separate reviews on culture, diversity, talent, technology and safety.

Attendance at meetings

The attendance of each Director at Board, Audit, Remuneration and Nomination Committee meetings is set out below:

Director	Board (maximum 11)	Audit Committee (maximum 4)	Nomination Committee (maximum 2)	Remuneration Committee (maximum 6)
Douglas Caster	11/11	4/4 ¹	2/2	6/6
Pete Raby	11/11	4/4 ¹	2/2 ¹	6/6 ¹
Peter Turner	11/11	4/4 ¹	–	–
Jane Aikman	11/11	4/4	2/2	6/6
Helen Bunch	10 ² /11	4/4	2/2	6/6
Laurence Mulliez	11/11	4/4	2/2	6/6
Clement Woon	11/11	4/4	2/2	6/6

1. Attended by invitation.

2. Helen Bunch was unable to attend a meeting convened specifically to approve a new precious metals facility agreement due to a last-minute emergency.



Summary of the Board's work and key decisions taken during the year

Strategy

- Monitored ongoing performance in relation to the strategic priorities
- Reviewed the progress of key technology projects and considered potential opportunities for growth
- Reviewed the Group's talent strategy, succession planning and potential future leadership capability and how best to retain and promote talent to support the business
- Received an update on implementation of the Group's IT strategy and how this had been adapted to working conditions under COVID-19
- Approved a small number of specific requests for capital expenditure above a certain threshold to invest and grow the business

Culture and stakeholder engagement

- Monitored the Group's culture
- Reviewed progress to date of the action plan to promote diversity and inclusion across the Group
- Performed annual review of progress in relation to fostering a safe, ethical and diverse culture
- Monitored implementation of 'thinkSAFE', the Group's behavioural safety programme
- Through reports from the Audit Committee, monitored progress against implementation of the Morgan Code and reviewed reports made to the ethics hotline
- Conducted engagement sessions with employees
- Reviewed feedback from investors following full-year and half-year results roadshows, and met the Company's joint brokers

Performance

- Received updates on health and safety of employees
- Monitored the impact of the pandemic on operations and ability to service customers
- Reviewed Group financial performance including actions to preserve cash, reduce costs, and improve liquidity
- Approved a Group restructuring programme and received updates on its implementation
- Conducted post-implementation reviews of capital expenditure projects
- Reviewed the dividend policy; recommended withdrawal of the 2019 final dividend and approved the 2020 interim dividend
- Approved the 2021 budget
- Considered reports from the Chief Executive Officer and the Chief Financial Officer at each Board meeting
- Received updates from each of the Presidents of the divisions and global business units

Governance and risk

- Monitored environmental, health and safety performance at every Board meeting and set targets for the forthcoming year
- Twice-yearly, reviewed the Group's principal risks and approach to risk management
- Reviewed the Group's risk appetite, including potential level of exposure for emerging and principal risks
- Approved a new precious metals financing facility
- Approved the Group's tax strategy
- Approved matters relating to the pension strategy, and approach to discussions with the pension trustees on funding strategy
- Reviewed legal matters including material litigation
- Reviewed the outcomes of the annual Board performance evaluation and agreed actions for further improvement as well as monitored progress against actions arising from the 2019 performance evaluation
- Considered the Board's response to the requirements of the Code and related legislation
- Reviewed reports from the Chairs of the Audit, Nomination and Remuneration Committees
- Reviewed and approved the Group's half-year results and preliminary announcement of the 2020 final results
- Considered whether the Annual Report and Accounts are 'fair, balanced and understandable'

Board support and access to information

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 fully discharge its duties. Board papers are generally made available electronically at least five working days prior to each meeting. Non-executive Directors also receive information and updates between formal Board meetings. The Company Secretary attends all Board meetings and all Directors have access to her advice and, if necessary, to independent professional advice at the Company's expense to assist them in fulfilling their duties as Directors.

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 induction programme, which will usually include: an information pack with pertinent documents; meetings with external advisers, senior executives and functional heads; and a number of site visits. All non-executive Directors have access to management and employees at all levels and are encouraged to visit operational sites.

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 continuing training and development of all Directors as necessary. Training may be provided via presentations at Board meetings as well as through online learning. During 2020, the Board received briefings on UK pension legislative developments, the UN Sustainable Development Goals and accounting for the impact of COVID and undertook online training on cybersecurity and elements of the Morgan Code and Morgan's policies in relation to ethical behaviour.

Board performance evaluation

An internal Board performance evaluation led by the Chairman, and facilitated by Jack Telfer of Auxesis Consulting, took place in 2020. Jack Telfer is not involved in any other business relationship with the Company and is independent.

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

1. All Board members completed online questionnaires. The questionnaires comprised a number of questions on general Board effectiveness (including a selection of questions repeated from last year's questionnaire to allow year-on-year comparison), one question on the performance of each of the principal Committees, and additional questions on the performance of the Chairman.
2. Auxesis Consulting reviewed Directors' responses and spoke to each Director individually by telephone to clarify points of feedback.



3. Auxesis Consulting produced a report summarising the results of the questionnaires and highlighting any significant changes from last year, discussing the findings with the Chairman initially.
4. The report on general Board effectiveness was made available to the Board and the Chairman presented his conclusion and recommendations at the December Board meeting.
5. The Board subsequently agreed an action plan.
6. In addition, Auxesis Consulting provided a separate summary for the Senior Independent Director on the Chairman's performance, and the Senior Independent Director provided feedback to the Chairman on his effectiveness in chairing the Board.

The overall outcome of the 2020 performance evaluation was that the Board is operating effectively, that the membership was sufficiently diverse, with individual Directors' skills and experience and thoughts complementing each other, and that the Directors work well together, including in the virtual meetings which were prevalent during 2020. Proposed actions arising from the 2020 evaluation which will be carried out in 2021 include the following:

- Monitoring implementation of strategy – the specific impact of COVID-19 meant that the Board focused more on short-term considerations during 2020. The Board intends to increase its focus on strategy during 2021.
- Oversight of the Group's restructuring programme – the Board agreed to continue to oversee the implementation of the restructuring programme. The Board will monitor the senior leadership's capacity to maintain balance between short-term execution priorities and the longer-term development of the business.
- Executive team bandwidth and wellbeing – the Board will seek to strongly support Morgan's people given the heavy and challenging workload arising from the pandemic.
- Employee engagement and site visits – whilst travel restrictions continue options for virtual Board engagement opportunities will be developed until physical visits and meetings can resume.
- Board engagement – non-executive Directors meet without executive management after each Board meeting (currently meeting virtually).

An externally facilitated Board performance evaluation process will be carried out in 2021.

Actions were taken during the year to track and implement the recommendations made following the 2019 Board performance review:

Recommendations from 2019

Monitoring implementation of strategy –

In the context of assessing future strategic direction, the Board agreed to consider further whether it should spend more time considering external economic and/or political developments that might affect the Group.

Assessing the risk profile of the Group –

To assist the Board in understanding the appetite for risk within the Group and to assist executive management in formalising the level of risk which is appropriate for the business, the Board should continue to review whether sufficient information is provided to the Board to assess the Group's risk profile.

Developing leadership capability and succession planning –

In order to support executive management in the development of leaders within the organisation, the Board will continue to take advantage of opportunities to meet senior leaders within the business, in particular for more informal interactions with Executive Committee members, and with site-based individuals who are part of the senior leadership team.

Board development – Recognising that the current Board has a good mix of skills and experience which complement each other, and that no current recruitment needs have been identified, the Board will continue to strengthen itself through specific training and development, with the selection of particular topics to be supported by the Company Secretary.

Action taken/progress made during 2020

- Reviewed large growth opportunities in target market sectors
- Received briefings on the short- and long-term prognosis for Morgan's target markets
- Kept abreast of the economic, political and societal trends which might impact the strategic direction in the long term, including climate change and barriers to trade in particular in relation to the US, China and the EU.

- Although no dedicated assessment of risk appetite took place during 2020, the Board has addressed the Group's risk profile in relation to the key decisions made by the Board during the year
- The Board reviewed the Group's principal and emerging risks half-way through, and at the end of, 2020.

- All members of the Executive Committee and a good number of their direct reports presented to the Board during meetings in 2020
- The Board met site leaders to give feedback following the virtual employee engagement sessions
- More will be done during 2021 to ensure engagement and interaction continue.

- The Board received briefings on a number of specific topics and undertook online training as described above.

ACCOUNTABILITY

Financial reporting

A summary of the statement of Directors' responsibilities in respect of the Annual Report and the consolidated financial statements is set out on page 89, and the going concern and viability statements are set out in the Strategic Report on pages 41 and 42.

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 9.

Environmental, Social and Governance

The Board has overall responsibility for the Group's ESG strategy and priorities and for monitoring the implementation of the strategy.

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 system of internal control, and the role of the Audit Committee in ensuring its effectiveness, are set out in the Report of the Audit Committee on pages 60 to 62.

Information on share capital and other matters

The information about share capital required to be included in this statement can be found on pages 87 to 89 in the Other disclosures section.



Report of the Audit Committee

This Report gives an insight into the responsibilities, activities and workings of the Audit Committee (the Committee) and how it discharged its duties during 2020.



COMMITTEE MEMBERS

Jane Aikman (Chair)
Helen Bunch
Laurence Mulliez
Clement Woon

Jane Aikman has chaired the Committee since July 2017 and has recent and relevant financial experience and competence in accounting and auditing gained from her current executive role and various prior Chief Financial Officer roles.

The Committee as a whole has competence in the sectors in which the Group operates. All Committee members are independent non-executive Directors. Biographies of the Committee members including details of relevant sector experience are set out on pages 48 to 49.

DEAR SHAREHOLDER

I am pleased to present the Audit Committee's report for 2020. This has been an exceptional year for the Group, and the Committee's primary function to ensure the integrity of the Group's financial reporting and external audit processes and the maintenance of sound internal control and risk management procedures have been more pertinent than ever.

The Audit Committee reports to the Board of Directors on whether the Annual Report and Accounts, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Company's position and performance, business model and strategy. The Audit Committee's role is to ensure that management's disclosures reflect the supporting detail or to challenge them to explain and justify their interpretation and, if necessary, re-present the information.

The Committee has provided assurance to the Board that the Group's financial statements have faithfully represented the impact of COVID-19 on the Group's financial performance, and the accounting judgements required to report the various activities which are being undertaken as part of the Group's restructuring programme. This assurance has supported the Board with the key decisions taken during 2020 and has provided assurance to the Board when reviewing the going concern and longer-term viability assessment of the Group.

In addition, the Committee monitored the systems of internal control to ensure that these continued to operate effectively. In particular, the Committee reviewed the progress of the internal audit plan and the effectiveness of the internal audit function, despite the limitations placed on the team due to the restrictions on travelling to Morgan sites.

The Committee has overseen the transition following the change of external auditor from KPMG to Deloitte LLP, who were appointed following the audit tender process which concluded in 2019. This is the first Annual Report to be audited by Deloitte LLP. The Committee has monitored the successful transition to a new audit approach and has scrutinised the performance and effectiveness of the external audit.

The Committee has monitored the reports raised through the ethics hotline and ensured that executive management have responded to these quickly and appropriately. The Committee reviews the key themes and trends in the number, type and source of these reports to gain an understanding of how effectively the Morgan Code of Conduct is embedded.

The Committee continues to monitor and address any changes in governance and reporting requirements. The landscape in which audit services are provided is likely to change in the near future. In particular, the Committee will monitor developments following the publication of the Brydon Report and developments in relation to the audit profession.

As a Committee, we are also following developments in the wake of the Kingman Review and how we can address the Kingman recommendation to promote greater 'brevity, comprehensibility and usefulness' in the Company's own reporting in the coming year.

COMMITTEE EVALUATION

The Committee's performance was reviewed as part of the main Board performance evaluation aimed at identifying areas for improvement. I am pleased to report that the Committee is continuing to work well and is fully discharging its responsibilities, whilst contributing effectively to the Group's overall governance framework.

Jane Aikman
Committee Chair

MEETINGS

The Committee met four times during the year, with the timing and the agendas of the meetings closely linked to key points in the annual reporting cycle.

The Chairman of the Board, the executive Directors and key members of senior management attend the meetings by invitation, as do senior representatives of the external auditor.

At the end of each meeting, Committee members meet the external auditor, the Head of Internal Audit and the Director of Ethics and Compliance without the executive Directors or other members of management present.

Between meetings, the Chair of the Audit Committee keeps in contact with the Chairman of the Board, the Chief Executive Officer, the Chief Financial Officer, the Group Financial Controller, the external auditor, the Head of Internal Audit and the Director of Ethics and Compliance 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.

Committee members receive appropriate and timely information on all matters needed to enable the Committee to fulfil its responsibilities. Training and development information is made available to Committee members as appropriate.

AUDIT COMMITTEE TERMS OF REFERENCE

The Committee supports the Board in its responsibilities in relation to corporate reporting, risk management and internal controls, and manages the relationship with the Group's external auditor. The Committee provides regular reports to the Board. The Committee's terms of reference, reviewed during the year, are available on the Company's website.

KEY ACTIVITIES DURING 2020

During 2020 the key areas of focus for the Committee were:

- Receiving reports on progress in relation to the internal audit plan, providing guidance and ensuring continuous improvement of the function;
 - Conducting a robust review of the scope, remit and effectiveness of the internal control environment and ensuring risk management procedures are appropriate and effective;
 - Overseeing the Group's ethics and compliance programme and monitoring progress in compliance with the Morgan Code across the Group;
 - Reviewing the management of all reports made to the 'Speak Up' hotline, or to management on ethics and compliance matters, considering the findings and recommending actions, including whether the Board should be notified of any investigations;
 - Reviewing the trends arising from the ethics and compliance investigations to draw conclusions on control areas for improvement;
 - Assessing the key areas of significant judgement in relation to the 2020 consolidated financial statements, which were: pensions, provisions and contingent liabilities and tax balances and the presentation of specific adjusting items;
 - Considering the appropriateness of management's assessment of going concern and the viability statement;
 - Reviewing the Company's draft 2020 Annual Report and Accounts and recommending to the Board that the document be approved. The review included specific consideration of whether the document was fair, balanced and understandable;
 - Reviewing the effectiveness of the external audit process;
 - Receiving annual risk presentations from the Thermal Products division, the Technical Ceramics global business unit, the Electrical Carbon global business unit and the Seals and Bearings global business unit;
 - Receiving an update from the Director of Group Tax on taxation issues; and
 - Recommending the tax strategy for Board approval.
- The Committee has an annual cycle of business which is designed to ensure it discharges in full its responsibilities over the course of each reporting year. This plan includes a number of standing agenda items, such as:
- Scheduled financial reporting updates which enable the Committee to monitor the integrity of the consolidated financial statements, agree the content of the full-year and half-year announcements relating to the Company's financial performance, and review all significant financial reporting judgements;
 - Review of the FRC's most recent Annual Review and Year-end Letter and consideration of the proposed focus areas;
 - Reports from the external auditor covering their views on key judgements and accounting estimates, and progress against the agreed audit plan;
 - Review and discussion of the external audit plan and strategy for the 2020 year-end;
 - Approval of the audit engagement letter, audit fee and confirmation of auditor independence;
 - Updates presented by the Head of Internal Audit covering progress against the internal audit annual plan, management reports on internal financial control and risk management systems, and the implementation of management actions to address any control weaknesses that have been identified;
 - Review the internal audit plan for the coming year;
 - Annual review of the effectiveness of the internal audit function;
 - Ethics and compliance updates, including reports on whistleblowing and investigations;
 - On behalf of the Board, review annually the effectiveness of the whistleblowing reporting line; and
 - Review of the Committee's terms of reference.

Report of the Audit Committee

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 taken as a whole is fair, balanced and understandable. The Committee approached this as follows, and:

- 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 judgements made by the authors of each section and considered the overall balance and consistency of 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 consolidated financial statements are consistent; and
- Made a recommendation to the Board to assist it in determining whether it is able to make the statement that the Annual Report and Accounts taken as a whole is fair, balanced and understandable.

The significant areas of judgement considered by the Committee in relation to the 2020 consolidated financial statements, and how these were addressed, were as follows:

Specific adjusting items

In the consolidated income statement, the Group presents specific adjusting items separately. In the judgement of the Directors, as a result of the nature and value of these items they should be disclosed separately from the underlying results of the Group. The Group believes that these APMs, which are not considered to be a substitute for, or superior to, IFRS measures, provide stakeholders with additional helpful information on the performance of the business.

Details of specific adjusting items arising during the year and the comparative period are given in note 6 to the consolidated financial statements. Specific adjusting items in relation to discontinued operations are disclosed in note 9 to the consolidated financial statements.

Pensions and other post retirement employee benefits

The Group operates a number of defined benefit arrangements as well as defined contribution plans. The defined benefit plans primarily related to the UK, US and Europe and predominantly provide pensions based on service and career-average pay.

Accounting assumptions given in note 23, are used to calculate the year-end net pension liability in accordance with the relevant accounting Standard, IAS 19 (revised) Employee Benefits.

The Committee reviewed the key assumptions underpinning the accounting for these defined benefit arrangements for the interim and full year results, including receiving presentations from Deloitte LLP on this matter.

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 judgements are important. These are addressed by the Committee and the Board discussing with various members of senior management the key judgements made, supported, where appropriate, by relevant external advice. Deloitte LLP also regularly present their view on all material provisions and contingent liabilities. During the year the Group recorded redundancy and restructuring provisions in the ordinary course of business, which are disclosed separately in note 25 to the consolidated financial statements to provide investors with additional information to assist in their assessment of the Group's performance.

Impairment of intangible assets and goodwill

The carrying amounts of the Group's assets are reviewed at each balance sheet date to determine whether there is any indication of impairment. An impairment loss is recognised whenever the carrying amount of an asset exceeds its recoverable amount. Impairment losses are recognised in the income statement.

The impairment charge in the year relates primarily to the impairment of customer relationship intangible assets recognised upon the acquisition of the Carpenter business in 2008 and in relation to Porextherm in Germany in 2014.

The Committee reviewed the key assumptions and forecasts that underpin the value in use calculations, including receiving the views from Deloitte LLP on these matters.

Credit Risk

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 Group limits its exposure to credit risk by only investing in liquid securities and only with counterparties that have a sound credit rating. The Group has a credit policy in place and the exposure to credit risk is monitored on an ongoing basis.

The Group establishes a provision that represents its estimate of expected credit losses in respect of trade and other receivables and investments. At the point the amount is considered irrecoverable it is written off.

The Committee reviewed the recoverability of receivables as part of its key activities during the period.

Tax balances

Accounting for current and deferred tax involves a range of judgements. 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.

Public reporting Statement

The Committee reviewed the content of the Annual Report and Accounts and advised the Board that, 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.

INTERNAL FINANCIAL CONTROL AND RISK MANAGEMENT SYSTEMS

The Committee assists the Board in fulfilling its responsibilities relating to the adequacy and effectiveness of the control environment and risk management systems. 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.

The Committee, on behalf of the Board, undertakes an annual review of the effectiveness of the Group's system of internal control and did so again for the year under review. This system is consistent with the FRC's guidance on the internal control requirements of the Code. The review covered all material controls, including financial, operational and compliance controls, and risk management systems. The Committee and Board receive regular risk management reports and together they ensure that there are adequate internal controls in place and that these are functioning effectively.

The Directors consider that the Group's system of internal financial control 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 or detect, within a timely period, material errors or irregularities. The system is designed to mitigate and manage risk, rather than eliminate it, and to address key business and financial risks.

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

Control environment

The Group's control environment is underpinned by the Morgan Code and its associated policies and guidelines. The Group policies cover financial procedures, environmental, health and safety practice, ethics and compliance (e.g. anti-bribery and anti-corruption, anti-trust and anti-competitive behaviour and trade compliance) and other areas such as IT and HR. There is a Limits of Authority Policy, which describes the matters reserved for the Board and the delegations granted to the Chief Executive Officer and other executives. The Group operates various programmes to improve the control environment and management of risk. These include the Group's ethics and compliance programme and the Group internal audit function, which present updates to the Committee at each meeting. In addition, the Committee receives reports from the Presidents and Finance Directors of each of the divisions and global business units on key risks, how these risks are managed and an assessment of the control environment, on an annual basis.

Part of the ethics and compliance programme is the provision of an externally managed, independent whistleblower ('Speak Up') hotline which is made available to workers to raise concerns. Any reports made to the hotline are investigated by senior management, with reports made to the Committee at each meeting. The Committee oversees the progress and outcome of any investigations arising from reports made to the hotline or directly to management, where there is a concern regarding ethical conduct. The reports investigated have varied in their nature and materiality, with certain matters requiring the support of external advisers and giving rise to disciplinary action against employees for breaches of Group policies.

The divisional and business unit 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 consolidated 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 or have escalated known exceptions to an appropriate level of management.

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 disposal of assets, provide reasonable assurance that transactions are recorded as necessary to allow the preparation of consolidated financial statements in accordance with International Financial Reporting Standards (IFRS), and the review and reconciliation of reported data. Representatives of the businesses 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.

Performance monitoring

The Board and the Executive Committee hold regular, scheduled meetings, at which they monitor performance and consider a comparison of forecast and actual results, including cash flows and comparisons against budget and the prior year. Divisional and global business unit management teams also meet regularly to review performance. Executive Committee members also visit sites on a regular basis.

Risk management

The Board undertakes a formal assessment of the Group's principal and emerging risks at least twice a year. The identification, assessment and reporting of risks is a continuous process carried out in conjunction with operational management. Appropriate 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 Committee, receives updates on risks, internal controls and future actions from both divisional and Group perspectives. The Executive Committee collectively reviews risk management and internal controls for all principal Group risks. The Group's risk management system, which is described in more detail in the 'Risk management' section of the Strategic Report on pages 26 to 31, supports the Directors' statements on going concern and viability on pages 41 and 42.

Risk factors

The Group's businesses are affected by a number of factors, many of which are influenced by macro-economic trends beyond Morgan's control; although, as described above and in the Strategic Report, the identification and mitigation of such risks are regularly reviewed by the Executive Committee and the Board. These are further discussed in the 'Risk management' section on pages 26 to 31.

Internal audit

The Group's internal audit function reviews internal control and risk management processes. The Audit Committee approves the annual internal audit plan and ensures that there are adequate resources in place for the function to carry out the plan. The Committee receives reports showing the ratings and key findings from each audit. The Committee challenges management over the key findings, discusses key themes identified by the internal audits and guides management in identifying areas of focus to continuously improve controls. Actions arising from internal audit reviews are agreed with management and the Committee monitors progress on any outstanding actions. The Head of Internal Audit has direct access to the Committee's Chair and meets separately with Committee members without executive management at least twice a year.

Report of the Audit Committee

During 2020, travel to sites was limited, but the members of the internal audit team continued to perform audits according to the planned programme, using remote procedures.

In 2020, the Committee reviewed the effectiveness of the Group's internal audit function by way of surveys completed by Committee members and key management personnel. This is the approach taken in those years that the review is not externally facilitated. The last externally facilitated review was in 2018. The Committee considers the internal audit function to be effective, with the quality, experience and expertise appropriate to the business.

External auditor, including independence and non-audit services policy

The external auditor, Deloitte LLP, has processes in place to safeguard its independence and objectivity, including specific safeguards where it is providing permissible non-audit services, and has confirmed in writing to the Committee that, in its opinion, it is independent.

In addition, the Company has a policy on the provision of non-audit services by the external auditor which was revised in 2019 and is in line with the revised Ethical Standard 2019 which took effect on 15 March 2020:

- Certain non-audit services may not be provided. The external auditor may not: review their own work; make any management decisions; create a mutuality of interest; and/or put themselves in the position of advocate.
- Any permissible non-audit work proposed to be placed with the external auditor with a total 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, with any such proposal being submitted in writing to the Chief Financial Officer, who would in turn seek approval from the Audit Committee. All permissible non-audit work, regardless of value, must be approved by the Group Financial Controller. 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 non-audit work which, when added to the fees paid for other non-audit work, would total more than 60% (previously 80%) of the audit fee.
- The value of non-audit fees must not under any circumstances exceed 70% of the average Group statutory audit fee incurred in the last three consecutive financial years.

To safeguard the objectivity and independence of the external auditor, the Company ensures that any non-audit services to be provided by the auditor are given prior approval by the Audit Committee where required under the Policy.

In the opinion of the Committee the auditor's objectivity and independence were safeguarded despite the provision of a limited number of non-audit services by Deloitte LLP during 2020.

In 2020, the proportion of the auditor's fees for non-audit work relative to the audit fee was 8.0% (2019: 8.0%).

Auditor effectiveness

The Committee discussed the quality of the audit during the year and considered the performance of the external auditor as a separate agenda item at the meeting in February 2021. The Committee considered all aspects of the auditor's performance including the following four areas as recommended by the FRC's Audit Quality Practice Aid (December 2019): (i) mindset and culture of the audit firm; (ii) skills, character and knowledge; (iii) quality control; and (iv) judgement. The Committee also considered Deloitte's approach and preparation to the transition of the audit from KPMG LLP.

The Committee confirmed Deloitte's independence before recommending their reappointment for approval by shareholders at the Annual General Meeting (AGM). As the audit of the FY2020 results is Deloitte's first for the Group, the Committee will conduct a full review post year end to gather feedback and look for continuous improvement opportunities.

External audit rotation

Deloitte LLP were appointed as auditor at the AGM in May 2020. The appointment followed a formal external audit tender process which commenced in 2018 and concluded in June 2019, when the Board confirmed the Audit Committee's recommendation that Deloitte LLP be appointed as auditor to take over from KPMG LLP and its predecessor firms. A detailed description of the audit tender process was included in the Report of the Audit Committee in the 2019 Annual Report.

The Company has complied with the provisions of the Competition and Markets Authority's Order on statutory audit services.

The Nomination Committee continued to evaluate the blend of skills, diversity and experience of the Board during the year.



COMMITTEE MEMBERS

Douglas Caster (Chairman)
Jane Aikman
Helen Bunch
Laurence Mulliez
Clement Woon

The Committee is composed solely of non-executive Directors and is chaired by the Chairman of the Board. Biographies of the Committee members can be found on pages 48 to 49. The Company Secretary is secretary to the Committee. Other attendees may join the Committee by invitation and currently the Chief Executive Officer and Group Human Resources Director attend scheduled meetings.

On behalf of the Nomination Committee, I present our report for 2020. The Committee performs a vital role in reviewing the composition and balance of skills and experience on the Board, enabling it to lead the process for appointments to the Board, keep under review the leadership needs of the Group, and ensure plans are in place for orderly succession to Board and senior management positions. During 2020, the Committee reviewed Board succession and formalised its Board Inclusion & Diversity Policy in the context of the Group's diversity and inclusion aspirations. More work will be done during 2021 to review succession planning and talent strategy for the Executive Committee as well as start the search process for my own successor as Chair, and identify future Board candidates.

During the past year, which has seen unprecedented change and disruption globally, Morgan has recognised the crucial need to source, attract, engage and retain talented individuals who can drive Morgan's purpose and values, and deliver our strategy responsibly, for the future.

Douglas Caster CBE FIET
Committee Chair

MEETINGS

The Committee met twice during 2020 and members' attendance is set out in the table on page 55.

NOMINATION COMMITTEE ROLE AND TERMS OF REFERENCE

The Nomination Committee is responsible for keeping under review the composition of the Board and its succession, and monitors and regularly reviews the balance of skills, knowledge, experience, independence and diversity of the Board and its Committees. It reviews succession planning for the Executive Committee and overall talent strategy for senior leadership positions, by reference to Morgan's Board Inclusion & Diversity Policy, which sets the overall tone for the Group's approach to diversity.

The Committee's formal role is set out in its terms of reference, which are available to view on the Company's website.

Report of the Nomination Committee

MAIN AREAS OF WORK DURING 2020

During 2020, the Committee's key activities included:

- Considering the skills mix on the Board, including diversity of gender, ethnicity and geographical representation.
- Reviewing and updating the Board's Inclusion & Diversity Policy and monitoring its effectiveness.
- Reviewing the structure, size and composition of the Board and its Committees, ensuring that they remain appropriate.
- Reviewing the results of the annual performance evaluation of the Committee.
- Considering whether each Director continued to be able to allocate sufficient time to discharge their responsibilities effectively.
- Considering the Directors' annual re-election at the 2020 Annual General Meeting (AGM).
- Reviewing the Committee's terms of reference.

SKILLS, SIZE AND COMPOSITION OF THE BOARD

The Committee reviews the Board's composition, including the length of tenure of non-executive Directors, to ensure that it has the correct balance of skills, experience, knowledge and diversity required for the leadership of the Group, to support the delivery of the Group's strategy, and to comply with the UK Corporate Governance Code.

During the year, the Committee reviewed and agreed that the overall size of the Board and its Committees, including the Non-executive Director/Executive Director split, was appropriate for Morgan. It agreed that the current Board and Committee structure remained appropriate, and all Non-Executive Directors should continue to be members of the main committees (with the exception of the Chair of the Audit Committee). The Committee considers that the members of the Board and Committees have the appropriate mix of skills, experience, diversity and knowledge of the Company, and that undue reliance was not placed on any particular individual(s). In the next couple of years, as the Chairman and other Non-Executive directors' tenures extend into a third three-year term, the Committee will actively start the process of identifying a new Chair and other Board members and will more proactively identify candidates from a diverse range, ahead of Board vacancies arising.

DIVERSITY AND INCLUSION

The Board recognises the benefits that diversity and inclusion bring at all levels of the Company, and firmly believes diversity is an important factor in enabling good decision-making at Board level.

Morgan continues to foster greater diversity and inclusion and remains committed to, and ambitious about, making Morgan a more diverse place to work. During the year, the Committee reviewed the diversity principles set out in Morgan's 2019 Annual Report applicable to the Board and developed them into a formal Board Inclusion & Diversity Policy, to reflect the Group's aspirations more closely, to set specific objectives, and to monitor progress against objectives. The Nomination Committee annually reviews the composition of the Board and considers the balance of competencies to ensure alignment with the Company's purpose and strategic priorities and the environment in which it operates. The Nomination Committee reviews the characteristics, perspectives, independence and diversity of Board members; how the Board works together; and other factors relevant to its effectiveness.

When monitoring the development of leadership and considering the succession planning for executive management, the Board looks for talented leaders from a diverse pool who have the skills to lead a global company.

Currently, three of the seven Board Directors are female, equating to 43% female representation on the Board, and the Board currently has one Director of colour and Morgan's intention is to at least maintain that level of diversity, in order that the Board's composition can more closely reflect Morgan's workforce and society more generally. The percentage of women on the Group's Executive Committee increased to 44% during 2020. At 31 December 2020, 25% (2019: 29% and 2018: 23%) of senior management (defined in accordance with the Code as the members of the Executive Committee including the Company Secretary) and their direct reports were female. The Committee takes diversity into account in broader discussions on succession planning and talent development and supports management in their wider commitment to promoting diversity.

The Board has agreed objectives for achieving gender, ethnic and cultural diversity on the Board, and places high emphasis on ensuring the development of diversity both in senior management roles and the workforce in general within the Company.

To promote diversity and inclusion the Board will:

- Consider all aspects of diversity when reviewing the composition and effectiveness of the Board.
- Only engage with executive search firms who are accredited under the Enhanced Code of Conduct for Executive Search Firms when seeking to make new appointments or have a proven track record in sourcing diverse candidates.
- Ensure that candidate lists include individuals from a broad and diverse range of backgrounds and that all candidates with the requisite skills and capability are considered, including those with less traditional track records than the corporate mainstream.
- Agree new Board appointments based on merit against the objective criteria set, taking account of the unique benefits each candidate can bring.
- Recommend that the Board reviews senior executive succession planning annually and monitors the development of a diverse pipeline of future senior leaders, reflecting the composition of Morgan's workforce.
- Set the tone and provide visible support for the Group's diversity and inclusion objectives, including the fostering of an inclusive culture which allows individuals to bring their whole selves to work, promoting inclusive leadership and reducing unconscious bias.
- Support a zero tolerance approach to any unfair discrimination on the basis of sex, ethnicity or other protected characteristics.

The Board's Inclusion & Diversity Policy can be viewed on the Company's website www.morganadvancedmaterials.com

SUCCESSION PLANNING

The Committee regularly reviews the Board's composition, including the length of tenure of non-executive Directors, to ensure that it has the correct balance of skills, experience, knowledge and diversity required for the leadership of the Group, to support the delivery of the Group's strategy, and to comply with the UK Corporate Governance Code.

The Committee did not actively consider the talent pipeline for potential new appointments to the Board during 2020. In 2021 and beyond, the Committee will continue to support the Group's work on culture, people and succession as part of the Group's strategic execution, in line with the findings of the Board's 2019 performance evaluation. Morgan is keen to develop and retain talented people throughout the Group to support its long-term sustainable success.

The Committee will commence preparations for an external search for a new Chair during 2021, with the search process likely to start in 2022, and expected to conclude by the end of that year.

The usual process for selection of a non-executive Director is described below. For 2021 and future years, the Committee will re-evaluate and update Morgan's processes for Board and senior management appointments by reference to the aims and objectives of the Board Diversity and Inclusion Policy, as well as report on progress in future annual reports.

- The Committee formulates a candidate specification for the role taking into account the balance of skills, knowledge, experience, diversity and geographical representation on the Board, and considering the desired skills and experience required to complement the existing membership and to support the implementation of the Group's strategy.
- The external search agent produces a long-list of candidates for the role, taking the identified requirements into consideration.
- Interviews with members of the Nomination Committee take place with short-listed candidates.
- Interviews with other Board members take place with the final three candidates.
- The Committee makes a recommendation for the appointment to the Board considering the views of the Board members.
- Any new Directors appointed to the Board must be elected at the next AGM to continue in office. All existing Directors retire by rotation every year.

Non-executive Directors, including the Chairman, are asked to confirm that they will allocate sufficient time to meet their commitments to the Company and that their other appointments and significant time obligations are disclosed to the Board prior to appointment, with an indication of the level of time commitment involved. The Board is informed of any subsequent changes, and additional commitments must be disclosed before they are accepted.

COMMITTEE PERFORMANCE EVALUATION

The Committee's performance was reviewed as part of the Board evaluation (see page 56 to 57 for details) and it was concluded that it continued to improve and had operated effectively during the period under review.

TIME COMMITMENT

The time commitment of each of the Chairman, Chairs of Board Committees and Non-Executive Directors are set out in their respective letters of appointments. Non-Executive Directors are expected to spend at least two days per month, more if they act as Chair of a Board Committee and the Chairman is expected to spend at least 50 days per annum on Company business. During the year, the Committee considered that each Board member fulfilled their respective commitment, both in respect of board and committee meetings (like many other companies, additional ad-hoc meetings were held as a result of the pandemic) and for employee engagement sessions. Details of meeting attendance by Board members are set out on page 55.

ANNUAL RE-ELECTION OF DIRECTORS

All Directors are subject to annual re-election under the UK Corporate Governance Code (the Code).

Clement Woon is serving his first three-year term as Director, and Douglas Caster, Jane Aikman, Helen Bunch and Laurence Mulliez are all in their second three-year term. In line with Provision 18 of the Code, the specific reasons why each Director's contribution is, and continues to be, important to the company's long-term sustainable success have been set out in this year's Notice of Annual General Meeting, to accompany the formal re-election resolutions.

During the year, the Chairman reviewed the performance of each Director and has confirmed their continued effectiveness. A formal review of each individual Director's performance was conducted as part of Morgan's board evaluation process in 2019, concluding with individual meetings between the Chairman and each Non-Executive Director. The Senior Independent Director hosted a meeting of the Non-Executive Directors without the Chairman present in December 2020 to discuss the Chairman's performance.

A statement to shareholders from the Chair of the Remuneration Committee.



COMMITTEE MEMBERS

Helen Bunch (Chair)

Jane Aikman

Douglas Caster

Laurence Mulliez

Clement Woon

I am pleased to present the Remuneration Report for the year ended 31 December 2020.

The health, safety and wellbeing of our employees remains a top priority, and in the light of the COVID-19 pandemic we have implemented heightened safety measures to protect our employees. There has been further focus on the 'thinkSAFE' programme, the Morgan Code of Ethics, as well as the continuation of the global Sales Effectiveness Programme.

The COVID-19 pandemic has made 2020 an extremely challenging year, with a significant impact observed across the global economy. Morgan has seen an 11.4% decline in organic revenue* for the 2020 financial year due to the pandemic, however the order trajectory began to improve in the second half of the year, with a return to organic constant currency sales growth anticipated from the second quarter of 2021. We have taken appropriate action to reduce costs, improve cash flow and increase liquidity, which along with continued further investment in the wider business to support sustainable long-term growth, helps to position Morgan to emerge stronger from the crisis.

Due to the impact of the pandemic on business results, Morgan, like many companies, has needed to review, and in many cases make changes to, remuneration plans and actions to control costs and cash flow. A key priority has been to balance the impact on remuneration equitably across the executives, wider employee population and other stakeholders. The 2019 final dividend was withdrawn and furloughs were used (UK government Job Retention Scheme funding having been reimbursed). In addition, a global restructuring programme was implemented. In light of the impact of the pandemic on employees and shareholders, the Board agreed that their own salaries should be reduced by 30% from 1 April to 31 December, extending beyond the typical salary reduction period in other companies and also beyond the date Morgan stopped utilising government job retention schemes. The Executive Team also agreed that their salaries should be reduced by 20% from 1 April to 30 September. The 2020 LTIP and DBP grants were also delayed until later in the year and the personal performance element of the 2020 bonus was cancelled for the executive Directors. It is of note, that despite the personal performance element being restored for employees, the executive Directors requested that their personal performance

element not be reinstated. In making our remuneration decisions, we have therefore carefully taken into account the impacts across all stakeholders to ensure equity.

During 2020, we have continued to focus on the reporting requirements within the 2018 UK Corporate Governance Code. Within this context, the Committee conducted a review of the implementation of the current Remuneration Policy (approved by 97% of shareholders at the 2019 AGM) to ensure it remains fit for purpose. This review concluded that the current framework continues to support Group strategy and culture, as well as providing strong alignment of executive Director and shareholder interests.

2020 COMMITTEE ACTIVITY

During the year, the Committee met six times compared to the usual four, the additional meetings being necessary to review changes required as a result of the pandemic. Its activities included:

- Determination of whether the 2019 bonus and 2017 LTIP were achieved, and, if so, to what extent (pre-COVID-19).
- A review of external benchmarking of executive Directors' remuneration packages (pre-COVID-19).
- Having reviewed the remuneration of the wider workforce, determination of the remuneration packages for the executive Directors and other senior executives, applying consistent guiding principles (pre-COVID-19).
- Determination of any changes required to 2020 share grants in response to the COVID-19 pandemic (post start of COVID-19).
- A review of whether the measures and structure for the bonus and share incentive schemes remain appropriate (post start of COVID-19).



- Determination of appropriate performance targets for the 2021 bonus and share incentive schemes (post start of COVID-19).
- A review of how we implemented the Group's Remuneration Policy, such that it supports the Group's business strategy and performance-based culture (post start of COVID-19).

2020 REMUNERATION OUTCOMES

In reviewing performance in 2020, the Committee determined that payouts of 9% of the 2020 annual bonus opportunity for the Chief Executive Officer (CEO) and Chief Financial Officer (CFO), were appropriate, reflecting the impact of the pandemic on financial results and the voluntary removal of the personal performance bonus element. The 2018 LTIP award will partially vest, resulting in a 21.8% achievement of the maximum. These outcomes are consistent with the Group's performance in the light of the pandemic, details of which are summarised later in this Report. The Committee has not felt it appropriate to adjust performance targets during the year and felt that no discretion needed to be applied for 2020 remuneration outcomes.

IMPLEMENTATION OF POLICY IN 2021

The Remuneration Committee decided that, taking into account the performance of the Group in 2020 within the overall economic context, the improved business trajectory in the second half, labour market conditions, and average range of salary increases in the wider workforce, the appropriate level of salary increase for the CEO would be 2.5% and for the CFO it would be 2%. The process for reviewing executive Director salaries takes into account individual and Group performance, demonstration of the defined Leadership Behaviours and salary position relative to the relevant market, which is consistent with the approach taken for the entire professional population. There will also be an increase to the fees for the Chairman and non-executive Directors of 2% for 2021 as determined by the Committee (for the Chairman) and the Chairman and executive Directors (for the non-executive Directors).

The Committee also reviewed the structure of the annual bonus and LTIP plans and concluded that the existing framework remains appropriately aligned with our strategic aims and culture, motivates and rewards management for delivering sustainable performance, and supports retention. Accordingly, no changes are proposed to the performance linkage of the annual bonus or LTIP for 2021. For the LTIP, it is proposed to increase the EPS targets from 4% – 11% to 15% – 22% p.a. to take into account the reduced base level resulting from the impact of the pandemic on financials; the Committee considers this to be appropriately challenging in the context of the Group's strategic plan, external market factors and broker forecasts. No changes are proposed to the TSR benchmarks and relative TSR performance range (median-upper quartile). It is proposed to modify the ROIC* definition to include the right-of-use assets arising from IFRS-16 leases in the invested capital (which is anticipated to be an addition of around £35m to the invested capital in 2021) and to maintain the ROIC* range for that element of the executive Directors 2021 LTIP (at 17%-20%), to reflect our latest expectations for performance over the three-year performance period. For annual bonus, the target ranges have been widened from $\pm 4.5\%$ to $\pm 10\%$ of target to reflect the ongoing uncertainty of the pandemic and potential impact on performance outcomes. Annual bonus targets are considered to be commercially sensitive at this time but will ordinarily be disclosed in next year's Remuneration Report.

I would like to thank the Leadership team not only for the exceptional contribution they have made in this challenging period, but also for the personal remuneration reductions they agreed to in support of the Business.

This Report is consistent with the current reporting regulations for executive remuneration and, as in prior years, includes an 'At a glance' section summarising the key elements of executive Director remuneration. I hope we have been successful in continuing to achieve the clarity and transparency that will be of help to our shareholders.

Helen Bunch
Committee Chair

Remuneration report

REMUNERATION AT A GLANCE

Components of remuneration



Key features of how our executive remuneration policy will be implemented in 2021

Fixed components

Base salary

Pete Raby (CEO)	£581,175
Peter Turner (CFO)	£426,160

Policy

Executive Directors' salaries are generally reviewed each January, with reference to individual and Group performance, experience and salary levels at companies of similar sector, size and complexity.

Pension and other benefits

Pension

Pete Raby (CEO)	fixed at £104,000
Peter Turner (CFO)	fixed at £80,120

Benefits

Pete Raby (CEO)	£13,885
Peter Turner (CFO)	£12,230

Policy

Executive Directors may receive defined contributions (and/or cash in lieu thereof) up to 20% of salary. Policy change approved at the 2019 AGM aligns pension contribution for new executive Directors with that available to the wider workforce. Other benefits can include company car/car allowance, health insurance and, where appropriate, relocation allowances and other expenses.

Implementation

The monetary value of the pension allowance for the current executive Directors was fixed at the 2018 value from 2019 onwards, to help align executive Director pensions with those of the wider workforce over time. The Company commits to review this as part of the next Remuneration Policy review in 2021.

Variable components, annual bonuses

Maximum opportunities for 2021 (no change)

Pete Raby (CEO)	150% of salary
Peter Turner (CFO)	150% of salary

Performance measures weighting

Operating profit*	40%
Cash generation*	40%
Strategic personal objectives	20%

Policy

Maximum award opportunity: 150% of base salary

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. 67% of any annual bonus paid is delivered in cash with the remainder deferred into shares and released after a further period of three years. 50% of the bonus opportunity is paid for on-target performance.

LTIP

Maximum opportunities for 2021 (no change)

Pete Raby (CEO)	150% of salary
Peter Turner (CFO)	150% of salary

Performance measures weighting

TSR vs. FTSE All-Share	1/6
Industrials Index	1/6
TSR vs. peer group	1/6
EPS growth	1/3
Group ROIC*	1/3

Policy

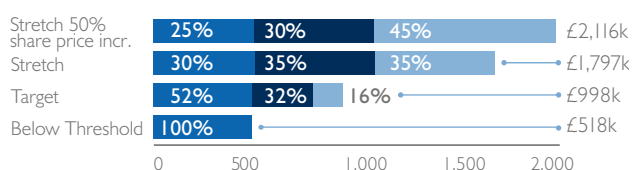
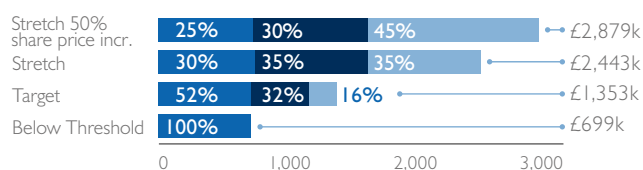
Maximum award opportunity: 250% of base salary

The award levels and performance conditions on which vesting depend are reviewed prior to the start of each award cycle to ensure they remain appropriate. Vested shares are subject to a post-vesting holding period of two years. The vesting of awards is usually subject to continued employment and to the Group's performance over a three-year performance period. 25% of an award vests for achievement of the threshold level of performance.

Pay at risk



Pay scenarios



● Variable
 ● Fixed total (base salary, pension and benefits)
 ● Annual Bonus
 ● LTIP

Shareholding requirements

Pete Raby (CEO) 200% of salary

Peter Turner (CFO) 200% of salary

COMPLIANCE STATEMENT

During the year under review, the Company has complied with the principles and provisions relating to Directors' remuneration in the UK Corporate Governance Code and this Remuneration Report has been prepared in accordance with the Companies Act 2006 (as amended) and Schedule 8 of the Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 (as amended). In accordance with Section 439A of the Companies Act 2006 an advisory resolution to approve the Annual Report on Remuneration will be proposed at the Annual General Meeting (AGM) on 6 May 2021.

This Report covers the period 1 January 2020 to 31 December 2020 and provides details of the Remuneration Committee and how the Remuneration Policy, approved by shareholders at the 2019 AGM, has been implemented for the year under review. The proposed implementation of this Policy for the 2021 financial year is summarised in the section of the Annual Report on Remuneration titled 'Implementation of Remuneration Policy for 2021'.

REMUNERATION COMMITTEE

The Remuneration Committee determines and agrees with the Board the framework and Policy for the remuneration, including pension rights and any compensation payments, of the Group's executive Directors and the Chairman. The Committee also reviews the remuneration in relation to other senior executives and is kept fully informed of remuneration policy decisions impacting the wider workforce.

The Committee's terms of reference are available on the Group's website.

The Remuneration Committee consults the Chief Executive Officer and invites him to attend meetings when appropriate. The Group Human Resources Director and Group Head of Reward as well as our independent advisors attend meetings of the Committee by invitation.

The Committee also has access to advice from the Chief Financial Officer. The Company Secretary acts as secretary to the Committee. No executive Director or other attendee is present when his or her own remuneration is being discussed.

Membership of the Committee is shown on pages 48 to 49.

I. POLICY REPORT

KEY PRINCIPLES OF THE REMUNERATION POLICY

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

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

The Remuneration Committee will keep the Remuneration Policy under periodic review to ensure it remains aligned with the Group's strategy, reinforces the Group's culture, and is 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 views and guidance of institutional investors and their representative bodies.

SUMMARY OF MORGAN ADVANCED MATERIALS PLC'S REMUNERATION POLICY

This section of the Report sets out the current Remuneration Policy for executive Directors and non-executive Directors. This Policy remains unchanged from that which was approved by shareholders at the 2019 AGM and which is effective for a period of up to three years from that date. The only amendments to the Policy Report published in the 2020 annual report are:

- To update remuneration figures in the pay for performance scenario analysis.

Remuneration report

Purpose and link to strategy	Operation	Opportunity	Performance metrics
Fixed pay			
<p>Base salary Provides the fixed element of the remuneration package. Set at competitive levels against the market.</p>	<p>Base salaries are generally reviewed each January, with reference to an individual's performance (and that of the Group as a whole), their experience, and the range of salary increases applying across the Group.</p> <p>The Committee also considers salary levels at companies of similar sector, size and complexity when determining increases.</p>	<p>Our policy is to pay salaries that are broadly market-aligned with increases 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.</p> <p>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.</p>	<p>An executive Director's performance (and that of the Group as a whole) and also their demonstration of the defined Leadership Behaviours, are taken into account when making decisions in relation to base salary.</p>
<p>Pension Provides post-retirement benefits for participants in a cost-efficient manner.</p>	<p>Defined contribution scheme (and/or a cash allowance in lieu thereof).</p>	<p>For executive Directors appointed from 1 January 2019 onwards, contributions (or cash in lieu thereof) will be aligned with the level of contribution available to the wider workforce at that time.</p> <p>For current executive Directors already in role, the Policy limit will remain up to 20% of salary.</p>	<p>Not applicable.</p>
<p>Benefits Designed to be competitive in the market in which the individual is employed.</p>	<p>Can include company car/car allowance, health insurance and, where appropriate, relocation allowances and other expenses.</p>	<p>Benefits values vary by role and are reviewed periodically relative to the market.</p> <p>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.</p> <p>The Committee retains the discretion to approve a higher cost in exceptional circumstances (e.g. relocation expenses, expatriate allowances etc.) or in circumstances where factors outside the Group's control have changed materially (e.g. market increases in insurance costs). Benefits in respect of the year under review are disclosed in the Annual Report on Remuneration.</p>	<p>Not applicable.</p>

Purpose and link to strategy	Operation	Opportunity	Performance metrics
Variable pay			
<p>Annual bonus Provides a direct link between annual performance and reward.</p> <p>Incentivises the achievement of key specific goals over the short term that are also aligned to the long-term business strategy.</p> <p>Deferred bonus supports retention and provides additional alignment with the interests of shareholders.</p>	<p>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.</p> <p>At the end of the year, the Remuneration Committee determines the extent to which these have been achieved.</p> <p>To the extent that the performance criteria have been met, up to 67% of the resulting 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.</p> <p>Cash and deferred share bonuses awarded for performance will be subject to malus and clawback until the end of the deferral period. Further details of our Malus and Clawback Policy are set out at the end of this table.</p> <p>Dividends may accrue over the deferral period on deferred shares that vest. Any dividends that accrue will be paid in shares at the end of the vesting period.</p>	<p>Up to 150% of salary.</p> <p>The payout for threshold performance may vary year on year but will not exceed 25% of the maximum opportunity.</p>	<p>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.</p> <p>The Committee retains discretion to adjust the bonus outcome if it considers that the payout is inconsistent with the Company's underlying performance when taking into account any factors it considers relevant.</p> <p>Further details are set out in the Annual Report on Remuneration on pages 66 to 86.</p>
<p>Long-Term Incentive Plan (LTIP) Aligns the interests of executives and shareholders with sustained long-term value creation.</p> <p>Incentivises participants to manage the business for the long term and deliver the Company's strategy.</p>	<p>The Remuneration Committee has the authority each year to grant an award under the LTIP.</p> <p>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. Vested shares will be subject to a post-vesting holding period of two years.</p> <p>Awards are subject to malus and/or clawback for a period of five years from the date of grant. Further details of our Malus and Clawback Policy are set out at the end of this table.</p> <p>Dividends may accrue on vested shares during the holding period.</p>	<p>The LTIP provides for a conditional award of shares up to an annual limit of 250% of salary.</p> <p>25% of an award vests for achievement of the threshold level of performance.</p>	<p>The vesting of awards is usually subject to continued employment and the Group's performance over a three-year performance period. This is currently based on a combination of TSR, EPS and ROIC* measures.</p> <p>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.</p> <p>The Committee also retains discretion to adjust the vesting outcome if it considers that the level of vesting is inconsistent with the Company's underlying performance when taking into account any factors it considers relevant.</p> <p>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 76 to 86.</p>
<p>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.</p>	<p>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.</p>	<p>Up to the savings limit as determined by HMRC from time to time, across all Sharesave schemes in which an individual has enrolled.</p>	<p>None.</p>

Malus and Clawback Policy

Malus and clawback will apply to the annual bonus and LTIP (as set out on page 71) 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, including (but not limited to) significant breaches of EHS codes, fraud, or other events which may cause serious reputational damage. Cash bonuses will be subject to clawback, with deferred shares subject to malus over the deferral period. LTIP awards are subject to malus over the vesting period and clawback from the vesting date to the fifth anniversary of grant.

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 (i.e. before 10 May 2019), 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 of the individual becoming a Director of the Company. Details of these awards 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' remuneration. Annual salary reviews across the Group take into account individual and business performance, demonstration of the defined Leadership Behaviours, experience, 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 and performance measures 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, and terminations. Any adjustments in light of corporate events will be made on a neutral basis, meaning that they will not be to the benefit or detriment of participants.

Any use of discretion by the Committee during the financial year under review 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), information on the rationale for the selection of bonus measures for each year will be detailed in the relevant year's 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 2021 awards, the TSR element of the LTIP award will continue to comprise two parts. One half of the TSR element will vest subject to the Group's performance relative to a TSR benchmark comprising the 103 constituents of the FTSE All-Share Industrials Index.

This benchmark is robust to merger and acquisition 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 15 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.

ROIC* targets are set using a similar approach to the EPS targets, after consideration of external reference points and reflecting the returns required to meet and exceed the Group's internal strategic plan. For the 2021 LTIP cycle, ROIC* will continue to be calculated as follows:

Group headline operating profit*
(pre-specific adjusting items)

12-month average (third-party working capital +
total fixed assets + total intangible fixed assets)

Share ownership guidelines

In order to encourage alignment with shareholders, executive Directors are encouraged to build and maintain an individual shareholding in the Company equivalent to at least 200% of base salary. The required level of shareholding is expected to be achieved within five years from an executive Director's appointment. Executive Directors' shareholdings are reviewed annually by the Committee to ensure progress is being made towards achievement of the guideline level of shareholding. However, if it becomes apparent to the Committee that the guideline is unlikely to be met within the timeframe, then the Committee will discuss with the Director a plan to ensure that the guideline is met over an acceptable timeframe.

From 2019, executive Directors have also been subject to a post-employment shareholding requirement. Executive Directors are required to hold shares at a level equal to the lower of the share ownership requirement or the actual shareholding on departure for a period of one year from departure date. The Committee retains the discretion to modify the post-employment shareholding requirement in certain, extraordinary circumstances; for example, on a change of control during the period or if a conflict of interest arises with an executive Director's next appointment.

Current executive Director shareholdings are set out in the Annual Report on Remuneration on page 85.

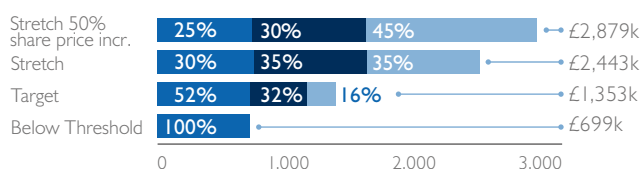
External appointments

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 in the Annual Report on Remuneration on pages 76 to 86.

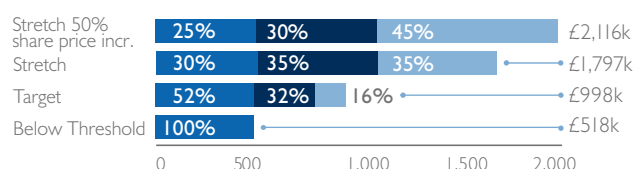
Pay-for-performance: scenario analysis

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 four different performance scenarios; 'Below threshold', 'Target', 'Stretch' and 'Stretch with 50% share price appreciation'. These have been updated to illustrate the potential opportunity under the 2021 packages proposed for executive Directors.

Pete Raby (CEO)



Peter Turner (CFO)



● Fixed total (base salary, pension and benefits) ● Annual Bonus ● LTIP

Potential reward opportunities illustrated above are based on the Policy, which was approved at the 2019 AGM, applied to the annual base salary in effect at 1 January 2021. For the annual bonus, the amounts illustrated are those potentially receivable in respect of performance for 2021 (before mandatory deferral into shares). The LTIP is based on the face value of awards to be granted in 2021 (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 change in the underlying value of the shares once an award is made, apart from in the 'stretch with hypothetical 50% share price appreciation' scenario. The following assumptions have been made in compiling the above charts:

Scenario	Annual bonus	LTIP	Fixed pay
Stretch with 50% share price appreciation	Maximum annual bonus.	Performance warrants full vesting (100% of the award). LTIP award value has additionally been uplifted by 50%.	Latest disclosed base salary, pension and benefits.
Stretch	Maximum annual bonus.	Performance warrants full vesting (100% of the award).	
Target	On-target annual bonus.	Performance warrants threshold vesting (25% of the award).	
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. The following table shows the date of the contract for each executive Director who served during the year:

Executive Director	Position	Date of appointment	Date of service agreement	Notice period	
				From employer	From employee
Pete Raby	CEO	1 August 2015	30 January 2015	12 months	6 months
Peter Turner	CFO	11 April 2016	30 March 2016	12 months	6 months

Exit Payments Policy

The Group's policy on exit payments 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 or her service agreement, for the duration of the notice period.

The Remuneration Committee will exercise discretion in making appropriate payments in the context of outplacement or the settling of legal claims or potential legal claims by the departing executive Director, including any other amounts reasonably owing 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.

Remuneration report

On termination of an executive Director's service contract, the Remuneration Committee will consider the departing Director's duty to mitigate his or her 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 that follows summarises the Policy on how awards under the annual bonus, LTIP and deferred bonus plan 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		
Injury, disability, death, redundancy, retirement, or other such event as the Committee determines	Awards will normally vest in full (i.e. not pro-rated for time).	At the normal vesting date, unless the Committee decides that awards should vest earlier (e.g. in the event of death).
Change of control	Awards will normally vest in full (i.e. 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		
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 (e.g. 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. LTIP awards may alternatively be exchanged for equivalent replacement awards, where appropriate.	On change of control.
All other reasons	Awards normally lapse.	Not applicable.

The Remuneration Committee retains discretion, where permitted by the plan 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	Based on: the size and nature of the responsibilities of the proposed role; 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 available to the wider workforce. If the executive Director is ineligible to join the standard defined contribution scheme, the company may grant a cash allowance of equivalent value.	In line with Policy limits.
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.	Up to HMRC limits.
Annual bonus	As described in the Policy table and typically pro-rated for the proportion of the year served; performance measures may include strategic and operational objectives tailored to the individual in the financial year of joining.	Up to 150% of salary.
LTIP	New appointees may be granted awards under the LTIP on similar terms to other executives.	Up to 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 via 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 ¹ 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 to the Senior Independent Director, and also in respect of chairing a Board Committee. Currently paid 100% in cash.	Annual fees are applied in line with the outcome of each periodic review.	None.

1. The maximum aggregate annual fee for all non-executive Directors (including the Chairman) as provided in the company's Articles of Association is £750,000.

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 election/re-election
Douglas Caster	Chairman	14 February 2014	15 January 2014 ¹	7 May 2020
Helen Bunch	Non-executive Director	24 February 2016	19 January 2016	7 May 2020
Laurence Mulliez	Senior Independent Director	6 May 2016	4 April 2016	7 May 2020
Jane Aikman	Non-executive Director	31 July 2017	27 April 2017	7 May 2020
Clement Woon	Non-executive Director	10 May 2019	7 May 2019	7 May 2020

1. Douglas Caster received a subsequent letter of appointment on 18 December 2018.

Remuneration report

CONSIDERATION OF STAKEHOLDER VIEWS

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 decisions, the Committee also considers the pay and employment conditions elsewhere in the Group, but the Committee does not currently consult with employees specifically on the executive Remuneration Policy and framework. Prior to the annual salary review, the Remuneration Committee is briefed by the Group Human Resources Director about pay increase data that individual business units will consider when deciding local pay awards for their specific businesses and countries. The Committee is also kept fully informed of remuneration policy and implementation decisions affecting the wider workforce. This important context forms part of the Committee's considerations for determining executive Director remuneration. See also 'People section' pages 18 to 21.

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 its 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' interests with those of shareholders. It is the 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 2020

The Remuneration Committee is currently composed of five 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 six times during the year. Attendance at meetings by individual members is detailed in the Corporate Governance Report on page 55.

SUMMARY OF SHAREHOLDER VOTING AT THE 2020 AGM

The following table shows the results of the latest binding vote on the Remuneration Policy (at the 2019 AGM) and advisory vote on the 2019 Annual Report on Remuneration (at the 2020 AGM).

Resolution	For	Against	Withheld ¹
Remuneration Policy (at the 2019 AGM)	97.17%	2.83%	100,712
Annual Report on Remuneration (at the 2020 AGM)	96.83%	3.17%	19,187,217

1. 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.

SINGLE TOTAL FIGURE OF REMUNERATION FOR EXECUTIVE DIRECTORS

The auditor is 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 2020 and the prior year. For 2020, the table reflects the position with and without the 30% salary reduction volunteered by the executive Directors from 1 April to the end of December, in response to the pandemic.

	Pete Raby			Peter Turner		
	2020 (actual with reduction)	2020	2019	2020 (actual with reduction)	2020	2019
1. Salary	£439,425	£567,000	£545,000	£323,797	£417,800	£408,600
2. Pension	£104,000	£104,000	£104,000	£80,120	£80,120	£80,120
3. Benefits	£13,711	£13,711	£13,456	£12,168	£12,168	£12,030
Fixed Pay Subtotal	£557,136	£684,711	£662,456	£416,085	£510,088	£500,750
4. Bonus	£74,878	£74,878	£688,989	£55,175	£55,175	£516,552
5. LTIP	£140,111	£140,111	£265,360	£107,939	£107,939	£210,518
6. Other	–	–	£1,800	–	–	£1,800
Variable Pay Subtotal	£214,989	£214,989	£956,149	£163,114	£163,114	£728,870
Total	£772,125	£899,700	£1,618,605	£579,199	£673,202	£1,229,620

The figures have been calculated as follows:

- Base salary: amount earned for the year. For 2020, figures in the '2020 (actual with reduction)' columns reflect actual salary earned.
- Pension: the figure is a cash allowance in lieu of pension.
- Benefits: the taxable value of benefits received in the year. Includes private medical insurance and a company car (or car allowance).
- Annual bonus: the total bonus earned on performance during the year (before mandatory deferral into shares).
- LTIP: the estimated value on 31 December 2020 of 2018 LTIP shares vesting in 2021 subject to performance over the three-year period ended 31 December 2020. Figure based on the average share price for the three months to 31 December 2020 of 274.69p. The figure for 2019 has been trued up from that disclosed in last year's Remuneration Report to reflect the share price on the vesting date (1 April 2020) of 183.37p. The impact of share price movement on the vesting value of the CEO's 2018 LTIP award is as follows:

Value of awards vesting using share price at award (233,981 shares x 21.8% x 333.36p)	£170,036
Value of awards vesting using 3 month average share price at 31 December 2020: (233,981 shares x 21.8% x 274.69p)	£140,111
Impact of share price movements on vesting values	–£29,925

- Other: 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).

INCENTIVE OUTCOMES FOR THE YEAR ENDED 31 DECEMBER 2020

Annual bonus in respect of 2020 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 returns by rewarding the achievement of 'stretch' targets.

For 2020, the bonus targets for the executive Directors were split between Group adjusted operating profit* before restructuring (weighted 40%), cash generation* (weighted 40%) and individual strategic personal objectives (weighted 20% – subsequently cancelled). The targets were set to incentivise the executive Directors to deliver stretching profit and cash performance for the Group. Performance in line with target results in a payout of 50% of maximum.

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 that follows sets out retrospectively the assessment of performance relative to the 2020 bonus targets for the executive Directors. Actual bonus payments are shown in the single total figure of remuneration table on page 76. Bonus outcomes are reflective of the impact of the COVID-19 pandemic on business results.

Performance measure	% of maximum bonus element	Performance range		Actual performance outcome	% payout of element	% salary earned
		Threshold (0% payout)	Maximum (100% payout)			
Group headline operating profit*	40%	£121.6m	£133.0m	£94.0m	0%	0%
Cash generation* ¹	40%	£165.0m	£180.6m	£170.8m	22%	13.2%
Personal objectives						
Pete Raby	20%	Please see narrative below for further details			n/a	n/a
Peter Turner	20%	on objectives and performance against these			n/a	n/a

Overall outcome	Maximum bonus (% salary)	% of salary earned			Total outcome	Total payable
		Group adjusted operating profit	Cash generation* ¹	Personal objectives		
Pete Raby	150%	0%	13.2%	n/a	13.2%	£74,878
Peter Turner	150%	0%	13.2%	n/a	13.2%	£55,175

1. For the cash generation metric there was a straight-line payout between the threshold and maximum figures. All figures were calculated using 2020 budgeted exchange rates.

Pete Raby's personal objectives for 2020 were: (1) Develop a safe, ethical and inclusive culture across the business, role modelling our leadership behaviours and actively engaging our employees, (2) Update the strategy for the group and define the execution commitments for the next 3 years, (3) Develop the leadership capability across the group driving the empowerment and engagement of employees in the strategy, priorities and progress of the business, (4) Enhance the IT capability of the group through the execution of the IT strategy, (5) Develop an end-market focused investor narrative. Performance of our leaders is assessed against all expectations of the role, specific personal objectives that are set and how outcomes are delivered with reference to our defined Leadership Behaviours. Despite difficult trading conditions, under Pete's leadership Morgan managed cost and cash, and implemented a restructuring programme which contained the profit drop-through on the revenue decline to the Company's goal of 30%, as well as delivering an improved free cash flow. New technology and product developments were also progressed, with new products in early-stage trials with a number of customers. Further improvements were made to operational performance and operating costs through the deployment of lean production techniques, and procurement improvements. Pete has also role modelled the Leadership Behaviours. The personal performance element of the 2020 bonus was cancelled for the executive Directors in response to the impact of the pandemic on business results, and despite it being restored for employees the CEO requested that his personal performance element not be reinstated.

Peter Turner's personal objectives for 2020 were: (1) Develop a safe, ethical and inclusive culture across the business, role modelling our leadership behaviours and actively engaging our employees, (2) Update the strategy for the group and define the execution commitments for the next 3 years, (3) Develop the leadership capability across the group driving the empowerment and engagement of employees in the strategy, priorities and progress of the business, (4) Enhance the IT capability of the group through the execution of the IT strategy, (5) Develop an end-market focused investor narrative. Peter's performance has been excellent against these objectives; in this challenging year he has driven cost and cash management programmes to improve the Company's cash position, whilst exhibiting the Leadership Behaviours. The personal performance element of the 2020 bonus was cancelled for the executive Directors in response to the impact of the pandemic on business results, and despite it being restored for employees the CFO requested that his personal performance element not be reinstated.

Performance against the above objectives is referred to in the Chairman's statement and elsewhere within the Annual Report.



Remuneration report

2017 Deferred Bonus Plan vesting

In 2017, 33% of the annual bonus results for Pete Raby and Peter Turner (for performance in the 2016 financial year) were deferred into shares under the Deferred Bonus Plan (DBP), in line with Morgan's Remuneration Policy. Dividends accrued over the deferral period on the deferred shares that vested, and the dividends were paid in shares at the end of the vesting period. Details of the DBP vesting for the executive Directors are set out in the table below:

Director	Date of grant	Number of DBP shares granted	Number of dividend re-investment shares	Total number of DBP shares vested	Market value at grant £	Market value at vesting £	Date of vesting
Pete Raby	3 March 2017	21,751	2,477	24,228	3.1588	2.8800	3 March 2020
Peter Turner	3 March 2017	15,173	1,727	16,900	3.1588	2.8800	3 March 2020

2016 Sharesave options exercise

The following options granted under the Sharesave scheme were exercised by the executive Directors in 2020:

Director	Date of grant	Number of options granted	Option price £	Number of options exercised	Market value on date of exercise £	Date of exercise
Pete Raby	26 September 2016	3,862	2.3300	3,862	2.5320	10 March 2020

2018 LTIP award vesting

Awards granted to executive Directors in 2018 were subject to relative TSR performance, EPS growth and Group ROIC* over a three-year period ended 31 December 2020. The EPS target (applying to one-third of each award) required three-year EPS growth of 4% per annum for 25% of that element to vest, rising to full vesting for EPS growth of 11% pa or higher. Over the period Morgan Advanced Materials plc's actual EPS growth was -7.2% and accordingly the EPS element of the award will not vest.

The TSR element (applying to one-third of each award) required Morgan Advanced Materials plc's three-year TSR performance to rank at median against two comparator groups (equally split), the FTSE All-Share Industrials Index and a tailored comparator group comprising 15 listed international carbon, ceramics and other materials companies for 25% of that element to vest, rising to full vesting if Morgan Advanced Materials plc's TSR ranked at or above the upper quartile against these two comparators.

Morgan Advanced Materials plc's TSR was -6.2%, which was at the 52nd percentile versus the FTSE All-Share Industrials Index and the 88th percentile versus the tailored comparator group. Accordingly, this results in a 21.8% vesting for the TSR element of the award.

The Group ROIC* target (applying to the remaining one-third of each award) required three-year Group ROIC* of 16% for 25% of that element to vest, rising to full vesting for Group ROIC* of 19% or higher. Morgan Advanced Materials plc's Group ROIC* was 12.2%, and accordingly the ROIC* element of the award will not vest.

This combined performance resulted in a partial vesting of the 2018 awards based on 21.8% achievement of maximum. The vesting outcome is appropriately reflective of the impact of the COVID-19 pandemic on business results.

Details of the awards to executive Directors are set out in the table below:

Director	Maximum potential LTIP award	Maximum potential LTIP-CSOP award	LTIP award vested	LTIP-CSOP award vested	LTIP-CSOP award exercised	Date of vesting
Pete Raby	233,981	–	51,007	–	–	21 March 2021
Peter Turner	180,255	–	39,295	–	–	21 March 2021

For the purposes of the 2018 LTIP award (and consistent with the approach taken in previous years), the financial results were adjusted to neutralise the effects of divestments and closed businesses in 2018 and 2019.



PENSION

The auditor is required to report on this information.

Pete Raby and Peter Turner each receive a cash allowance in lieu of pension, which is fixed at the 2018 values of £104,000 and £80,120 respectively.

NON-EXECUTIVE DIRECTOR FEES

The auditor is required to report on the information in this table.

The table below sets out the fees received by each non-executive Director in respect of the year ended 31 December 2020 and the prior year. The 2020 figures reflect the 30% fee reduction volunteered (in response to the pandemic) from 1 April to 31 December mentioned earlier in this document, with the pre-reduction salaries shown in brackets.

	Douglas Caster		Helen Bunch		Laurence Mulliez		Jane Aikman	
	2020	2019	2020	2019	2020	2019	2020	2019
Fee ¹	£149,808 (£193,300)	£189,500	£47,448 (£58,900)	£57,900	£47,448 (£58,900)	£57,900	£47,448 (£58,900)	£57,900
	Clement Woon							
	2020	2019						
Fee	£39,448 (£50,900)	£32,179						

1. NEDs do not receive any other fixed/variable pay, or benefits, in addition to their fee. Figures inclusive of £8,000 SID/ Committee Chair fees for Helen Bunch, Laurence Mulliez and Jane Aikman.

SCHEME INTERESTS AWARDED IN 2020

2020 LTIP awards

In 2020, Pete Raby and Peter Turner were granted awards under the LTIP as shown in the table below. As disclosed above, the 2020 LTIP grant was delayed in response to the economic impact of the pandemic. The later grant date also allowed for the share price to partially recover, therefore reducing the risk of windfall gains resulting from a material bounce back in share price when the awards vest. Vesting outcomes will continue to be assessed to ensure they reflect business performance and will be adjusted as appropriate.

Executive Director	Number of LTIP shares granted ^{1,2}	LTIP-CSOP shares granted ^{1,2}	Value of awards at grant		
			£	As % of 2020 annualised salary	Date of vesting
Pete Raby	362,377	–	850,500	150%	5 October 2023
Peter Turner	254,239	12,782	626,700	150%	5 October 2023

1. Calculated using the award price of £2.3470, being the average share price for the five dealing days prior to the award date.

2. Peter Turner's LTIP funding award of 12,782 shares: these shares are used to the extent required to pay the exercise price arising on exercise of the CSOP and are therefore not transferable to Peter Turner.

The Committee discusses and reviews the performance criteria for new three-year LTIP awards before they are granted. For the awards granted in 2020, 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 with the TSR element continuing to be split into two parts. One-half of this element will vest based on Morgan's TSR performance relative to the constituents of the FTSE All-Share Industrials Index and one-half will vest based on Morgan's TSR performance relative to a tailored comparator group of 15 industry comparators.

The table below sets out the targets attaching to the 2020 LTIP awards:

TSR vs FTSE All-Share Industrials Index	% of award that vests	TSR performance vs peer group	% of award that vests	EPS growth	% of award that vests	Group ROIC*	% of award that vests
Upper quartile	16.67%	Upper quartile	16.67%	11% pa	33.33%	20%	33.33%
Median	4.17%	Median	4.17%	4% pa	8.33%	17%	8.33%
Below median	Nil	Below median	Nil	<4% pa	Nil	<17%	Nil

For executive Directors, there is a two-year holding period in relation to the 2020 LTIP. Dividends accrue over this holding period on any shares that vest.

Remuneration report

2020 Deferred Bonus Plan awards

In 2020, 33% of the annual bonus results for Pete Raby and Peter Turner (for performance in the 2019 financial year) were deferred into shares under the Deferred Bonus Plan (DBP), in line with Morgan's Remuneration Policy. The 2020 DBP grant was delayed in response to the pandemic as mentioned earlier. The following DBP awards were granted:

Executive Director	Value of awards at grant		
	Number of DBP shares granted ¹	Value of award £	Date of vesting
Pete Raby	116,438	229,663	20 May 2023
Peter Turner	87,296	172,184	20 May 2023

1. Calculated using the award price of £1.9724, being the average share price for the five dealing days prior to the award date.

Exit payments made in year

The auditor is required to report on this information.

No exit payments were made to executive Directors during the 2020 financial year.

Payments to past Directors

The auditor is required to report on this information.

No payments were made to past Directors during the 2020 financial year.

External appointments

Pete Raby was appointed non-executive Director of Hill & Smith Holdings PLC in December 2019. His fee for this position in 2020 was £51,250 which he retains. No other external appointments were held by either executive Director in the 2020 financial year.

Implementation of Remuneration Policy for 2021

Base salary

In line with the Remuneration Policy, executive Directors' salaries were reviewed by the Committee and increased for 2021 consistent with the average range of increases awarded to the wider workforce. The table below shows the base salaries in 2020 (prior to any reduction implemented in response to the pandemic), and those that took effect from 1 January 2021:

Executive Director	Base salary at:		
	1 January 2021	1 January 2020	Increase
Pete Raby	£581,175	£567,000	2.5%
Peter Turner	£426,160	£417,800	2%

For the 2020 performance year, the Group maintained the formal link between performance and pay within the senior leadership population. Specifically, the process considers individual and Group performance, as well as salary relative to the relevant market.

The increases awarded to both Pete Raby and Peter Turner were calibrated in line with this. The Committee considered Pete Raby's and Peter Turner's continued strong performance in their roles as well as the market positioning of their salaries, in determining to increase their salaries in line with the average range of increases for UK based employees. The rationale for any future increases will be disclosed in the relevant Annual Report on Remuneration.

Pension

While Pete Raby and Peter Turner will continue to receive a cash allowance in lieu of pension, the monetary value remains fixed at the 2018 level disclosed in the table on page 68. The Company commits to review this as part of the next Remuneration Policy review in 2021.

Annual bonus in respect of 2021 performance

The maximum bonus opportunity remains at 150% of salary (with the payout for on-target performance continuing to be 50% of the maximum).

33% of any bonus result will ordinarily be deferred into shares for a further three-year period. The performance measures attached to the annual bonus remain unchanged from 2020, as follows:

Adjusted operating profit* – 40%

Cash generation* – 40% (measured against quarterly cumulative targets as well as over the complete financial year. For every quarterly target that is missed, the payout warranted for full-year performance under this element will be reduced by 10%)

Strategic personal objectives – 20%

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. These targets will be disclosed retrospectively, at such time as they have become less commercially sensitive, and within three years of the end of the performance year.

2021 LTIP awards

In March 2021, Pete Raby and Peter Turner will be granted awards under the 2021 LTIP with a face value of 150% of their respective base salaries for 2021. The number of shares allocated are not being reduced as the share price recovery reduces the opportunity for significant windfall gains, however vesting outcomes will continue to be assessed to ensure they reflect business performance and will be adjusted as appropriate. The three-year performance period over which performance will be measured began on 1 January 2021 and will end on 31 December 2023. Further details of the awards will be disclosed in next year's Remuneration Report.

The performance measures are detailed below:

- 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 for each element will remain median to upper quartile.
- The EPS performance range will be adjusted to 15%-22% p.a. to take into account the reduced base level resulting from the impact of the pandemic on financials
- The ROIC* range will remain unchanged at 17%-20%, but with IFRS-16 lease assets added to the invested capital. The Committee believes these ranges appropriately support the Group's strategy for sustainable long-term growth over the next three years whilst continuing to represent suitably demanding targets.
- For all three measures, awards will continue to vest on a straight-line basis between threshold and maximum, with 25% of each element vesting at threshold.
- For the 2021 LTIP cycle, executive Directors will be required to hold any vested 2021 LTIP awards for an additional two-year period. Vested awards that are subject to the holding period will remain subject to clawback in line with our Policy but will not be forfeitable on cessation of employment.

Chairman and non-executive Director fees

The Chairman's and non-executive Directors' fees were reviewed in December 2020. The table below shows the fees in 2020 (prior to any reduction volunteered in response to the pandemic), and those that will apply in 2021:

Role	2021 fee pa	2020 fee pa	Increase
Chairman	£197,166	£193,300	2.0%
Non-executive Director	£51,918	£50,900	2.0%
Committee Chair (additional fee)	£8,000	£8,000	0%
Senior Independent Director (additional fee)	£8,000	£8,000	0%

Percentage change in Directors' remuneration

The table below shows the percentage change in the executive and non-executive Directors' remuneration in 2020 compared to the average percentage change in remuneration for other employees of Morgan Advanced Materials plc over the same period, in accordance with the revised guidelines.

	% Change in Salary or Fees ¹	% Change in Benefits ³ (excluding pension)	% Change in Annual Bonus ⁶
Executive Directors			
Pete Raby	-19.4%	1.9%	-89.1%
Peter Turner	-20.8%	1.1%	-89.3%
Non-Executive Directors⁴			
Douglas Caster	-20.9%	n/a	n/a
Helen Bunch	-18.1%	n/a	n/a
Laurence Mulliez	-18.1%	n/a	n/a
Jane Aikman	-18.1%	n/a	n/a
Clement Woon ²	-20.9%	n/a	n/a
Average per employee	3.0%	-5.81% ⁵	-2.11%

1. Percentages reflect the temporary Board salary/fee reductions implemented in response to the pandemic. All figures are based on full time equivalent comparisons.

2. Clement Woon joined in May 2019; his 2019 salary has therefore been annualised within the calculation, to permit appropriate comparison.

3. Benefits figures include private medical insurance and car allowance.

4. Non-Executive Directors do not receive any additional benefits or bonus payments.

5. Decrease reflects change in type of medical cover required by individual employees.

6. Executive Director bonus reflects 2020 bonus paid in 2021. Employee average bonus based on 2019 bonus paid in 2020 (data for 2020 bonus was not available at the time of publication. 2020 bonus is expected to exhibit a downward trend, but to a lesser extent than the executive Directors based on the personal performance element having been reinstated for the wider workforce).

Remuneration report

CEO Pay Ratio

Year	Method	25th Percentile Pay Ratio	Median (50th Percentile) Pay Ratio	75th Percentile Pay Ratio
2020	Option B	34:1¹	24:1²	20:1³
2020 (Excluding Variable)	Option B	25:1	20:1	14:1
2019	Option B	74:1⁴	62:1⁵	41:1⁶
2019 (Excluding Variable)	Option B	34:1	27:1	19:1

1. Total 25th percentile employee pay & benefits as at 31/12/20 = £22,464 (salary component = £21,000).
2. Total 50th percentile employee pay & benefits as at 31/12/20 = £31,550 (salary component = £23,960).
3. Total 75th percentile employee pay & benefits as at 31/12/20 = £38,723 (salary component = £36,900).
4. Ratio trued up from that disclosed in last year's Remuneration Report to reflect final value of LTIP vesting for CEO. Total 25th percentile employee pay & benefits as at 31/12/19 = £21,958 (salary component = £17,599).
5. Ratio trued up from that disclosed in last year's Remuneration Report to reflect final value of LTIP vesting for CEO. Total 50th percentile employee pay & benefits as at 31/12/19 = £25,927 (salary component = £24,300).
6. Ratio trued up from that disclosed in last year's Remuneration Report to reflect final value of LTIP vesting for CEO. Total 75th percentile employee pay & benefits as at 31/12/19 = £39,926 (salary component = £30,610).

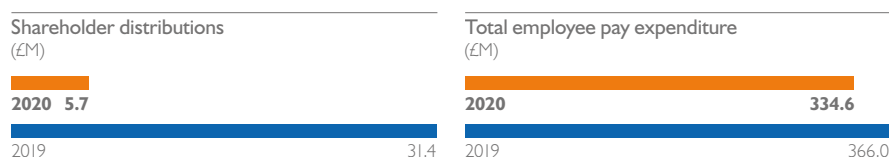
In line with the CEO pay ratio regulations, the table above shows for 2020 the ratio of the CEO's single total figure of remuneration (STFR) to that of UK employees at the 25th, 50th (median) and 75th percentiles. In addition to the mandatory calculation using total remuneration, ratios have also been calculated excluding variable pay elements such as bonus and share awards.

Of the three reporting options available to companies, Morgan has applied Option B, where the most recent gender pay gap reporting data has been used to identify the 25th, 50th and 75th percentile employees. The 25th, 50th and 75th percentile pay ratios are based on the remuneration of a representative employee who falls on each of these pay percentiles. Option B has been used to calculate the CEO pay ratios, as Option A requires the ability to calculate a single total remuneration figure for each UK employee, and Morgan does not currently have the systems in place to support this methodology. The 'best equivalent' employees identified using the gender pay gap information are representative of the 25th, 50th and 75th percentiles of company remuneration since base pay constitutes a large proportion of the remuneration package for the majority of employees, so it is likely that a similar set of employees would have been identified using Option A. The calculation covers base pay, annual bonus, pension and where applicable stock awards and benefits including car allowance and private medical. Total remuneration figures used in the calculation for 25th, 50th and 75th percentile employees include annual bonus relating to 2020 performance in order to be consistent with the methodology used for the CEO's total remuneration figure.

The 2020 CEO pay ratios are significantly lower than those in 2019 as a consequence of the CEO's temporary salary reduction, cancellation of the CEO's personal performance bonus element in response to the COVID-19 pandemic, and also due to the pandemic's impact on business results (and therefore on levels of variable pay). Pay and benefits for the CEO and wider employee population are based on the same philosophies, for example driving pay for performance and alignment to external benchmarks, in order to promote consistency, fairness and equity across all levels in the organisation. As the same methodology underpins the remuneration used in the above calculations, the resulting median pay ratio is consistent with the company's wider policies on employee pay, reward and progression. Pay ratios are reduced when variable pay elements are excluded, so the gap between CEO and employee pay is largely attributable to non-fixed pay elements, some of which (e.g. share awards) the majority of the wider workforce would not typically be eligible for in the external market. The diversity of different levels and types of roles found in a manufacturing environment such as at Morgan may result in a higher CEO pay ratio than companies which have predominantly professional and/or more senior staff. It is therefore important to compare Morgan's data to companies in similar industries.

Relative importance of spend on pay

The graphs below show shareholder distributions (i.e. dividends and share buybacks) and total employee pay expenditure for the financial years ended 31 December 2019 and 31 December 2020.



The reduction in shareholder distributions in 2020 reflects the withdrawal of the 2019 final dividend in response to the COVID-19 pandemic, and also the impact of the pandemic on business results, affecting the 2020 interim dividend. Total employee pay across the Group has decreased by 8.6% to £334.6 million (2019: £366.0 million), also impacted by measures taken as a result of the pandemic.



Advisers

Kepler (now branded Mercer Kepler) was appointed by the Committee in 2010 as its executive remuneration adviser and was retained during the most recent financial year. In 2020 Mercer Kepler 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. Mercer Kepler reports directly to the Chairman of the Remuneration Committee and does not provide any other material non-remuneration-related services to the Group (nor does Mercer Kepler's parent company, Mercer), and is considered to be independent.

Mercer Kepler is a signatory to the Remuneration Consultants Group's voluntary Code of Conduct.

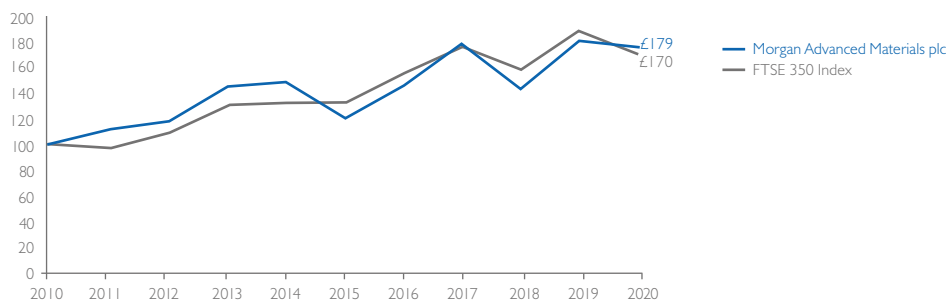
Fees paid during the year to advisers for advice to the Remuneration Committee, charged on a time and materials basis, were as follows:

Adviser	Fees (including expenses, excluding VAT)
Mercer Kepler	£32,413

On 1 January 2021, the role of executive remuneration advisor transitioned from Mercer to Ellason LLP.

Comparison of Company performance

The graph below shows the value, at 31 December 2020, of £100 invested in Morgan Advanced Materials plc's shares on 31 December 2010 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 because it is widely followed by the UK's investment community and easily tracked over time.



The table below details the CEO's 'single figure' of remuneration over the ten-year period to 31 December 2020.

CEO	2011 M Robertshaw	2012 M Robertshaw	2013 M Robertshaw	2014 M Robertshaw	2015 P Raby	2016 P Raby	2017 P Raby	2018 P Raby	2019 P Raby	2020 P Raby
CEO single figure	£3,371,302	£1,285,556	£648,932	£1,001,448	£788,252	£787,492	£1,210,856	£1,479,738	£1,618,605	£772,125
Annual bonus (% max)	100%	0%	0%	65%	50%	29.5% ¹	71.3%	67.4%	84.3%	9%
BDSMP vesting (% max)	60%	100%	0%	0%	n/a	n/a	n/a	n/a	n/a	n/a
LTIP vesting (% max)	100%	50%	0%	0%	n/a	n/a	15.4%	42.9%	61.3%	21.8%

1. Figure represents percentage achievement of maximum opportunity. Bonus maximum as a percentage of salary increased to 150% of base salary in 2016 compared to 100% in previous years.

Remuneration report

Directors' interests in shares

Shares owned outright

The auditor is required to report on the information in this table.

The following table shows the number of shares held by each person who was a Director of Morgan Advanced Materials plc as at 31 December 2020 (together with shares held by their connected persons) in the Ordinary share capital of the Company:

	As at 1 January 2020 or date of joining	As at 31 December 2020	As at 3 March 2021
Executive Directors			
Pete Raby	165,332	258,945	258,945
Peter Turner	194,330	263,914	263,914
Non-executive Directors			
Douglas Caster	110,454	110,454	110,454
Laurence Mulliez	6,580	6,765	6,765
Helen Bunch	2,028	2,028	2,028
Jane Aikman	1,000	1,000	1,000
Clement Woon	45,281	45,281	45,281

As at 3 March 2021, the Directors' interests in shares had not changed since the end of the period under review, with the exception of the vesting of the 2018 Deferred Bonus Plan (DBP) on 21 March 2021, which resulted in the retention of 30,525 shares for Pete Raby and 24,216 for Peter Turner (inclusive of dividend reinvestment and net of taxes). Full details will be disclosed in the 2021 Annual Report.

Executive Directors' shareholding guidelines

The table below shows the shareholding of each executive Director against their respective shareholding guideline as at 31 December 2020.

	Shareholding guideline (% 2020 salary)	Shares owned outright	Shares subject to performance ¹	Performance- tested but unvested shares ²	Shares subject to DBP deferral ³	Options vested but unexercised ⁴	Options granted but subject to continued employment ⁵	Current shareholding (% 2020 salary) ⁵	Guideline met?
Pete Raby	200%	258,945	678,466	51,007	124,417	–	4,477	213%	Yes
Peter Turner	200%	263,914	508,394	39,295	95,217	–	4,477	271%	Yes

1. 2019 and 2020 LTIP and LTIP-CSOP awards. The total shares for Pete Raby and Peter Turner include a funding award of 11,189 and 12,782 shares respectively to be used to the extent required to pay the exercise price arising on exercise of the CSOP and are therefore not transferable to Pete Raby and Peter Turner.

2. 2018 LTIP awards.

3. Estimated number of shares, net of tax (47%), deferred under the DBP.

4. Options granted under the Sharesave scheme.

5. Based on an executive Director's 2020 salary (prior to temporary reduction) and the share price at 31 December 2020 of 311.0 pence, comprising shares owned outright and shares subject to deferral.

Unless otherwise stated, figures given in the tables on pages 84 to 86 are for shares or interests in shares.

Pete Raby

The auditor is required to report on the information in this table.

LTIP

Status at 31 December 2020	Plan	As at 1 January 2020	Allocations during the year	Released during the year	Lapsed during the year	31 December 2020	As at 2020	Market price at date of allocation	Market price at date of release	Performance period
No further performance conditions, released	2017	236,074	–	144,713	91,361	–	–	314.52p	183.37p	01.01.17 – 31.12.19
No further performance conditions, not yet released	2018	233,981	–	–	–	233,981	–	333.36p	–	01.01.18 – 31.12.20
Subject to performance conditions	2019	293,711	–	–	–	293,711	–	268.12p	–	01.01.19 – 31.12.21
	2019 funding	11,189	–	–	–	11,189	–	268.12p	–	01.01.19 – 31.12.21
	2020	–	362,377	–	–	362,377	–	234.70p	–	01.01.20 – 31.12.22

Share options

Status at 31 December 2020	Plan	As at 1 January 2020	Allocations during the year	Released during the year	Lapsed during the year	31 December 2020	As at 2020	Market price at date of allocation	Market price at date of release	Performance period
Continued service met	2016 Sharesave	3,862	–	3,862	–	–	–	233.0p	253.20p	01.12.16 – 30.11.19
Subject to continued service	2019 Sharesave	4,477	–	–	–	4,477	–	201.00p	–	01.12.19 – 30.11.22
Subject to performance conditions	2019 LTIP-CSOP	11,189	–	–	–	11,189	–	268.12p	–	01.01.19 – 31.12.21

Total interests in share plans

As at 1 January 2020	As at 31 December 2020
934,547 ^{1,2,3}	1,151,675 ^{1,3,4}

1. Includes a funding award of 11,189 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.
2. Includes 2017 deferred bonus award.
3. Includes 2018 and 2019 deferred bonus award.
4. Includes 2020 deferred bonus award.

Peter Turner

The auditor is required to report on the information in this table.

LTIP

Status at 31 December 2020	Plan	As at 1 January 2020	Allocations during the year	Released during the year	Lapsed during the year	31 December 2020	As at 2020	Market price at date of allocation	Market price at date of release	Performance period
Subject to performance conditions, released	2017	187,285	–	114,805	72,480	–	–	314.52p	183.37p	01.01.17 – 31.12.19
No further performance conditions, not yet released	2018	180,255	–	–	–	180,255	–	333.36p	–	01.01.18 – 31.12.20
Subject to performance conditions	2019	228,591	–	–	–	228,591	–	268.12p	–	01.01.19 – 31.12.21
	2020	–	254,239	–	–	254,239	–	234.70p	–	01.01.20 – 31.12.22
	2020 funding	–	12,782	–	–	12,782	–	234.70p	–	01.01.20 – 31.12.22

Remuneration report

Peter Turner *continued*

Share options

Status at 31 December 2020	Plan	As at 1 January 2020	Allocations during the year	Released during the year	Lapsed during the year	As at 31 December 2020	Market price at date of allocation	Market price at date of release	Performance period
Subject to continued service	2019 Sharesave	4,477	–	–	–	4,477	201.00p	–	01.12.19 – 30.11.22
Subject to performance conditions	2020 LTIP-CSOP	–	12,782	–	–	12,782	234.70p	–	01.01.20 – 31.12.22

Total interests in share plans

As at 1 January 2020	As at 31 December 2020
708,143 ^{1,2}	872,784 ^{2,3,4}

1. Includes 2017 deferred bonus award.

2. Includes 2018 and 2019 deferred bonus award.

3. Includes 2020 deferred bonus award.

4. Includes a funding award of 12,782 shares to be used to the extent required to pay the exercise price arising on exercise of the CSOP and therefore not transferable to Peter Turner.

Details of plans

LTIP

Plan	Details
2018, 2019, 2020	The performance conditions attached to the 2018 awards are set out on page 77 to 78. The 2019 awards were on the same basis as the 2018 awards except that the ROIC*, range was amended to 17%-20%. The 2020 awards were on the same basis as the 2019 awards.

Share options

Plan	Details
LTIP – CSOP	<p>LTIP 2018: The awards to the CEO and CFO were structured as LTIP awards in the form of a conditional award of free shares.</p> <p>LTIP 2019: The award to the CFO was structured as LTIP awards in the form of a conditional award of free shares. The CEO's award was structured as an Approved Performance Share Plan (APSP) and comprised three elements: (i) HMRC-approved options (CSOP) over shares to the value of up to £30,000 with an exercise price of 268.12 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. The award is also subject to malus and clawback provisions.</p> <p>The provisions of these CSOP options, funding awards and LTIP awards was linked so that the maximum aggregate number of shares that could be acquired on exercise of LTIP and CSOP awards (the funding award being used to pay the exercise price arising on exercise of the CSOP) was limited to that number of shares that had a market value on the date of the awards equal to 150% of Pete Raby's 2019 annual salary. Vested funding awards were not transferable to the participant.</p> <p>LTIP 2020: The award to the CEO was structured as LTIP awards in the form of a conditional award of free shares. The CFO's award was structured as an Approved Performance Share Plan (APSP) and comprised three elements: (i) HMRC-approved options (CSOP) over shares to the value of up to £30,000 with an exercise price of 234.70 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. The award is also subject to malus and clawback provisions.</p> <p>The provisions of these CSOP options, funding awards and LTIP awards was linked so that the maximum aggregate number of shares that could be acquired on exercise of LTIP and CSOP awards (the funding award being used to pay the exercise price arising on exercise of the CSOP) was limited to that number of shares that had a market value on the date of the awards equal to 150% of Peter Turner's 2020 annual salary. Vested funding awards were not transferable to the participant.</p>
Sharesave	HMRC-approved all-employee Sharesave scheme. Exercise price set at 20% discount to share price on date of grant. Options mature after the three-year savings period 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.

Deferred Bonus Plan

Plan	Details
2018, 2019 and 2020	Mandatory deferral of one-third of gross bonus result relating to the previous year, which is provided as a conditional award of shares of the equivalent value. The award vests on the third anniversary of the award date and is subject to forfeiture if the executive Director leaves before the vesting date. The award is also subject to malus and clawback provisions.

Other transactions involving Directors are set out in note 43 (Related Parties) to the consolidated financial statements. This Report was approved by the Board on 3 March 2021.

Signed on behalf of the Board

Helen Bunch
Committee Chair

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

Pages 46 to 89 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 (AGM)

The Company's 2021 AGM will be held on Thursday 6 May 2021, commencing at 10:30am at York House, Sheet Street, Windsor SL4 1DD. 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 (the 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.

Appointment and replacement of Directors

The Articles provide that the Company may by ordinary resolution at a 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 or she 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 or her period of office. The Articles also set out the circumstances in which a Director shall vacate office. The Articles require that at each AGM any Director who was appointed after the previous AGM 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 AGMs 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 AGM.

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 (the Code). Details of the skills, experience and 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 48 to 49.

RESULTS AND DIVIDENDS

The total loss (attributable to owners of the parent and non-controlling interests) for the year ended 31 December 2020 was £18.0 million (2019: profit £81.3 million). The loss for the period arises principally as a result of the impairment of assets of £65.6 million and restructuring costs of £24.0 million recorded within specific adjusting items. Loss before taxation for the same period was £13.1 million (2019: profit £109.7 million). Revenue was £910.7 million (2019: £1,049.5 million) and operating loss was £1.8 million (2019: profit £126.1 million). Basic loss per share* from continuing operations was 8.6 pence (2019: earnings per share 25.2 pence). Capital and reserves at the end of the year were £240.0 million (2019 restated: £312.2 million). The total loss of £18.0 million will be transferred to equity.

The Directors recommend the payment of a final dividend at the rate of 3.5 pence per share on the Ordinary share capital of the Company, payable on 21 May 2021 to shareholders on the register at the close of business on 30 April 2021. Together with the interim dividend of 2.0 pence per share paid on 11 December 2020, this final dividend, if approved by shareholders, brings the total distribution for the year to 5.5 pence per share (2019: 4.0 pence).

DIRECTORS

All those who served as Directors at any time during the year under review are set out on pages 48 to 49.

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.

Engagement with customers and suppliers

Details of the Group's engagement with customers and suppliers are set out on pages 4 to 5 of the Strategic Report and on page 52 of the Corporate Governance Report.

Information required by LR 9.8.4R

Apart from the dividend waiver which has been issued in respect of shares held by the Trust referred to in note 20 on page 130, there is no information required to be disclosed under LR 9.8.4R.

OVERSEAS BRANCHES

As at 31 December 2020, the Company had branches as follows:

- Thermal Ceramics Europe (France)
- Morganite Australia Pty Limited (New Zealand)
- Morgan AM&T BV (Sweden and Belgium)
- Carbo San Luis SA (Peru)

HUMAN RESOURCES

Details of the Group's human resources policies and employee involvement are set out on pages 18 to 21.

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.

Other disclosures

RESEARCH AND DEVELOPMENT

The Group recognised £28.0 million in expense in respect of research and development (2019: £34.0 million). The Group did not capitalise any development costs in 2020 (2019: £nil).

GREENHOUSE GAS EMISSIONS

Details of the Group's annual greenhouse gas emissions are shown in the Environment section on page 14.

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 22 on pages 132 to 140. 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 2020 is set out in note 41 on page 163. 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 20 on page 131.

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 2020 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 scheduled to lapse at the 2021 AGM. At the 2021 AGM, shareholders will be asked to grant a similar allotment authority.

Two separate special resolutions 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 5% of the issued share capital as at the last practicable date before the publication of the 2021 Notice of AGM, and an additional 5% of the issued share capital which would be for use only in connection with acquisitions and specified capital investments.

The Directors sought authority at the 2020 AGM to repurchase shares in the capital of the Company up to a maximum aggregate number of Ordinary shares of 28,536,998. The Directors will seek to renew this authority at the 2021 AGM.

Employee share and share option schemes

The Company operates a number of employee share and share option schemes. 85 employees hold awards under the Morgan Advanced Materials plc Long-Term Incentive Plan, including share options held under the Approved Performance Share Plan, seven employees hold awards under the Morgan Advanced Materials Deferred Bonus Plan, 200 employees hold awards under the Morgan Advanced Materials plc Restricted Stock Unit Plan and 341 employees participate in the Company's UK Sharesave scheme. Details of outstanding share awards and share options are given in note 24 on pages 146 to 147.

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 as to whether to accept or reject the offer in respect of any shares held by them.

Major shareholdings

As at 31 December 2020, 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	Percentage of issued share capital	Date of notification of interest
Ameriprise Financial Inc., and its group	24,186,489	8.48	3 February 2017
M&G Plc	19,762,544	6.92	22 October 2019
Black Creek Investment Management Inc.	17,136,885	6.01	22 October 2018
FIL Limited	15,414,047	5.40	5 August 2020
Aberforth Partners LLP	14,338,459	5.03	3 September 2019
Harris Associates	14,119,504	4.95	24 November 2017
AXA Investment Managers SA	14,039,985	4.92	6 June 2019
Norges Bank	8,581,132	3.01	15 June 2020

As at 3 March 2021, the Company was notified by Norges Bank that its holding had decreased from 3.01% to below 3%. There are no other changes to the substantial shareholdings shown in the above table.

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. The facility agreements generally include change of control provisions which, in the event of a change in ownership of the Company, could result in their renegotiation or withdrawal.

The most significant of such agreements are the UK £200 million multi-currency revolving credit facility agreement, which was signed on 26 September 2018, and the privately placed Note Purchase and Guarantee Agreements signed on 27 October 2016 and 20 March 2017, for which the aggregate outstanding loan amounts are US\$137 million and €85 million.

There are a number of other agreements that would 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 were no reportable subsequent events following the balance sheet date.

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 consolidated financial statements in accordance with International Financial Reporting Standards (IFRSs) adopted pursuant to Regulation (EC) No 1606/2002 as it applies in the European Union and applicable law and have elected to prepare the Parent company financial statements in accordance with UK Accounting Standards, including FRS 101 Reduced Disclosure Framework.

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.

In preparing each of the Group and Parent company financial statements, the Directors are required to:

- Select suitable accounting policies and then apply them consistently.

- Make judgements and estimates that are reasonable and prudent.
- For the Group consolidated financial statements, state whether they have been prepared in accordance with IFRSs as adopted by the EU.
- Assess the Group and Parent company's ability to continue as a going concern, disclosing, as applicable, matters related to Going concern.
- 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. They are responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error, and 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.
- Prepare the financial statements on the going concern basis of accounting unless they intend to liquidate the Group or the Parent company or to cease operations or have no realistic alternative but to do so.

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. They are responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error, and 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.

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.

The Directors as at the date of this Report, whose names and functions are set out on pages 48 to 49, confirm that, to the best of their knowledge:

- The Group's consolidated 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.
- 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 2020.

For the purposes of DTR 4.1.5R(2) and DTR 4.1.8, the Directors' Report on pages 46 to 89 and the Strategic Report on pages 2 to 45 comprise the management report, including the sections of the Annual Report and consolidated financial statements incorporated by reference.

Each Director holding office at the date of approval of this Directors' Report confirms that, so far as he or she is aware, there is no relevant audit information of which the Company's auditor is unaware, and that he or she has taken all steps that he or she ought to have taken as a Director to make himself or herself 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 3 March 2021.

For and on behalf of the Board

Stephanie Mackie Company Secretary

3 March 2021

Morgan Advanced Materials plc
York House
Sheet Street
Windsor
Berkshire SL4 1DD

Registered in England and Wales, No. 286773

Independent auditor's report

to the members of Morgan Advanced Materials plc

REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS

I. OPINION

In our opinion:

- the financial statements of Morgan Advanced Materials plc (the 'Parent company') and its subsidiaries (the 'Group') give a true and fair view of the state of the Group's and of the Parent company's affairs as at 31 December 2020 and of the Group's loss for the year then ended;
- the Group financial statements have been properly prepared in accordance with international accounting standards in conformity with the requirements of the Companies Act 2006 and the International Financial Reporting Standards (IFRSs) as adopted by the European Union;
- the Parent company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice, including Financial Reporting Standard 101 "Reduced Disclosure Framework"; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006.

We have audited the financial statements which comprise:

- the Consolidated income statement;
- the Consolidated statement of comprehensive income;
- the Consolidated and Parent company balance sheets;
- the Consolidated and Parent company statements of changes in equity;
- the Consolidated statement of cash flows; and
- the related Notes 1 to 45.

The financial reporting framework that has been applied in the preparation of the Group financial statements is applicable law, international accounting standards in conformity with the requirements of the Companies Act 2006, and IFRSs as adopted by the European Union. The financial reporting framework that has been applied in the preparation of the Parent company financial statements is applicable law and United Kingdom Accounting Standards, including FRS 101 "Reduced Disclosure Framework" (United Kingdom Generally Accepted Accounting Practice).

2. BASIS FOR OPINION

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the auditor's responsibilities for the audit of the financial statements section of our report.

We are independent of the Group and the Parent company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the Financial Reporting Council's (the 'FRC's') Ethical Standard as applied to listed public interest

entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements. The non-audit services provided to the Group and Parent company for the year are disclosed in Note 4 to the financial statements. We confirm that the non-audit services prohibited by the FRC's Ethical Standard were not provided to the Group or the Parent company.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

3. SUMMARY OF OUR AUDIT APPROACH

Key audit matters

The key audit matters that we identified in the current year were:

- Inventory valuation;
- Presentation of restructuring costs as a specific adjusting item; and
- Impairment of non-financial assets.

Materiality

The materiality that we used for the Group financial statements was £4.0m which was determined on the basis of considering a number of different metrics used by investors and other readers of the financial statements. These included:

- profit before tax before specific adjusting items;
- revenue;
- earnings before interest, tax, depreciation and amortisation; and
- net assets.

Scoping

Full scope audit work was performed on 18 reporting components, and specified audit procedures were undertaken on a further 14 reporting components. Our full scope and specified audit procedures covered 74% of Group revenue and 89% of absolute Group statutory loss.

Significant changes in our approach

In the prior year, the predecessor auditor identified provisions for uncertain tax positions, environmental provisions and the valuation of the defined benefit obligation in the UK and US as key audit matters.

We considered and concluded as follows:

- Having assessed provisions for uncertain tax positions and the assumptions used in valuing the UK and US defined benefit obligation in the current year, we do not consider the level of judgement involved to be significant or an area where significant audit effort is required.
- In relation to environmental provisions, the judgement in the prior year primarily related to one site where the feasibility study was at an early stage. The feasibility study for this site is now complete and as a result, we do not consider the level of judgement involved to be significant or an area where significant audit effort is required.

In the current year, we have changed the basis for determining materiality. Refer to section 6 for further details.

4. CONCLUSIONS RELATING TO GOING CONCERN

In auditing the financial statements, we have concluded that the directors' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

Our evaluation of the directors' assessment of the Group's and Parent company's ability to continue to adopt the going concern basis of accounting included:

- obtaining an understanding of the financing facilities including nature of facilities, repayment terms and covenants;
- evaluating the linkage to business model and principal risks as identified on pages 8 to 9 and 26 to 31;
- challenging the assumptions used in the Board approved forecasts by reference to historical performance and other supporting evidence such as market data;
- recalculation of the amount of headroom in the forecasts (in liquidity terms and against the relevant covenant limits);
- assessing the appropriateness of the sensitivity analysis and reverse stress tests performed by management; and
- assessing the adequacy of the disclosures made by management, in light of the COVID-19 pandemic.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the Group's and Parent company's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

In relation to the reporting on how the Group has applied the UK Corporate Governance Code, we have nothing material to add or draw attention to in relation to the directors' statement in the financial statements about whether the directors considered it appropriate to adopt the going concern basis of accounting.

Our responsibilities and the responsibilities of the directors with respect to going concern are described in the relevant sections of this report.

5. KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) that we identified. These matters included those which had the greatest effect on: the overall audit strategy, the allocation of resources in the audit; and directing the efforts of the engagement team.

These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

5.1. Inventory Valuation

Key audit matter description

The Group manufactures thermal, carbon and technical ceramic products for a diverse range of end markets. The Group had material inventory balances of £122.4m as at 31 December 2020 (2019: £142.3m). There is a risk that the Group's reporting components are not correctly applying the Group accounting policy to the valuation and provisioning of inventory, due to:

- System limitations in certain locations, where there is significant manual intervention required to record and value inventory, which results in regular manual adjustments to inventory; and
- The level of management judgement involved in determining whether a provision should be recognised and how it should be measured.

Following the outbreak of COVID-19, there is also an enhanced risk in relation to the absorption of fixed cost overheads into inventory where there are low production volumes.

In the Consolidated Financial Statements, Note 1 sets out the Group's accounting policy for inventory valuation and Note 16 provides further analysis of the account balance.

How the scope of our audit responded to the key audit matter

We have performed the following procedures in respect of this key audit matter:

- Obtained an understanding of the relevant controls over the inventory valuation process;
- Challenged the basis on which the cost of inventory has been determined, and tested the allocation of costs to inventory by comparing to actual overheads incurred;
- Assessed whether the absorption of fixed cost overheads in inventory is appropriate, where production volumes are abnormally low during the year due to COVID-19;
- Challenged management's key assumptions in determining inventory provisions by assessing the accuracy and completeness of the items included within the provision and also taking into account the impact of COVID-19 on future usage;
- Assessed the mathematical accuracy of the inventory provision by obtaining management's analysis and performing a recalculation based on key inputs; and
- Tested the net realisable value of inventory by comparing to post year-end sales invoices.

Key observations

Based on our procedures performed, we are satisfied that the valuation of inventory at 31 December 2020 is appropriate.



Independent auditor's report

to the members of Morgan Advanced Materials plc

5.2. Presentation of restructuring costs as a specific adjusting item

Key audit matter description

Following the outbreak of COVID-19, the Group launched a significant restructuring programme to reduce its cost base in certain areas in response to the economic downturn arising from the pandemic, as communicated in the HY20 announcement. The restructuring actions are expected to position the business ahead of a period of lower demand across a number of geographies and industries. The programme is anticipated to incur cash costs of £30m and result in £23m annual savings over a three year period to December 2022.

There are four types of activity undertaken as part of the project. These include the closure or idling of under-utilised assets, headcount reductions, full or partial site closures and movement of manufacturing to lower cost locations. The costs recognised in the year under these programmes have been classified as specific adjusting items within the financial statements. This is in line with Group accounting policy where in the Directors' judgement, certain items need to be disclosed separately by virtue of their size and incidence in order for users of the Consolidated Financial Statements to give an understanding of the financial information and the underlying performance of the business.

There is a risk that business as usual restructuring activities are incorrectly presented as exceptional within adjusting items.

During FY20 the Group has recognised £24.0m of restructuring costs which have been presented as specific adjusting items. There is significant judgement in determining whether these items meet the definition of exceptional and therefore this has been determined to be a key audit matter in the current year.

Refer to Note 1 Critical accounting judgements and Note 6 specific adjusting items in the financial statements for the Group's policy on the classification and disclosure of restructuring and other specific adjusting items.

The Audit Committee Report on pages 58 to 62 refers to specific adjusting items as an area considered by the Audit Committee.

How the scope of our audit responded to the key audit matter

We have performed the following procedures in respect of this key audit matter:

- Obtained an understanding of the relevant key controls relating to the identification and disclosure of restructuring costs as adjusting items;
- Obtained an understanding of management's accounting policy for presenting restructuring costs and the governance structure in place to oversee the restructuring program; and
- Challenged the nature of restructuring costs and whether it is appropriate to classify relevant costs as exceptional, based on the Group accounting policy, ESMA and FRC guidance and relevant accounting standards.

Key observations

Based on our procedures performed, we are satisfied with the presentation of the restructuring costs as a specific adjusting item.



5.3. Impairment of non-financial assets

Key audit matter description

Following the outbreak of COVID-19 and the resulting economic downturn, the Group has made impairments of non-financial assets of £65.6m. These primarily sit within the Technical Ceramics and Thermal Ceramic global business units.

We have focussed our work on impairment of non-financial assets at the ceramic cores business within Technical Ceramics, where a significant downturn in Aerospace demand has resulted in a partial impairment of that cash generating unit, with an impairment loss of £28.8m being recognised.

Management have determined the recoverable amount based on a value-in-use model calculated from cash flow projections, which are based on management's assumptions and estimates of future trading performance.

Estimating a value-in-use is inherently judgemental, and a range of assumptions can reasonably be applied in determining the estimates applied therein. The key judgements in assessing non-financial assets for impairment are the discount rate, long-term growth rate, and the short-term projected cash flows. The value-in-use models are sensitive to changes in these estimates, all of which must reflect a long-term view of underlying growth in the respective economy within which these businesses operate and the reasonableness of projected cash flows.

We have focussed this key audit matter to the discount rate and short-term future cash flows and material judgements contained therein. This is where the highest degree of sensitivity exists in determining the value-in-use. As a result, management have provided sensitivity disclosures of the reasonable possible changes that could result in an impairment.

The Audit Committee Report on pages 58 to 62 refers to impairment of non-financial assets as an area considered by the Audit Committee. Note 1 to the Consolidated Financial Statements sets out the Group's accounting policy for testing of non-financial assets for impairment and contains further details on the key source of estimation uncertainty.

How the scope of our audit responded to the key audit matter

We have performed the following procedures in respect of this key audit matter:

- Obtained an understanding of the relevant key controls relating to the impairment process;
- Assessed the integrity of management's impairment model through testing of the mechanical accuracy and reviewing the application of the input assumptions;
- Evaluated the process management undertook to prepare the cash flow forecasts in their impairment models including agreement with the latest Board-approved plans and management approved forecasts;
- Challenged the cash flow projections through assessing the accuracy of historical budgeting by comparing them with actual performance and independent evidence to support any significant expected future changes to the business;
- Assessed a range of available market data and performing a peer benchmarking exercise to assess and challenge the growth rates forecasted by management in revenue and margins;
- Assessed the potential impact of COVID-19 on the cash flow projections;
- Assessed reasonable possible changes in assumptions to challenge the appropriateness of management's assessment of reasonable possible change scenarios; and
- Involved internal valuation specialists to assess the appropriateness of the discount rates used.

Key observations

Based on our procedures performed, we consider the key assumptions taken by management to be within an acceptable range and reasonable and supportable when taken in aggregate.



Independent auditor's report

to the members of Morgan Advanced Materials plc

6. OUR APPLICATION OF MATERIALITY

6.1. Materiality

We define materiality as the magnitude of misstatement in the financial statements that makes it probable that the economic decisions of a reasonably knowledgeable person would be changed or influenced. We use materiality both in planning the scope of our audit work and in evaluating the results of our work.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

	Group financial statements	Parent company financial statements
Materiality	£4.0m (2019: £4.1m)	£2.0m (2019: £3.8m)
Basis for determining materiality	<p>The materiality that we used for the Group financial statements was £4.0m which was determined on the basis of considering a number of different metrics used by investors and other readers of the financial statements. These included:</p> <ul style="list-style-type: none"> → Profit before tax before specific adjusting items; → revenue; → earnings before interest, tax, depreciation and amortisation; and → net assets <p>As a result, the materiality equates to 5.4% of the final profit before tax before specific adjusting items, 0.4% of revenue, 3% of EBITDA and 1.7% of net assets.</p> <p>The predecessor auditor determined materiality based on 3.7% of profit before tax before specific adjusting items.</p>	<p>Materiality was determined on the basis of the Parent company's net assets (3%). This was then capped at 50% of Group materiality.</p> <p>The predecessor auditor determined materiality based on 0.3% of total assets.</p>
Rationale for the benchmark applied	<p>Profit before tax before specific adjusting items, revenue, EBITDA and net assets are key metrics for users of the financial statements and reflects the manner in which business performance is reported and assessed by external users of the financial statements.</p>	<p>The entity is non-trading and contains investments in all of the Group's trading components and as a result, we have determined net assets for the current year to be the appropriate basis.</p>

6.2. Performance materiality

We set performance materiality at a level lower than materiality to reduce the probability that, in aggregate, uncorrected and undetected misstatements exceed the materiality for the financial statements as a whole.

	Group financial statements	Parent company financial statements
Performance materiality	£2.4m which is 60% of Group materiality	£1.2m which is 60% of Parent company materiality
Basis and rationale for determining performance materiality	<p>In determining performance materiality for the Group and Parent company, we considered the following factors:</p> <ul style="list-style-type: none"> → the quality of the control environment; → the degree of centralisation in the Group's financial reporting processes; → the understanding of the business given is a first year audit; → the level of corrected and uncorrected misstatements identified in the prior year audit by the predecessor auditor; → the changes in key management personnel and internal restructuring of the Group; and → the pervasive impact of COVID-19 on the Group. 	

6.3. Error reporting threshold

We agreed with the Audit Committee that we would report to the Committee all audit differences in excess of £0.2m, as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds. We also report to the Audit Committee on disclosure matters that we identified when assessing the overall presentation of the financial statements.



7. AN OVERVIEW OF THE SCOPE OF OUR AUDIT

7.1. Identification and scoping of components

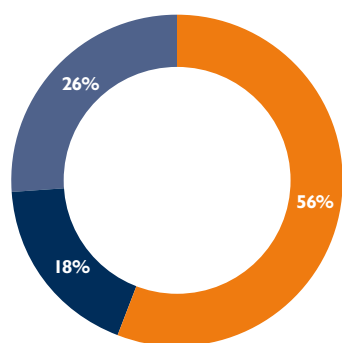
The Group operates and manufactures in 30 countries spread across five continents with the largest footprint being in North America, Asia and Europe. Our Group audit was scoped by obtaining an understanding of the Group and its environment, including Group-wide controls, and assessing the risks of material misstatement at the Group and component level.

Based on that assessment, we focussed our Group audit scope across all five of the established business units: Thermal Ceramics, Molten Metal systems, Seals and Bearings, Technical Ceramics and Electrical Carbon.

These five business units are composed of many individual reporting components, which are the lowest level at which management prepares financial information that is included in the Financial Statements. The Parent company is located in the UK and is audited directly by the Group audit team.

We have considered reporting components on the basis of their contribution to Group revenue, and profit, as well as those that require local statutory audits in their jurisdiction. Full scope audit work was completed on 18 components and specified audit procedures were undertaken on a further 14 components. Each reporting component in scope was subject to an audit materiality level between £1.0 m and £1.2m. Our full scope and specified audit procedures covered 74% of Group revenue and 89% of absolute Group statutory loss.

Revenue



- Full audit scope
- Specified audit procedures
- Review at group level

7.2. Our consideration of the control environment

The Group uses a number of different IT systems across the reporting components and we worked with our IT specialists to obtain an understanding of the General IT controls for relevant systems. The control environment is decentralised and reliant on manual processes with improvements required to the IT environment in order for us to adopt a controls reliance approach to our audit.

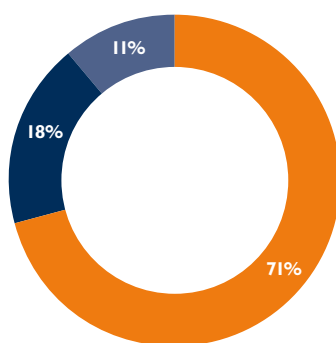
7.3. Working with other auditors

The audit work on all components was performed by Deloitte Touche Tohmatsu Limited member firms with the exception of one component business in France which continued to be audited by the predecessor auditor. The component work was performed under the direction and supervision of the Group audit team. At a Group level, further substantive audit work was performed over the consolidation and analytical review procedures were performed over components not in scope.

The planned programme which we designed as part of our involvement in the component auditors' work was delivered over the course of the Group audit. The extent of our involvement which commenced from the planning phase included;

- Setting the scope of the component auditor and assessment of their independence;
- Designing the audit procedures for all significant risks to be addressed by the component auditors and issuing Group audit instructions detailing the nature and form of the reporting required by the Group engagement team;

Absolute Group statutory loss



- Full audit scope
- Specified audit procedures
- Review at group level

- Providing direction on enquiries made by the component auditors through online and telephone conversations; and
- A review of the component auditors' engagement file by a senior member of the Group engagement team.

In response to the COVID-19 pandemic, which limited our ability to make component visits, more frequent calls were held between the Group and component teams and remote access to relevant documents was provided. Given the pandemic, the majority of our year-end audit was performed in a remote working environment. As a response to this situation, we increased the frequency of our online meetings with the component audit teams and with management.

8. OTHER INFORMATION

The other information comprises the information included in the annual report, other than the financial statements and our auditor's report thereon. The directors are responsible for the other information contained within the annual report. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the course of the audit, or otherwise appears to be materially misstated.

If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

Independent auditor's report

to the members of Morgan Advanced Materials plc

9. RESPONSIBILITIES OF DIRECTORS

As explained more fully in the directors' responsibilities statement, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the Group's and the Parent company's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or the Parent company or to cease operations, or have no realistic alternative but to do so.

10. AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the FRC's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

11. EXTENT TO WHICH THE AUDIT WAS CONSIDERED CAPABLE OF DETECTING IRREGULARITIES, INCLUDING FRAUD

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud is detailed below.

11.1. Identifying and assessing potential risks related to irregularities

In identifying and assessing risks of material misstatement in respect of irregularities, including fraud and non-compliance with laws and regulations, we considered the following:

- the nature of the industry and sector, control environment and business performance including the design of the Group's remuneration policies, key drivers for directors' remuneration, bonus levels and performance targets;
- results of our enquiries of management, internal audit, and the audit committee about their own identification and assessment of the risks of irregularities;
- any matters we identified having obtained and reviewed the Group's documentation of their policies and procedures relating to:
 - identifying, evaluating and complying with laws and regulations and whether they were aware of any instances of non-compliance
 - detecting and responding to the risks of fraud and whether they have knowledge of any actual, suspected or alleged fraud
 - obtaining an understanding of the cases being reported through the whistleblowing hotline
 - the internal controls established to mitigate risks of fraud or non-compliance with laws and regulations
- the matters discussed among the audit engagement team including significant component audit teams and relevant internal specialists, including tax, valuations, pensions, and IT specialists, regarding how and where fraud might occur in the financial statements and any potential indicators of fraud.

As a result of these procedures, we considered the opportunities and incentives that may exist within the organisation for fraud and identified the greatest potential for fraud in the following areas: presentation of restructuring costs as adjusting items and revenue recognition. In common with all audits under ISAs (UK), we are also required to perform specific procedures to respond to the risk of management override.

We also obtained an understanding of the legal and regulatory frameworks that the Group operates in, focusing on provisions of those laws and regulations that had a direct effect on the determination of material amounts and disclosures in the financial statements. The key laws and regulations we considered in this context included the UK Companies Act, Listing Rules, pensions legislation, tax legislation in all relevant jurisdictions where the Group operates.

In addition, we considered provisions of other laws and regulations that do not have a direct effect on the financial statements but compliance with which may be fundamental to the Group's ability to operate or to avoid a material penalty. These included the Group's environmental regulations.

11.2. Audit response to risks identified

As a result of performing the above, we identified the presentation of restructuring costs as a specific adjusting item as a key audit matter related to the potential risk of fraud. The key audit matters section of our report explains the matter in more detail and also describes the specific procedures we performed in response to that key audit matter. In addition to the above, our procedures to respond to risks identified included the following:

- reviewing the financial statement disclosures and testing to supporting documentation to assess compliance with provisions of relevant laws and regulations described as having a direct effect on the financial statements;
- enquiring of management, the audit committee and in-house legal counsel concerning actual and potential litigation and claims;
- performing additional audit procedures where possible risks of fraud or non-compliance were identified from understanding and discussing whistleblowing cases;
- performing analytical procedures to identify any unusual or unexpected relationships that may indicate risks of material misstatement due to fraud;
- reading minutes of meetings of those charged with governance, reviewing internal audit reports and reviewing correspondence with HMRC;
- in addressing the risk of fraud in relation to revenue recognition, we have obtained an understanding of relevant controls in the revenue cycle and tested a sample of sales recognised during the period by agreeing to invoice, dispatch note and cash collection (where appropriate) to assess the performance obligations have been met; and
- in addressing the risk of fraud through management override of controls, testing the appropriateness of journal entries and other adjustments; assessing whether the judgements made in making accounting estimates are indicative of a potential bias; and evaluating the business rationale of any significant transactions that are unusual or outside the normal course of business;

We also communicated relevant identified laws and regulations and potential fraud risks to all engagement team members including internal specialists and significant component audit teams, and remained alert to any indications of fraud or non-compliance with laws and regulations throughout the audit.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

12. OPINIONS 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.

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the strategic report and the directors' report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the strategic report and the directors' report have been prepared in accordance with applicable legal requirements.

In the light of the knowledge and understanding of the Group and the Parent company and their environment obtained in the course of the audit, we have not identified any material misstatements in the strategic report or the directors' report.

13. CORPORATE GOVERNANCE STATEMENT

The Listing Rules require us to review the directors' statement in relation to going concern, longer-term viability and that part of the Corporate Governance Statement relating to the Group's compliance with the provisions of the UK Corporate Governance Code specified for our review.

Based on the work undertaken as part of our audit, we have concluded that each of the following elements of the Corporate Governance Statement is materially consistent with the financial statements and our knowledge obtained during the audit:

- the directors' statement with regards to the appropriateness of adopting the going concern basis of accounting and any material uncertainties identified set out on page 41;
- the directors' explanation as to its assessment of the Group's prospects, the period this assessment covers and why the period is appropriate set out on pages 41 to 42;
- the directors' statement on fair, balanced and understandable set out on page 60;

- the board's confirmation that it has carried out a robust assessment of the emerging and principal risks set out on page 26;
- the section of the annual report that describes the review of effectiveness of risk management and internal control systems set out on pages 26 to 31; and
- the section describing the work of the audit committee is set out on pages 58 to 62.

14. MATTERS ON WHICH WE ARE REQUIRED TO REPORT BY EXCEPTION

14.1. Adequacy of explanations received and accounting records

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- we have not received all the information and explanations we require for our audit; or
- 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 are not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

14.2. Directors' remuneration

Under the Companies Act 2006 we are also required to report if in our opinion certain disclosures of directors' remuneration have not been made or the part of the directors' remuneration report to be audited is not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

15. OTHER MATTERS WHICH WE ARE REQUIRED TO ADDRESS

15.1. Auditor tenure

Following the recommendation of the audit committee, we were appointed in June 2019 to audit the financial statements for the year ending 31 December 2020 and subsequent financial periods. The Board's decision was approved by the shareholders at the AGM in May 2020. The period of total uninterrupted engagement of the firm is one year.

15.2 Consistency of the audit report with the additional report to the audit committee

Our audit opinion is consistent with the additional report to the audit committee we are required to provide in accordance with ISAs (UK).

16. USE OF OUR REPORT

This report is made solely to the company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Jane Makrakis, ACA
(Senior statutory auditor)
For and on behalf of Deloitte LLP
Statutory Auditor
 Reading, United Kingdom

3 March 2021

Financial statements

FINANCIAL STATEMENTS

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Consolidated income statement

FOR THE YEAR ENDED 31 DECEMBER 2020

	Note	31 December 2020			31 December 2019		
		Results before specific adjusting items £m	Specific adjusting items ¹ £m	Total £m	Results before specific adjusting items £m	Specific adjusting items ¹ £m	Total £m
Revenue	3	910.7	–	910.7	1,049.5	–	1,049.5
Operating costs before amortisation of intangible assets	4	(819.0)	(87.4)	(906.4)	(915.3)	–	(915.3)
Profit from operations before amortisation of intangible assets	3	91.7	(87.4)	4.3	134.2	–	134.2
Amortisation of intangible assets	4	(6.1)	–	(6.1)	(8.1)	–	(8.1)
Operating profit/(loss)	3	85.6	(87.4)	(1.8)	126.1	–	126.1
Finance income		0.9	–	0.9	1.9	–	1.9
Finance expense		(12.8)	–	(12.8)	(18.8)	–	(18.8)
Net financing costs	7	(11.9)	–	(11.9)	(16.9)	–	(16.9)
Share of profit of associate (net of income tax)	14	0.6	–	0.6	0.5	–	0.5
Profit/(loss) before taxation		74.3	(87.4)	(13.1)	109.7	–	109.7
Income tax (expense)/credit	8	(20.2)	13.3	(6.9)	(29.9)	–	(29.9)
Profit/(loss) from continuing operations		54.1	(74.1)	(20.0)	79.8	–	79.8
Profit from discontinued operations²	9	–	2.0	2.0	0.7	0.8	1.5
Profit/(loss) for the year		54.1	(72.1)	(18.0)	80.5	0.8	81.3
Profit/(loss) for the year attributable to:							
Shareholders of the Company		48.1	(70.6)	(22.5)	72.3	0.8	73.1
Non-controlling interests		6.0	(1.5)	4.5	8.2	–	8.2
		54.1	(72.1)	(18.0)	80.5	0.8	81.3
Earnings per share	10						
Continuing and discontinued operations							
Basic earnings per share				(7.9)p			25.7p
Diluted earnings per share				(7.9)p			25.5p
Continuing operations							
Basic earnings per share				(8.6)p			25.2p
Diluted earnings per share				(8.6)p			25.0p
Dividends³							
Interim dividend		– pence		2.00p			4.00p
		– £m		5.7			11.4
Proposed final dividend ⁴		– pence		3.50p			–
		– £m		10.0			

1. Details of specific adjusting items are given in note 6 to the consolidated financial statements.

2. Profit from discontinued operations are entirely attributable to the Shareholders of the Company.

3. The proposed final dividend is based upon the number of Ordinary shares outstanding at the balance sheet date.

4. On 31 March 2020, the Group announced the Board's decision to withdraw the proposed 2019 final dividend due to the financial uncertainty resulting from the COVID-19 pandemic.



Consolidated statement of comprehensive income

FOR THE YEAR ENDED 31 DECEMBER 2020

	Note	31 December 2020 £m	31 December 2019 £m
Loss/profit for the period		(18.0)	81.3
Other comprehensive income/(expense):			
Items that will not be reclassified subsequently to profit or loss:			
Remeasurement (loss)/gain on defined benefit plans	23	(33.9)	20.5
Tax effect of components of other comprehensive income not reclassified	8	0.4	2.2
		(33.5)	22.7
Items that may be reclassified subsequently to profit or loss:			
Foreign exchange translation differences		(3.2)	(18.3)
Cash flow hedges:			
Change in fair value		0.4	0.8
Transferred to profit or loss		(0.8)	0.2
		(3.6)	(17.3)
Total other comprehensive (expense)/income		(37.1)	5.4
Total comprehensive (expense)/income		(55.1)	86.7
Attributable to:			
Shareholders of the Company		(59.8)	81.1
Non-controlling interests		4.7	5.6
		(55.1)	86.7
Total comprehensive (expense)/income attributable to shareholders of the Company arising from:			
Continuing operations		(61.8)	79.6
Discontinued operations		2.0	1.5
		(59.8)	81.1

Consolidated balance sheet

AS AT 31 DECEMBER 2020

	Note	2020 £m	2019 restated ^{1,2} £m	2018 restated ^{1,2} £m
Assets				
Property, plant and equipment	11	267.6	317.2	314.5
Right-of-use assets	12	35.5	49.1	–
Intangible assets	13	185.4	204.8	215.6
Investments	14	7.2	6.5	5.9
Other receivables	17	4.0	5.7	6.3
Deferred tax assets	15	14.4	6.0	6.9
Total non-current assets		514.1	589.3	549.2
Inventories	16	122.4	142.3	145.3
Derivative financial assets		1.0	1.5	0.6
Trade and other receivables	17	143.6	181.0	200.5
Current tax receivable		1.6	2.3	1.3
Cash and cash equivalents	18	147.8	132.8	138.5
Total current assets		416.4	459.9	486.2
Total assets		930.5	1,049.2	1,035.4
Liabilities				
Borrowings	21	177.5	176.7	165.3
Lease liabilities	21	43.1	52.6	–
Employee benefits: pensions	23	176.3	156.8	190.4
Provisions	25	8.5	9.2	10.1
Non-trade payables	19	4.9	2.5	2.5
Deferred tax liabilities	15	0.5	4.9	11.0
Total non-current liabilities		410.8	402.7	379.3
Borrowings and bank overdrafts	21	71.3	113.4	153.5
Lease liabilities	21	11.5	11.7	0.2
Trade and other payables	19	148.4	173.3	190.5
Current tax payable		20.4	26.9	26.0
Provisions	25	27.3	8.9	8.6
Derivative financial liabilities		0.8	0.6	0.6
Total current liabilities		279.7	334.8	379.4
Total liabilities		690.5	737.5	758.7
Total net assets		240.0	311.7	276.7
Equity				
Share capital	20	71.3	71.3	71.3
Share premium		111.7	111.7	111.7
Reserves		18.7	22.5	37.2
Retained earnings		0.6	64.7	12.1
Total equity attributable to shareholders of the Company		202.3	270.2	232.3
Non-controlling interests		37.7	41.5	44.4
Total equity		240.0	311.7	276.7

1. Comparative information has been restated to include the Group's cumulative preference shares within borrowings. The cumulative preference shares were previously presented in equity, see note 1 for further details.
2. Cash and cash equivalents and borrowings have been restated to meet the presentational requirements of IAS 32 as further described in note 1. This has had no impact on net assets or net debt*.

The financial statements were approved by the Board of Directors on 3 March 2021 and were signed on its behalf by:

Pete Raby
Chief Executive Officer

Peter Turner
Chief Financial Officer

Consolidated statement of changes in equity

FOR THE YEAR ENDED 31 DECEMBER 2020

	Share capital £m	Share premium £m	Translation reserve £m	Hedging reserve £m	Fair value reserve £m	Capital redemption reserve £m	Other reserves £m	Retained earnings £m	Total parent equity £m	Non-controlling interests £m	Total equity £m
At 1 January 2019 as reported	71.8	111.7	2.1	(0.2)	(1.0)	35.7	0.6	12.1	232.8	44.4	277.2
Impact of change in accounting policy, net of tax, following the adoption of IFRS 16	–	–	–	–	–	–	–	(12.2)	(12.2)	–	(12.2)
Restatement of prior period ¹	(0.5)	–	–	–	–	–	–	–	(0.5)	–	(0.5)
1 January 2019 restated	71.3	111.7	2.1	(0.2)	(1.0)	35.7	0.6	(0.1)	220.1	44.4	264.5
Profit for the year	–	–	–	–	–	–	–	73.1	73.1	8.2	81.3
Other comprehensive income/(expense):											
Remeasurement gain on defined benefit plans and related taxes	–	–	–	–	–	–	–	22.7	22.7	–	22.7
Foreign exchange differences	–	–	(15.7)	–	–	–	–	–	(15.7)	(2.6)	(18.3)
Cash flow hedging fair value changes and transfers	–	–	–	1.0	–	–	–	–	1.0	–	1.0
Total comprehensive (expense)/income	–	–	(15.7)	1.0	–	–	–	95.8	81.1	5.6	86.7
Transactions with owners:											
Dividends	–	–	–	–	–	–	–	(31.3)	(31.3)	(8.5)	(39.8)
Equity settled share-based payments	–	–	–	–	–	–	–	2.8	2.8	–	2.8
Own shares acquired for share incentive schemes (net)	–	–	–	–	–	–	–	(2.5)	(2.5)	–	(2.5)
At 31 December 2019	71.3	111.7	(13.6)	0.8	(1.0)	35.7	0.6	64.7	270.2	41.5	311.7
At 1 January 2020	71.3	111.7	(13.6)	0.8	(1.0)	35.7	0.6	64.7	270.2	41.5	311.7
(Loss)/profit for the year	–	–	–	–	–	–	–	(22.5)	(22.5)	4.5	(18.0)
Other comprehensive income/(expense):											
Remeasurement loss on defined benefit plans and related taxes	–	–	–	–	–	–	–	(33.5)	(33.5)	–	(33.5)
Foreign exchange differences	–	–	(3.4)	–	–	–	–	–	(3.4)	0.2	(3.2)
Cash flow hedging fair value changes and transfers	–	–	–	(0.4)	–	–	–	–	(0.4)	–	(0.4)
Total comprehensive (expense)/income	–	–	(3.4)	(0.4)	–	–	–	(56.0)	(59.8)	4.7	(55.1)
Transactions with owners:											
Dividends	–	–	–	–	–	–	–	(5.7)	(5.7)	(7.9)	(13.6)
Purchase of non-controlling interest	–	–	–	–	–	–	–	(2.2)	(2.2)	(0.6)	(2.8)
Equity settled share-based payments	–	–	–	–	–	–	–	1.2	1.2	–	1.2
Own shares acquired for share incentive schemes (net)	–	–	–	–	–	–	–	(1.4)	(1.4)	–	(1.4)
At 31 December 2020	71.3	111.7	(17.0)	0.4	(1.0)	35.7	0.6	0.6	202.3	37.7	240.0

1. 2019 has been restated to remove the cumulative preference shares previously presented in equity, see note 1 for further details.

Details of the reserves are provided in note 20.

Consolidated statement of cash flows

FOR THE YEAR ENDED 31 DECEMBER 2020

	Note	31 December 2020 £m	31 December 2019 restated ¹ £m
Operating activities			
(Loss)/profit for the year from continuing operations		(20.0)	79.8
Profit for the year from discontinued operations	9	2.0	1.5
Adjustments for:			
Depreciation – property, plant and equipment		32.7	32.3
Depreciation – right-of-use assets		9.2	10.1
Amortisation		6.1	8.1
Net financing costs	7	11.9	16.9
Profit on disposal of business	2,6	(2.2)	(0.7)
Non-cash specific adjusting items included in operating profit	6,9	65.7	–
Share of profit from associate (net of income tax)	14	(0.6)	(0.5)
Profit on sale of property, plant and equipment		(1.0)	(0.7)
Income tax expense	8	6.9	29.9
Equity settled share-based payment expense	4	0.7	2.4
Cash generated from operations before changes in working capital and provisions		111.4	179.1
Decrease/(increase) in trade and other receivables		36.1	9.0
Decrease/(increase) in inventories		18.4	(5.9)
(Decrease)/increase in trade and other payables		(19.7)	(3.1)
Increase/(decrease) in provisions		17.8	(0.5)
Payments to defined benefit pension plans (net of IAS 19 pension charges)	23	(17.9)	(13.4)
Cash generated from operations		146.1	165.2
Interest paid – borrowings and overdrafts		(7.5)	(11.2)
Interest paid – lease liabilities		(2.8)	(3.0)
Income tax paid		(26.0)	(28.8)
Net cash from operating activities		109.8	122.2
Investing activities			
Purchase of property, plant and equipment and software		(30.0)	(56.4)
Purchase of investments		(1.0)	(1.1)
Proceeds from sale of property, plant and equipment		1.4	1.5
Interest received		0.9	1.9
Disposal of subsidiaries, net of cash disposed		5.3	0.7
Net cash from investing activities		(23.4)	(53.4)
Financing activities			
Purchase of own shares for share incentive schemes	20	(1.8)	(3.3)
Proceeds from exercise of share options	20	0.4	0.8
Increase in borrowings	18	7.9	67.1
Reduction and repayment of borrowings	18	(49.8)	(85.2)
Payment of lease liabilities	18	(9.9)	(9.6)
Dividends paid to shareholders of the Company		(5.7)	(31.3)
Dividends paid to non-controlling interests		(7.9)	(8.5)
Purchase of shares from non-controlling interest		(2.8)	–
Net cash from financing activities		(69.6)	(70.0)
Net increase/(decrease) in cash and cash equivalents		16.8	(1.2)
Cash and cash equivalents at start of the year		132.8	138.5
Effect of exchange rate fluctuations on cash held		(1.8)	(4.5)
Cash and cash equivalents at year end	18	147.8	132.8

1. As disclosed in note 1, the Group's cash and cash equivalents have been restated to meet the presentational requirements for offsetting in accordance with IAS 32. Comparative information for the year ended 31 December 2019 has increased from £68.7 million to £132.8 million. This has had no impact on the Group's net assets.

Notes to the consolidated financial statements

I. SIGNIFICANT ACCOUNTING POLICIES, ESTIMATES AND JUDGEMENTS

Morgan Advanced Materials plc (the 'Company') is a company incorporated in the UK under The Companies Act. The address of the registered office is given in 'Shareholder information' on page 172. The principal activities of the Company and its subsidiaries and the nature of the Group's operations are set out in the Strategic Report on pages 2 to 45.

The Group's 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 2020. The Group maintains a 12-month calendar financial year ending on 31 December.

The Group financial statements have been prepared and approved by the Directors in accordance with the requirements of the Companies Act 2006 and International Financial Reporting Standards adopted pursuant to Regulation (EC) no 1606/2002 as it applies in the European Union. 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 150 to 168.

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.

SIGNIFICANT ACCOUNTING POLICIES

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 designated as fair value through other comprehensive income (FVOCI).

Functional and presentation currency

The Group's financial statements are presented in pounds sterling, which is the Company's functional currency.

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. SIGNIFICANT ACCOUNTING POLICIES, ESTIMATES AND JUDGEMENTS *continued*

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. 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 values are 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, expenses and cash flows 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.

Specific adjusting items

In the consolidated income statement the Group presents specific adjusting items separately. In the judgement 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 provide the reader with an alternative understanding of the financial information and an indication of the underlying performance of the Group.

Revenue

Revenue is recognised when or as the Group satisfies a performance obligation by transferring a promised good or service to a customer. The Group's principal performance obligation is the provision of products and components, and is satisfied at a point in time and subject to payment terms typical to the geography in which the business operates. Products and components are transferred when the customer obtains control of the goods. For goods that are collected by the customer, revenue is recognised at the point the customer has taken physical possession of the goods. For contracts that include delivery of goods, the delivery element of the contract constitutes a separate performance obligation because it is distinct. For these contracts, control of the goods does not transfer to the customer until the goods have been delivered and therefore both performance obligations are satisfied simultaneously. Revenue for these contracts is therefore recognised on delivery.

Substantially all of the Group's revenue is derived from short-term contracts for the provision of products and components. A smaller portion of the Group's revenue relates to project-based business, principally within the Thermal Ceramics global business unit. Revenue for these contracts is recognised in line with fulfilment of contractual performance obligations stated in the contract and is not significant; consequently (except for trade receivables) the Group does not have significant assets or liabilities relating to its contracts with customers.

Revenue is only recognised to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognised will not occur. The transaction price is determined as the amount receivable for the provision of products and components excluding rebates, discounts and similar items. Determining the transaction price does not require significant judgement. The costs incurred in obtaining contracts are not material. The Group acts as a principal in its transactions with customers. In 2020, there were no material adjustments to revenue which related to performance obligations satisfied in the previous year.

IFRS 15 Revenue from Contracts with Customers requires revenue to be disaggregated into categories that depict how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors. The Group discloses revenue disaggregated by geography, end market and by global business unit, which are aligned by product type, in note 3 to the consolidated financial statements.

Research and development

The Group's research and development expenditure is widely dispersed with no individually material projects. It is often some time into a project before the Group is able to test technical or commercial feasibility and therefore whether the Group will continue to fund any individual project, as such materially all of the Group's expenditure is recognised in the income statement as an expense as incurred.

Development activities are capitalised when research findings are applied to a plan or design for the production of new or substantially improved products and processes and that relate to a product or process that is technically and commercially feasible and the Group has sufficient resources to complete development, use and sale of products or processes. Capitalised development expenditure is stated at cost less accumulated amortisation and impairment losses.

Finance income and expense

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, interest on IFRS 16 lease liabilities, net interest on IAS 19 pension assets and 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.

Notes to the consolidated financial statements

I. SIGNIFICANT ACCOUNTING POLICIES, ESTIMATES AND JUDGEMENTS *continued*

Taxation

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 equity or other comprehensive income, in which case it is recognised in equity or other comprehensive income.

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.

Discontinued operations

Where the Group has disposed of or has classified as held-for-sale a business component which represents a separate major line of business or geographical area of operations, it classifies such operations as discontinued. The post tax profit or loss of the discontinued operations is shown as a single line on the face of the consolidated income statement, separate from the results of the rest of the Group.

Hedge accounting

The Group designates certain derivatives as hedging instruments in respect of foreign currency risk and interest rate risk in cash flow hedges. Hedges of foreign exchange risk on firm commitments are accounted for as cash flow hedges. At the inception of the hedge relationship, the Group documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking various hedge transactions. Furthermore, at the inception of the hedge and on an ongoing basis, the Group documents whether the hedging instrument is effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk, which is when the hedging relationships meet all of the following hedge effectiveness requirements:

- there is an economic relationship between the hedged item and the hedging instrument;
- the effect of credit risk does not dominate the value changes that result from that economic relationship; and
- the hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Group actually hedges and the quantity of the hedging instrument that the Group actually uses to hedge that quantity of hedged item.

If a hedging relationship ceases to meet the hedge effectiveness requirement relating to the hedge ratio but the risk management objective for that designated hedging relationship remains the same, the Group adjusts the hedge ratio of the hedging relationship (i.e. rebalances the hedge) so that it meets the qualifying criteria again. The Group designates the full change in the fair value of a forward contract (i.e. including the forward elements) as the hedging instrument for all of its hedging relationships involving forward contracts.

Note 22 sets out details of the fair values of the derivative instruments used for hedging purposes.

Movements in the hedging reserve in equity are detailed in note 20.

Fair value hedges

The fair value change on qualifying hedging instruments is recognised in profit or loss.

Where hedging gains or losses are recognised in profit or loss, they are recognised in the same line as the hedged item.

Cash flow hedges

The effective portion of changes in the fair value of derivatives and other qualifying hedging instruments that are designated and qualify as cash flow hedges is recognised in other comprehensive income and accumulated under the heading of hedging reserve, limited to the cumulative change in fair value of the hedged item from inception of the hedge. The gain or loss relating to the ineffective portion is recognised immediately in profit or loss.

Amounts previously recognised in other comprehensive income and accumulated in equity are reclassified to profit or loss in the periods when the hedged item affects profit or loss, in the same line as the recognised hedged item. However, when the hedged forecast transaction results in the recognition of a non-financial asset or a non-financial liability, the gains and losses previously recognised in other comprehensive income and accumulated in equity are removed from equity and included in the initial measurement of the cost of the non-financial asset or non-financial liability. This transfer does not affect other comprehensive income. Furthermore, if the Group expects that some or all of the loss accumulated in the hedging reserve will not be recovered in the future, that amount is immediately reclassified to profit or loss.

The Group discontinues hedge accounting only when the hedging relationship (or a part thereof) ceases to meet the qualifying criteria (after rebalancing, if applicable). This includes instances when the hedging instrument expires or is sold, terminated or exercised. The discontinuation is accounted for prospectively. Any gain or loss recognised in other comprehensive income and accumulated in cash flow hedge reserve at that time remains in equity and is reclassified to profit or loss when the forecast transaction occurs. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in the cash flow hedge reserve is reclassified immediately to profit or loss.

I. SIGNIFICANT ACCOUNTING POLICIES, ESTIMATES AND JUDGEMENTS *continued*

Property, plant and equipment

(i) Owned assets

Items of property, plant and equipment are stated at 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, plant and equipment are recognised in 'Operating costs before amortisation of intangible assets' in the income statement.

(ii) Depreciation of owned assets

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:

Buildings	50 years
Plant, equipment and fixtures	3-20 years

Leasing

The Group assesses whether a contract is or contains a lease, at inception of the contract. The Group recognises a right-of-use asset and a corresponding lease liability with respect to all lease arrangements in which it is the lessee, except for short-term leases (defined as leases with a lease term of 12 months or less) and leases of low value assets (defined as leases of a value of less than USD 5,000 at lease commencement). For these leases, the Group recognises the lease payments as an operating expense on a straight-line basis over the term of the lease.

(i) Lease liabilities

The lease liability is initially measured at the present value of future lease payments, discounted by using the rate implicit in the lease or, where the rate cannot be readily determined, an incremental borrowing rate. The lease payments included in the lease liability comprise fixed lease payments, variable payments that depend on an index or rate and any payments due under lease extension, termination or purchase options to the extent they are assessed as reasonably certain.

The lease liability is subsequently measured by using the effective interest method and by reducing the carrying amount to reflect the lease payments made.

The Group remeasures the lease liability (and makes a corresponding adjustment to the related right-of-use asset) whenever there is a lease modification, a change in lease term or there is a significant event or change in circumstances resulting in a change in the assessment of exercise of other lease variables, such as purchase options. A remeasurement will also occur when the lease payments change due to changes in index rates.

(ii) Right-of-use assets

The right-of-use assets comprise the initial measurement of the corresponding lease liability, lease payments made at or before the commencement date, less any lease incentives received and initial direct costs. They are subsequently measured at cost less accumulated depreciation and impairment losses.

Whenever the Group incurs an obligation for costs to dismantle and remove a leased asset, restore the site on which it is located or restore the underlying asset to the condition required by the terms and conditions of the lease, a provision is recognised and measured under IAS 37. To the extent that the costs relate to a right-of-use asset, the costs are included in the related right-of-use asset, unless those costs are incurred to produce inventories.

(iii) Depreciation of right-of-use assets

Right-of-use assets are depreciated over the shorter period of lease term and useful life of the underlying asset. The depreciation starts at the commencement date of the lease.

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 not amortised. Goodwill is allocated to cash-generating units and is tested at least annually for impairment. If the recoverable amount of the cash-generating unit is less than the carrying amount of the unit, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to reduce the carrying amount of the other intangibles and other assets of the unit pro-rata on the basis. An impairment loss recognised for goodwill is not reversed in a subsequent period.

Notes to the consolidated financial statements

I. SIGNIFICANT ACCOUNTING POLICIES, ESTIMATES AND JUDGEMENTS *continued*

Other intangible assets

Other intangible assets that are acquired by the Group are stated at cost less accumulated amortisation (see below) and impairment losses.

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 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:

Capitalised development costs	3 years
Computer software	3-10 years
Customer relationships	15-20 years
Technology and trademarks	15-20 years

Impairment of non-financial assets, excluding goodwill

The carrying amounts of the Group's 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.

The recoverable amount of other assets is the greater of their value in use and fair value less costs to sell. 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. An impairment loss is recognised immediately in profit or loss.

An impairment loss is reversed if the subsequent increase in recoverable amount can be related objectively to an event occurring after the impairment loss was recognised. A reversal of an impairment loss is recognised immediately in profit or loss 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.

Investments in equity securities

Investments in equity securities held by the Group are classified as FVOCI and are stated at fair value, with any resultant gain or loss being recognised directly in other comprehensive income (in the fair value reserve), except for impairment losses. The gains or losses arising from changes in fair value are recognised in other comprehensive income until the security is disposed of, at which time the cumulative gain or loss previously recognised in other comprehensive income and accumulated in the FVOCI reserve is transferred to retained earnings.

Inventories

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.

Trade and other receivables

Trade receivables are recorded initially at transaction price and subsequently measured at amortised cost less the loss allowance. The loss allowance is recognised based on management's expectation of losses without regard to whether an impairment trigger happened or not (an 'expected credit loss' model). The Group measures the loss allowance for trade receivables at an amount equal to lifetime ECL, estimated based on historical write-offs and adjusted for forward-looking information where appropriate. Trade receivables more than 180 days past due are generally considered not recoverable and a 100% loss allowance is recognised, except where historical experience with certain customers or geographies indicates otherwise. The loss is recognised in the income statement. Trade receivables are written off when recoverability is assessed as being remote. Subsequent recoveries of amounts previously written off are credited to the income statement.

Cash and cash equivalents

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 borrowings for the purpose of the Group statement of cash flows.

Trade and other payables

Trade and other payables are recognised initially at transaction price. Subsequent to initial recognition they are measured at amortised cost using the effective interest method.

I. SIGNIFICANT ACCOUNTING POLICIES, ESTIMATES AND JUDGEMENTS *continued*

Borrowings

Borrowings are recognised initially at fair value less attributable transaction costs. Subsequent to initial recognition, 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.

Financial instruments issued by the Group

Financial instruments issued by the Group are treated as equity (i.e. 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.

Pensions and other long-term service benefits

(i) Defined contribution plans

For defined contribution plans, the Group pays contributions to either publicly or privately administered pension 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 define 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 other comprehensive income 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.

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.

Notes to the consolidated financial statements

I. SIGNIFICANT ACCOUNTING POLICIES, ESTIMATES AND JUDGEMENTS *continued*

Provisions, contingent liabilities and contingent assets

A provision is recognised in the consolidated balance sheet when the Group has a present legal or constructive obligation as a result of a past event and there is probable outflow of resources which can be reliably measured and will be required to settle the obligation. Provisions are recognised at an amount equal to the best estimate of the expenditure required to settle the Group's liability. If the effect is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate reflective of the current market assessments of the time value of money and, where appropriate, the risks specific to the liability.

A contingent liability is disclosed, where significant, if the existence of the obligation will only be confirmed by future events or where the amount of the obligation cannot be measured with reasonable reliability. A contingent liability is not disclosed if the likelihood of a material outflow in excess of any amounts provided is considered remote. Obligations arising from restructuring plans are recognised when detailed formal plans have been established and when there is a valid expectation that such a plan will be carried out. The Group's contingent liabilities are reviewed on a regular basis.

A contingent asset is not recognised but is disclosed, where significant, if an inflow of economic benefit is probable.

Preference share capital

Preference share capital is classified as a financial liability within borrowings if redeemable and dividends are not discretionary. Dividends on preference share capital are classified as finance charges within the consolidated income statement.

Share capital

Ordinary shares are classified as equity.

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 Morgan General Employee Benefit Trust (the Trust) are presented as a deduction from total equity.

Dividends

Dividends payable are recognised as a liability in the Company's financial statements in the period in which the dividends are declared and approved. Dividends declared after the balance sheet date are not recognised as there is no present obligation at that the balance sheet date.

USE OF JUDGEMENTS AND ESTIMATES

In preparing these consolidated financial statements, management has made judgements, estimates and assumptions that affect the application of the Group's accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates. Estimates and underlying assumptions are reviewed on an ongoing basis.

Judgements

Information about judgements made in applying accounting policies that have the most significant effects on the amounts recognised in the consolidated financial statements is included in the following notes:

Note 6: Specific adjusting items

The Group separately presents specific adjusting items in the consolidated income statement which, in the Directors' judgement, need to be disclosed separately by virtue of their size and incidence in order for users of the consolidated financial statements to obtain an alternative understanding of the financial information and the underlying performance of the business. These are items which occur infrequently and include (but are not limited to):

- Individual restructuring projects which are material or relate to the closure of a part of the business and are not expected to recur.
- Gains or losses on disposal or exit of businesses.
- Significant costs incurred as part of the integration of an acquired business.
- Gains or losses arising on significant changes to or closures of defined benefit pension plans.

Determining whether an item is part of specific adjusting items requires judgement to determine the nature and the intention of the transaction.

Note 15: Recognition of deferred tax assets

Deferred tax assets are recognised when management judges it probable that future taxable profits will be available against which the temporary differences can be utilised. This relies on the use of estimates of future taxable profits which may differ from the actual results delivered. In the event future taxable profits do not materialise this would lead to a write-off of recognised deferred tax assets.

Note 25: Provisions and contingent liabilities

Due to the nature of its operations, the Group holds provisions for its environmental obligations. Judgement is needed in determining whether a contingent liability has crystallised into a provision. Management assesses whether there is sufficient information to determine that an environmental liability exists and whether it is possible to estimate with sufficient reliability what the cost of remediation is likely to be. For environmental remediation matters, this tends to be at the point in time when a remediation feasibility study has been completed, or sufficient information becomes available through the study to estimate the costs of remediation.

The Group will recognise a legal provision at the point when the outcome of a legal matter can be reliably estimated. Estimates are based on past experience of similar issues, professional advice received and the Group's assessment of the most likely outcome. The timing of the utilisation of these provisions is frequently uncertain, reflecting the complexity of issues and the outcome of various court proceedings and associated negotiations.

I. SIGNIFICANT ACCOUNTING POLICIES, ESTIMATES AND JUDGEMENTS *continued*

Assumptions and estimates

The key assumptions concerning the future, and other key sources of estimation uncertainty at the reporting period that may have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are included in the below notes:

Note 23: Pensions and other post-retirement employee benefits: key actuarial assumptions

The principal actuarial assumptions applied to pensions are shown in note 23, 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.

In 2018, based on the results of a High Court hearing, the Group recognised a liability in relation to Guaranteed Minimum Pensions (GMPs), an initiative to remove inequalities in scheme benefits that arise from Guaranteed Minimum Pensions being unequal between men and women. As a result of a further judgement in November 2020 relating to the need to equalise historical transfer payments, a further charge of £0.1 million has been included in these accounts, refer also to note 23. Legal uncertainty remains in this area in relation to how equalisation will be practically implemented.

Note 25: Environmental provisions and contingent liabilities

Provisions for environmental costs and settlement of litigation are estimated based on current legal and constructive requirements. Actual costs and cash outflows can differ from current estimates because of changes in laws and regulations, public expectations, prices, more detailed analysis of site conditions and innovations in clean-up technology.

Amounts provided are the Group's best estimate of exposure based on currently available information.

Note 6: Impairment of non-financial assets (excluding goodwill)

In addition to the impairment assessment of goodwill, described below, management also monitor the performance of individual assets and where indicators of impairment exist, perform an impairment review on those assets.

This process relies on the use of estimates of the future profitability and cash flows which may differ from the actual results delivered. Due to the current COVID-19 global pandemic, there is an increased level of risk and therefore a key source of estimation uncertainty in these assumptions. It is reasonably possible that a change in these assumptions could lead to a material reversal of impairment, for ceramic cores within Technical Ceramics and Porextherm within Thermal Ceramics, in the next financial year. See note 6 for a sensitivity analysis for these in respect to the recoverable amount of these assets.

Other assumptions and estimates which have a lower risk of resulting in a material adjustment to the carrying amounts of assets and liabilities within the next 12 months include:

Notes 8 and 15: 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 judgements 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.

The Group periodically assesses its liabilities and contingencies for all tax years open to audit based on the latest information available. The Group records its best estimate of these tax liabilities, including related interest charges. Whilst management believes it has adequately provided for the probable outcome of these matters, future results may include adjustments to these estimated tax liabilities and the final outcome of tax examinations may result in a materially different outcome than that assumed in the tax liabilities. Provisions are made against individual exposures taking into account the specific circumstances of each case, including the strengths of technical arguments, past experience with tax authorities, recent case law or rulings on similar issues and external advice received.

Note 13: Impairment of goodwill

The Group tests whether goodwill have suffered any impairment at least annually. 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. Note 13 contains information about the assumptions relating to goodwill impairment tests, including a sensitivity analysis.

Note 22: Credit risk

Note 22 contains information about the Group's exposure to credit risk, including a sensitivity analysis. The Group establishes a loss allowance for its estimate of expected credit losses against receivables.



Notes to the consolidated financial statements

I. SIGNIFICANT ACCOUNTING POLICIES, ESTIMATES AND JUDGEMENTS *continued*

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 2 to 45. The financial position of the Group, its cash flows, liquidity position and borrowing facilities, are described earlier in this Financial Review. In addition, note 22 to the consolidated financial statements, includes the Group's policies and processes for managing financial risk, details of its financial instruments and hedging activities and details of 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, which matures in September 2024. As at 31 December 2020 the Group had significant headroom on its covenants and available liquidity with the Group's undrawn £200 million multi-currency revolving credit facility and net cash and cash equivalents* of £75.8 million. The Group applied for the UK Government's 'COVID Corporate Financing Facility' (CCFF) with an issuer limit of £300 million, which was confirmed as successful in June 2020. As a result of available liquidity and cash preservation measures taken the facility remained undrawn through the period. During 2020 the Group announced a restructuring and efficiency programme to reduce costs by a targeted £23 million per annum by 2022, with an anticipated cash cost of £30 million to deliver these savings. This has been implemented in 2020 and is expected to complete through 2021. No further restructuring activities have therefore been modelled into the sensitivity analysis performed. The Group's forecasts and projections, taking account of reasonably possible changes in trading performance, exchange rates and plausible downside scenarios as a result of COVID-19 and its impact on the global economy, show the Group operating within its debt financial covenants for the next 18 months.

The Board has also reviewed the Group's reverse stress testing performed to demonstrate how much headroom is available on covenant levels in respect of changes in net debt*, EBITDA* and underlying revenue. Based on this assessment, a combined reduction in EBITDA* of 40% and an increase in net debt* of 80% would still allow the Group to operate within its financial covenants. The Board has reviewed this with management and is satisfied that this is appropriate and is supporting the Group as a Going Concern.

The current economic climate continues to have an impact on the Group, its customers and its suppliers. Due to the Group's broad-end market base, as a result of the COVID-19, it is anticipated that some markets will continue to see reduced activity but others will continue to grow. The UK's exit from the EU may have an impact on the Group if tariffs are subsequently introduced or border controls negatively impact either the profitability of the Group's products or the ability to manufacture or distribute products on a timely basis. However, given the current value of the Group's UK exports to the EU (ca. £24 million) and imports into the UK from the EU (ca. £17 million), it is not considered that this will have a significant impact on the Group's overall liquidity or operations.

The Board and Executive Committee have regular reporting and review processes in place in order to monitor the ongoing operational and financial performance of the Group closely. These processes include the ongoing review of the impact of COVID-19 on the Group and its stakeholders.

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 this Annual Report and Accounts. Accordingly, they continue to adopt the going concern basis in preparing the Annual Report and Accounts.

NON-GAAP MEASURES

Where non-GAAP measures have been referenced these have been identified by an asterisk (*) where they appear in text, and by a footnote where they appear in tables in this Report. Further details can be found on pages 43 to 45, 'Alternative Performance Measures'.

NEWLY ADOPTED STANDARDS

There were no new standards applicable to the Group in the year.

ACCOUNTING DEVELOPMENTS AND CHANGES

New accounting standards in issue but not yet effective

New standards and interpretations that are in issue but not yet effective are listed below:

- Amendments to IFRS 9, IAS 39 and IFRS 7 – interest rate benchmark reform – phase 2
- Amendments to IFRS 16 – COVID-19 related rent concessions
- Amendments to IAS 1 – classification of liabilities as current or non-current and disclosure of accounting policies
- Amendments to IAS 8 – definition of accounting estimates
- Amendments to IAS 16 – property, plant and equipment – proceeds before intended use
- 2018-2020 annual improvements cycle

The adoption of the above standards and interpretations is not expected to lead to any material changes to the Group's accounting policies or have any other material impact on the financial position or performance of the Group.

There are no other upcoming accounting standards or amendments that are applicable to the Group.



I. SIGNIFICANT ACCOUNTING POLICIES, ESTIMATES AND JUDGEMENTS *continued*

PRIOR PERIOD RESTATEMENT

Cash pooling arrangements

Within the period, it was determined that the Company's cash and overdrafts within notional cash pooling arrangements did not meet the requirements for offsetting in accordance with IAS 32 Financial Instruments: Presentation. For presentational purposes, amounts have therefore been restated for the preceding period ended 31 December 2019 and the beginning of the preceding period being 1 January 2019 in accordance with IAS 8 Accounting Policies, Change in Accounting Policies and Errors. The impact of this change for the period ended 31 December 2019 is to increase both cash and cash equivalents and overdrafts within current loans and other borrowings by £64.1 million (2018: £70.9 million).

This has had no impact on net assets as seen on the face of the Consolidated balance sheet.

Preference shares

Within the period, the Group financial statements have also been restated to reclassify the Group's cumulative preference shares (which were previously classified as equity) to borrowings. Following a review of the substance of the shares it was determined that the cumulative preference shares do not contain an equity element. The impact of this change for the period ended 31 December 2019 is an increase in non-current borrowings and a decrease in share capital of £0.4 million (2018: £0.4 million), this change decreased net assets by the same amount.

There was no impact to the consolidated income statement as the dividends, previously classified as distributions from equity that have been reclassified to finance charges within the consolidated income statement totalled less than £0.1 million.

2. DISPOSALS

2020

Diamonex, Technical Ceramics

On 31 August 2020, the Group completed the sale of its Diamonex business, based in Allentown, US. The transaction was structured as a sale of the business and related assets for total consideration of up to £6.5 million. The consideration comprises £5.6 million paid in cash on completion, £0.3 million of deferred consideration due in 2021 and up to £0.5 million of consideration contingent on the future performance of the disposed business which, if earned, would also be payable in 2021.

In 2020, Diamonex generated an operating profit of £0.5 million on revenues of £4.3 million in the period prior to their disposal (year ended 31 December 2019: £0.5 million on revenues of £6.4 million).

The disposal of the Diamonex business reduced the Group's assets and liabilities as follows:

	31 December 2020 £m
Trading net assets of disposal group	2.2
Goodwill of disposal group	0.9
Cumulative foreign exchange gains and losses recycled on disposal	0.3
Total net assets	3.4
Consideration	5.9
Transaction costs associated with the disposal	(0.3)
Gain on disposal	2.2

The disposal group was included in the Technical Ceramics operating segment.

2019

There were no business disposals in the year ended 31 December 2019.

Notes to the consolidated financial statements

3. SEGMENT REPORTING

The Group reports as two divisions and five (2019: five) global business units, which have been identified as the Group's reportable operating segments, as detailed on pages 8, 32 to 37. 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, borrowings and related expenses, corporate assets and head office expenses, and income tax assets and liabilities.

The information presented below represents the operating segments of the Group.

	Thermal Ceramics		Molten Metal Systems		Thermal Products division		Electrical Carbon		Seals and Bearings	
	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m
Continuing operations										
Revenue from external customers	344.3	418.4	41.2	49.1	385.5	467.5	151.4	164.2	146.4	144.3
Segment adjusted operating profit¹	26.7	52.2	3.2	5.9	29.9	58.1	23.6	21.9	27.5	26.4
Corporate costs										
Group adjusted operating profit/(loss)¹										
Amortisation of intangible assets	(1.9)	(2.2)	(0.3)	(0.3)	(2.2)	(2.5)	(0.7)	(0.7)	(0.4)	(0.4)
Operating profit/(loss) before specific adjusting items	24.8	50.0	2.9	5.6	27.7	55.6	22.9	21.2	27.1	26.0
Specific adjusting items included in operating profit ²	(39.4)	–	(0.9)	–	(40.3)	–	(3.7)	–	(0.6)	–
Operating profit/(loss)	(14.6)	50.0	2.0	5.6	(12.6)	55.6	19.2	21.2	26.5	26.0
Finance income										
Finance expense										
Share of profit of associate (net of income tax)										
Profit/(loss) before taxation										
Segment assets	315.7	387.5	39.5	42.8	355.2	430.3	141.5	154.8	98.7	101.9
Segment liabilities (2019: restated ³)	84.8	96.4	7.4	9.4	92.2	105.8	31.1	32.2	19.9	22.5
Segment capital expenditure	7.2	12.1	2.9	4.2	10.1	16.3	4.8	8.4	7.7	10.1
Segment depreciation – property, plant and equipment	12.5	13.6	2.3	1.8	14.8	15.4	5.4	5.2	5.7	5.0
Segment depreciation – right-of-use assets	4.1	4.3	0.4	0.4	4.5	4.7	1.2	1.2	0.7	0.7

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 170, reconciliations of the statutory results to the adjusted measures can be found on pages 43 to 45.

2. Details of specific adjusting items are given in note 6 to the consolidated financial statements.

3. 2019 segment liabilities have been restated to include the Group's cumulative preference shares within borrowings, see note 1 for further details.

3. SEGMENT REPORTING *continued*

	Technical Ceramics		Carbon and Technical Ceramics division		Segment totals		Corporate costs		Group	
	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m
Continuing operations										
Revenue from external customers	227.4	273.5	525.2	582.0	910.7	1,049.5	–	–	910.7	1,049.5
Segment adjusted operating profit¹	14.8	33.7	65.9	82.0	95.8	140.1			95.8	140.1
Corporate costs							(4.1)	(5.9)	(4.1)	(5.9)
Group adjusted operating profit/(loss)¹									91.7	134.2
Amortisation of intangible assets	(2.8)	(4.5)	(3.9)	(5.6)	(6.1)	(8.1)	–	–	(6.1)	(8.1)
Operating profit/(loss) before specific adjusting items	12.0	29.2	62.0	76.4	89.7	132.0	(4.1)	(5.9)	85.6	126.1
Specific adjusting items included in operating profit ²	(42.3)	–	(46.6)	–	(86.9)	–	(0.5)	–	(87.4)	–
Operating profit/(loss)	(30.3)	29.2	15.4	76.4	2.8	132.0	(4.6)	(5.9)	(1.8)	126.1
Finance income									0.9	1.9
Finance expense									(12.8)	(18.8)
Share of profit of associate (net of income tax)									0.6	0.5
Profit/(loss) before taxation									(13.1)	109.7
Segment assets (2019: restated ³)	158.3	209.6	398.5	466.3	753.7	896.6	176.8	152.6	930.5	1,049.2
Segment liabilities (2019: restated ^{3,4})	72.6	78.0	123.6	132.7	215.8	238.5	474.7	499.0	690.5	737.5
Segment capital expenditure	7.4	21.6	19.9	40.1	30.0	56.4	–	–	30.0	56.4
Segment depreciation – property, plant and equipment	6.8	6.7	17.9	16.9	32.7	32.3	–	–	32.7	32.3
Segment depreciation – right-of-use assets	2.8	3.4	4.7	5.3	9.2	10.0	–	0.1	9.2	10.1

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 170, reconciliations of the statutory results to the adjusted measures can be found on pages 43 to 45.

2. Details of specific adjusting items are given in note 6 to the consolidated financial statements.

3. Cash and cash equivalents (within segment assets) and borrowings (within segment liabilities) have been restated to meet the presentational requirements of IAS 32 as further described in note 1. This has had no impact on net assets.

4. 2019 segment liabilities have been restated to include the Group's cumulative preference shares within borrowings, see note 1 for further details.

Notes to the consolidated financial statements

3. SEGMENT REPORTING *continued*

REVENUE FROM EXTERNAL CUSTOMERS AND NON-CURRENT ASSETS BY GEOGRAPHY

	Revenue from external customers		Non-current assets (excluding tax and financial instruments)	
	2020 £m	2019 £m	2020 £m	2019 £m
Continuing operations				
US	359.8	420.0	182.3	226.8
China	97.1	101.3	40.9	60.1
Germany	59.3	68.9	36.1	46.9
UK (the Group's country of domicile)	37.5	44.5	120.0	120.8
France	21.4	29.8	15.2	17.6
Other Asia, Australasia, Middle East and Africa	164.6	195.7	71.2	71.6
Other Europe	120.9	128.2	25.1	26.0
Other North America	32.9	33.6	6.2	9.4
South America	17.2	27.5	2.7	4.1
	910.7	1,049.5	499.7	583.3

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 more than 10% of revenue.

REVENUE FROM EXTERNAL CUSTOMERS BY END MARKET

	2020 £m	2019 ¹ £m
Continuing operations		
Industrial	390.9	469.8
Transportation	157.0	218.2
Chemical and petrochemical	103.7	106.0
Semiconductor and electronics	57.8	62.7
Energy	50.5	57.4
Security and defence	90.1	78.1
Healthcare	60.7	57.3
	910.7	1,049.5

1. Revenue from external customers by end market for the year ended 31 December 2019 has been re-presented to better reflect the end-markets of our customers.

INTERCOMPANY SALES TO OTHER SEGMENTS

	Thermal Ceramics		Molten Metal Systems		Thermal Products division		Electrical Carbon		Seals and Bearings		Technical Ceramics		Carbon and Technical Ceramics division	
	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m
Intercompany sales to other segments	0.9	1.0	0.1	0.1	1.0	1.1	0.3	0.3	0.8	1.2	1.0	0.4	2.1	1.9

4. OPERATING COSTS BEFORE SPECIFIC ADJUSTING ITEMS

Continuing operations	Note	2020 £m	2019 £m
Change in stocks of finished goods and work in progress		9.0	0.8
Raw materials and consumables		236.2	265.4
Other external charges		127.0	129.5
		372.2	395.7
Employee costs:			
Wages and salaries		264.2	292.2
Equity-settled share-based payments expense	24	0.7	2.4
Social security costs and other benefits		54.2	56.3
Pension costs	23	15.4	15.1
		334.5	366.0
Depreciation – property, plant and equipment	11	32.7	32.3
Depreciation – right-of-use assets	12	9.2	10.1
		41.9	42.4
Short-term leases and leasing of low value assets:			
Plant and equipment		0.1	0.2
Other leases		0.4	0.6
		0.5	0.8
Other operating charges and income:			
Net foreign exchange (gains)/losses		(0.1)	(0.1)
Net other operating charges		70.0	110.5
		69.9	110.4
Total operating costs before specific adjusting items and amortisation of intangible assets		819.0	915.3
Amortisation of intangible assets	13	6.1	8.1
Total operating costs before specific adjusting items		825.1	923.4

The following costs are included in total operating costs before specific adjusting items in the table above:

1. Research and development

The Group recognised £28.0 million in expense in respect of research and development (2019: £34.0 million). These costs are included in employee costs and other operating charges in the above table. There are no individually material project costs.

2. Employee costs

Due to the impact of the pandemic on business results, Morgan, like many companies, has needed to review, and in many cases make changes to, remuneration plans alongside other actions to control costs and cash flow. A key priority has been to balance the impact on remuneration equitably across the executives, wider employee population and other stakeholders. Furloughs were used (with UK government job retention scheme funding having been reimbursed). In addition a global restructuring programme was also implemented. In the light of the impact of the pandemic on employees and shareholders, the Board agreed that their own salaries should be reduced by 30% from 1 April to 31 December as well as other measures outlined in the Remuneration Report on page 81.

3. Audit and non-audit fees

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 2020 is set out below. Fees set out in 2020 relate to Deloitte LLP following their appointment in May 2020, fees in the comparative period relate to the Group's previous auditor.

	2020 £m	2019 £m
Fees payable to the Company's auditor for the audit of the Company's annual accounts	0.7	0.6
Fees payable to the Company's auditor and its associates for other services:		
the auditing of accounts of any subsidiaries of the Company	1.9	1.6
audit-related services	0.1	0.1
taxation compliance services	–	0.1
other non-audit services	–	–
	2.7	2.4

Notes to the consolidated financial statements

5. STAFF NUMBERS

The average number of persons employed by the Group (including Directors) during the year, analysed by reporting segment, was as follows:

	Number of employees	
	2020	2019
Reportable operating segments		
Thermal Ceramics	2,540	2,680
Molten Metal Systems	430	480
Thermal Products division	2,970	3,160
Electrical Carbon	1,450	1,560
Seals and Bearings	1,270	1,290
Technical Ceramics	2,270	2,560
Carbon and Technical Ceramics division	4,990	5,410
Segment total	7,960	8,570
Corporate (UK and North America)	50	50
Continuing operations	8,010	8,620
Discontinued operations	–	–
Group	8,010	8,620

Average employee numbers have been rounded to the nearest 10.

6. SPECIFIC ADJUSTING ITEMS

		31 December 2020	31 December 2019
	Note	£m	£m
Continuing operations			
Specific adjusting items:			
Impairment of assets		(65.6)	–
Restructuring costs		(24.0)	–
Profit on disposal of business	2	2.2	–
Business closure and exit costs		–	(0.7)
Release of provisions related to business exits and disposals		–	0.7
Total specific adjusting items before income tax		(87.4)	–
Income tax credit from specific adjusting items		13.3	–
Total specific adjusting items after income tax		(74.1)	–

Specific adjusting items in relation to discontinued operations are disclosed in note 9.

2020

Impairment of assets

Technical Ceramics, ceramic cores

A significant downturn in aerospace demand has resulted in impairment losses of £28.8 million in the ceramic cores business. The assets relating to these businesses have been impaired to align their recoverable value to their value in use. The calculation of value in use, which was performed in June 2020, assumed trends seen in the second quarter of 2020 persisted into the second half of 2020, followed by a gradual recovery of demand. A long-term growth rate of 1% was used for years beyond 2025 and in calculating the terminal value. A pre-tax discount rate of 11.5% was used to determine the value in use. The impairment was allocated to customer relationship intangible assets recognised upon the acquisition of the Carpenter business in 2008, right-of-use assets and property, plant and equipment.

A reasonably possible change in the above assumptions could lead to a material reversal of impairment. An accelerated recovery of demand, with return to 2019 demand levels in the forecast period to 2025, would lead to a full reversal of the above impairment. There is no scenario that would lead to a further, material impairment of the existing assets.

6. SPECIFIC ADJUSTING ITEMS *continued*

Technical Ceramics, China

On 15 June 2020 the Group announced the closure of its Suzhou manufacturing facility in China and has recognised £1.1 million relating to the impairment of plant and equipment to its fair value less costs of disposal.

Thermal Ceramics

The continuing reduced demand in the aerospace, automotive and industrial market segments has resulted in impairment losses of £35.7 million in Thermal Ceramics.

Impairments relating to the closure of sites and under-utilised product lines, totalled £21.7 million relating to property, plant and equipment, land use rights, right-of-use assets, other debtors and inventory, aligning their recoverable value to their fair value less costs of disposal.

Two further businesses, which remain in operation, have recognised combined impairment losses of £14.0 million after reassessment of their value in use in the current economic climate. The calculation of value in use, which was performed in June 2020, assumed trends seen in the second quarter of 2020 persisted into the second half of 2020, followed by a gradual recovery of demand. A long-term growth rate of 1% was used for years beyond the forecast period and in calculating the terminal value. A pre-tax discount rate of 11.6% was used to determine the value in use. The impairment was allocated to customer relationship and technology and trademark intangible assets recognised upon the acquisition of Porextherm in Germany in 2014 as well as right-of-use assets and property, plant and equipment across both businesses.

A reasonably possible change in the above assumptions on the Porextherm impairment assessment could lead to a material reversal of impairment. An accelerated recovery of demand in the forecast period to levels which existed before the decline, which started in 2018, would lead to a full reversal of the above impairment. There is no scenario that would lead to a further, material impairment of the existing assets.

Restructuring costs

Following the announcement of the Group's restructuring programme on 5 June 2020 the Group has recognised £24.0 million relating to staff redundancies, site closure costs, legal and professional fees and the exit of certain multi-employer defined contribution pension plans.

US Electro-ceramics update

In 2017, the Group divested its UK Electro-ceramics business, which was part of the Technical Ceramics operating segment. At the same time it announced the closure of its US Electro-ceramics business, which formed the remainder of the Group's Electro-ceramics business, once the delivery of the last time orders from customers had been completed. In 2020, the US Electro-ceramics business generated an operating profit contribution of £2.8 million on revenues of £4.6 million.

2019

Business closure and exit costs

China, Technical Ceramics

In 2019, the Group completed the exit of the ceramic cores operations within China, Technical Ceramics initiated in 2018. The Group recognised £0.7 million of costs relating to staff redundancies and legal and professional fees.

Release of provisions related to previous business exits and disposals

In 2019, certain liabilities relating to previous business exits and disposals lapsed and the Group released £0.7 million of legal and other provisions.

7. FINANCE INCOME AND EXPENSE

Continuing operations	2020 £m	2019 £m
Recognised in profit or loss		
Interest on bank balances and cash deposits	0.9	1.9
Finance income	0.9	1.9
Interest expense on borrowings and overdrafts	(7.4)	(11.2)
Interest expense on lease liabilities	(2.8)	(3.0)
Net interest on IAS 19 defined benefit pension obligations	(2.6)	(4.6)
Finance expense	(12.8)	(18.8)
Net financing costs recognised in profit or loss	(11.9)	(16.9)

No finance income or expense related to discontinued operations in either the current or preceding year.

Notes to the consolidated financial statements

8. TAXATION – INCOME TAX EXPENSE

	2020 £m	2019 £m
Continuing operations		
Recognised in profit or loss		
Current tax		
Current year	21.0	29.3
Adjustments for prior years	(1.3)	0.3
	19.7	29.6
Deferred tax		
Current year	(12.5)	1.5
Adjustments for prior years	(0.3)	(1.2)
	(12.8)	0.3
Total income tax expense recognised in profit or loss	6.9	29.9
Recognised in other comprehensive income		
Tax effect on components of other comprehensive income:		
Deferred tax associated with defined benefit schemes and share schemes	(0.4)	(2.2)
Total tax recognised in other comprehensive income	(0.4)	(2.2)

RECONCILIATION OF EFFECTIVE TAX RATE

	2020 £m	2020 %	2019 £m	2019 %
(Loss)/ profit before tax	(13.1)		109.7	
Income tax (credit)/charge using the domestic corporation tax rate	(2.5)	19.0	20.8	19.0
Effect of different tax rates in other jurisdictions	(0.8)	6.1	5.8	5.3
Local taxes including withholding tax suffered	2.0	(15.3)	3.9	3.6
Permanent differences	10.2	(77.9)	3.9	3.6
Movements related to unrecognised temporary differences	(0.4)	3.1	(3.6)	(3.3)
Adjustments in respect of prior years	(1.6)	12.2	(0.9)	(0.8)
Statutory effective rate of tax	6.9	(52.7)	29.9	27.3

The effective rate of tax before specific adjusting items is 27.2% (2019: 27.3%).

The Group operates in many jurisdictions around the world and is subject to factors that may impact future tax charges including the recently enacted US tax reform, implementation of the OECD's BEPS actions, tax rate and legislation changes, expiry of the statute of limitations and resolution of tax audits and disputes.

EU State Aid

On 2 April 2019 the European Commission ruled that a Group Financing Exemption under the UK controlled foreign company rules was partly contrary to EU State Aid rules. The UK government has filed an annulment application with the EU General Court against this decision. HM Revenue & Customs have been reviewing the position for the Group and concluded in February 2021 that the Group was not the beneficiary of State Aid.

9. DISCONTINUED OPERATIONS

The Group disposed of its Composites and Defence Systems business on 20 November 2018. The business represented a separate reportable segment and therefore, in accordance with IFRS 5 Non-current Assets Held for Sale and Discontinued Operations, the disposal group was classified as discontinued.

The results from discontinued operations, which have been disclosed in the consolidated income statement, are set out below:

	Note	31 December 2020			31 December 2019		
		Results before specific adjusting items £m	Specific adjusting items £m	Total £m	Results before specific adjusting items £m	Specific adjusting items £m	Total £m
Revenue		–	–	–	–	–	–
Operating income		–	2.0	2.0	0.7	0.8	1.5
Profit before taxation		–	2.0	2.0	0.7	0.8	1.5
Income tax expense		–	–	–	–	–	–
Profit from discontinued operations		–	2.0	2.0	0.7	0.8	1.5
Basic earnings per share from discontinued operations	10			0.7p			0.5p
Diluted earnings per share from discontinued operations	10			0.7p			0.5p

In both 2019 and 2020, specific adjusting items relate to the reassessment of certain provisions associated with the disposal. In 2019, operating income of £0.7 million related to receipts from contingent assets excluded from the disposal.

There is no income tax expense in relation to the discontinued operations in either the current or preceding year.

Cash flows from discontinued operations are set out below:

	31 December 2020 £m	31 December 2019 £m
Net cash (outflow)/inflow from operating activities	(0.1)	0.4
Net cash inflow from investing activities	–	0.7
Net cash flow used in financing activities	–	–
	(0.1)	1.1

10. EARNINGS PER SHARE

	31 December 2020			31 December 2019		
	Earnings £m	Basic earnings per share pence	Diluted earnings per share pence	Earnings £m	Basic earnings per share pence	Diluted earnings per share pence
(Loss)/profit for the year attributable to shareholders of the Company	(22.5)	(7.9)p	(7.9)p	73.1	25.7p	25.5p
Profit from discontinued operations	(2.0)	(0.7)p	(0.7)p	(1.5)	(0.5)p	(0.5)p
(Loss)/profit from continuing operations	(24.5)	(8.6)p	(8.6)p	71.6	25.2p	25.0p
Specific adjusting items	87.4	30.7p	30.5p	–	–	–
Amortisation of intangible assets	6.1	2.1p	2.1p	8.1	2.8p	2.8p
Tax effect of the above	(13.3)	(4.7)p	(4.6)p	–	–	–
Non-controlling interests' share of the above adjustments	(1.5)	(0.5)p	(0.5)p	–	–	–
Adjusted profit for the year from continuing operations as used in adjusted earnings per share¹	54.2	19.0p	18.9p	79.7	28.0p	27.8p

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 170, reconciliations of the statutory results to the adjusted measures can be found on pages 43 to 45.

	2020	2019
Number of shares (millions)		
Weighted average number of Ordinary shares for the purposes of basic earnings per share¹	284.7	284.6
Effect of dilutive potential Ordinary shares:		
Share options	1.4	1.6
Weighted average number of Ordinary shares for the purposes of diluted earnings per share	286.1	286.2

1. The calculation of the weighted average number of shares excludes the shares held by The Morgan General Employee Benefit Trust, on which the dividends are waived.

Notes to the consolidated financial statements

II. PROPERTY, PLANT AND EQUIPMENT

	Note	Land and buildings £m	Plant, equipment and fixtures £m	Total £m
Cost				
Balance at 1 January 2019		218.3	697.6	915.9
Additions		9.2	41.8	51.0
Disposals		(2.6)	(22.0)	(24.6)
Effect of movement in foreign exchange		(9.5)	(31.4)	(40.9)
Balance at 31 December 2019		215.4	686.0	901.4
Balance at 1 January 2020		215.4	686.0	901.4
Additions		0.9	22.1	23.0
Disposals		(1.5)	(18.6)	(20.1)
Sale of business	2	–	(6.5)	(6.5)
Transfers between categories		0.3	(0.3)	–
Transfer to intangible assets		–	(1.5)	(1.5)
Effect of movement in foreign exchange		0.1	(3.0)	(2.9)
Balance at 31 December 2020		215.2	678.2	893.4
Depreciation and impairment losses				
Balance at 1 January 2019		95.9	505.5	601.4
Depreciation charge for the year		5.4	26.9	32.3
Reversal of impairment		–	(0.5)	(0.5)
Disposals		(1.4)	(21.6)	(23.0)
Effect of movement in foreign exchange		(4.2)	(21.8)	(26.0)
Balance at 31 December 2019		95.7	488.5	584.2
Balance at 1 January 2020		95.7	488.5	584.2
Depreciation charge for the year		5.3	27.4	32.7
Impairment losses	6	10.1	26.9	37.0
Disposals		(0.8)	(18.3)	(19.1)
Sale of business	2	–	(5.1)	(5.1)
Transfers between categories		(0.3)	0.3	–
Effect of movement in foreign exchange		(0.3)	(3.6)	(3.9)
Balance at 31 December 2020		109.7	516.1	625.8
Carrying amounts				
At 1 January 2019		122.4	192.1	314.5
At 31 December 2019		119.7	197.5	317.2
At 31 December 2020		105.5	162.1	267.6

In 2020, no assets were pledged as security for liabilities (2019: none). Profit on sale of property, plant and equipment presented in the cash flow includes £1.2 million (2019: £0.8 million) of insurance proceeds for replacement of assets.

12. LEASES

The reconciliation in the movement of the Group's right-of-use assets is set out in the table below:

	Note	Land and buildings £m	Plant and equipment £m	Total £m
Balance at 1 January 2019		40.8	10.3	51.1
Additions		6.4	3.1	9.5
Remeasurements		0.6	0.1	0.7
Depreciation charge for the year		(6.1)	(4.0)	(10.1)
Effect of movement in foreign exchange		(1.7)	(0.4)	(2.1)
Balance at 31 December 2019		40.0	9.1	49.1
Balance at 1 January 2020		40.0	9.1	49.1
Additions		1.8	2.0	3.8
Remeasurements		(2.0)	(0.8)	(2.8)
Depreciation charge for the year		(5.5)	(3.7)	(9.2)
Impairment losses	6	(5.0)	(0.3)	(5.3)
Effect of movement in foreign exchange		(0.1)	–	(0.1)
Balance at 31 December 2020		29.2	6.3	35.5

The weighted average lease term is 13.2 years for land and buildings and 3.7 years for plant and equipment (2019: 13.2 years and 3.5 years respectively). The maturity analysis of lease liabilities is presented in note 22.

Amounts recognised in the consolidated income statement in respect of leasing arrangements are set out in the table below:

	2020 £m	2019 £m
Depreciation expense on right-of-use assets	(9.2)	(10.1)
Interest expense on lease liabilities	(2.8)	(3.0)
Expense relating to short-term leases and leasing of low value assets	(0.5)	(0.8)
Income from leasing owned assets	0.3	0.3
	(12.2)	(13.6)

The total cash flows from leasing activities in the year ended 31 December 2020 was £12.9 million (2019: £13.1 million) as set out in the table below:

	2020 £m	2019 £m
Payment of lease liabilities	(9.9)	(9.6)
Interest expense on lease liabilities	(2.8)	(3.0)
Expense relating to short-term leases and leasing of low value assets	(0.5)	(0.8)
Income from leasing owned assets	0.3	0.3
	(12.9)	(13.1)

At 31 December 2020, the Group is committed to future payments of £0.3 million (2019: £0.7 million) for short-term leases and leasing of low value assets.

At 31 December 2020, the Group had entered into leases which had not yet commenced with future cash flows totalling £0.3 million (2019: £nil).

The total of future minimum lease income under non-cancellable leases, where the Group is a lessor is £0.3 million (2019: £0.3 million).

Notes to the consolidated financial statements

13. INTANGIBLE ASSETS

	Note	Goodwill £m	Customer relationships £m	Technology and trademarks £m	Capitalised development costs £m	Computer software £m	Total £m
Cost							
Balance at 1 January 2019		179.4	60.4	3.7	0.8	29.8	274.1
Additions (externally purchased)		–	–	–	–	2.8	2.8
Disposals		–	–	–	–	(0.1)	(0.1)
Effect of movement in foreign exchange		(4.3)	(2.7)	(0.3)	–	(0.8)	(8.1)
Balance at 31 December 2019		175.1	57.7	3.4	0.8	31.7	268.7
Balance at 1 January 2020		175.1	57.7	3.4	0.8	31.7	268.7
Additions (externally purchased)		–	–	–	–	7.0	7.0
Disposals		(0.9)	–	–	–	(5.2)	(6.1)
Transfers from property, plant & equipment		–	–	–	–	1.5	1.5
Effect of movement in foreign exchange		(1.0)	(1.5)	0.2	(0.1)	(0.5)	(2.9)
Balance at 31 December 2020		173.2	56.2	3.6	0.7	34.5	268.2
Amortisation and impairment losses							
Balance at 1 January 2019		–	38.1	0.5	0.8	19.1	58.5
Amortisation charge for the year		–	4.3	0.2	–	3.6	8.1
Disposals		–	–	–	–	(0.1)	(0.1)
Effects of movement in foreign exchange		–	(2.0)	–	–	(0.6)	(2.6)
Balance at 31 December 2019		–	40.4	0.7	0.8	22.0	63.9
Balance at 1 January 2020		–	40.4	0.7	0.8	22.0	63.9
Amortisation charge for the year		–	2.5	0.1	–	3.5	6.1
Impairment losses	6	–	13.9	2.7	–	3.1	19.7
Disposals		–	–	–	–	(4.5)	(4.5)
Effects of movement in foreign exchange		–	(2.0)	0.1	(0.1)	(0.4)	(2.4)
Balance at 31 December 2020		–	54.8	3.6	0.7	23.7	82.8
Carrying amounts							
At 1 January 2019		179.4	22.3	3.2	–	10.7	215.6
At 31 December 2019		175.1	17.3	2.7	–	9.7	204.8
At 31 December 2020		173.2	1.4	–	–	10.8	185.4

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:

	2020 £m	2019 £m
Thermal Ceramics	84.6	85.2
Molten Metal Systems	9.0	9.1
Electrical Carbon	29.3	29.5
Seals and Bearings	14.9	14.9
Technical Ceramics	35.4	36.4
	173.2	175.1

13. INTANGIBLE ASSETS *continued*

Each cash-generating unit is assessed for impairment annually and whenever there is an indication of impairment.

The economic uncertainty caused by the COVID-19 pandemic, and its impact Group's financial statements in the six months to 30 June 2020, led management to perform an impairment assessment on goodwill at 30 June 2020. No impairment was indicated at that time. At 31 December 2020 management has reperformed these impairment tests with updated assumptions.

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 the most recent Board approved budget. Cash flow projections for years two and three are based on the most recent Board approved strategic plan. 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. External data sources have been considered as to the strength and recovery of the Group's end-markets in building an expectation of the future cash flows of each cash generating unit.

A 1.0% growth rate has been used for years beyond 2023 and to calculate a terminal value. Management has assessed these growth rates, including the terminal growth rate as reasonable for each cash-generating unit.

In 2020, the Group has used the following pre-tax discount rates for calculating the value in use of each of the cash-generating units: Thermal Ceramics: 11.7%, Molten Metal Systems: 13.7%, Electrical Carbon: 11.9%, Seals and Bearings: 10.7%, Technical Ceramics 10.8%.

The Directors have considered the following individual sensitivities and are confident that no impairment would arise for each of the Thermal Ceramics, Molten Metal Systems, Electrical Carbon, Seals and Bearings and Technical Ceramics cash-generating units in any one of the following three circumstances, which are considered reasonably possible changes:

- If the pre-tax discount rate was increased to 15%.
- If no growth was assumed for years two to five and in the calculation of terminal value.
- If the cash flow projections of all businesses were reduced by 25%.

14. INVESTMENTS

	2020 £m	2019 £m
Non-current investments		
FVOCI – equity instrument	0.7	0.6
Investment in associates	6.5	5.9
	7.2	6.5

FVOCI – EQUITY INSTRUMENT

The equity securities classified as FVOCI represent an investment in a mutual fund. A 10% increase in the unit price would increase the fair value of the investments by £0.1 million (2019: £nil).

These investments in equity instruments are not held for trading. Instead, they are held for medium to long-term strategic purposes. Accordingly, the Directors of the Company have elected to designate these investments in equity instruments as at FVOCI as they believe that recognising short-term fluctuations in these investments' fair value in profit or loss would not be consistent with the Group's strategy of holding these investments for long-term purposes and realising their performance potential in the long run.

Notes to the consolidated financial statements

14. INVESTMENTS *continued*

INVESTMENT IN ASSOCIATES

The Group's share of profit from its associate for the year was £0.6 million (2019: £0.5 million). The Group did not receive a dividend from its associate during the current or preceding year.

Details of the Group's material associate at the end of the reporting period are as follows:

Name of associate	Principal activity	Place of incorporation and principal place of business	Proportion of ownership interest/voting rights held by the Group	
			2020	2019
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.

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).

	Jemmtec Limited	
	2020 £m	2019 £m
Current assets	12.0	7.8
Non-current assets	15.5	13.4
Current liabilities	4.5	2.7
Non-current liabilities	4.9	2.1
Revenue	20.2	16.9
Profit from continuing operations	1.6	1.4

Reconciliation of the above summarised financial information to the carrying amount of the interest recognised in the Group's consolidated financial statements:

	Jemmtec Limited	
	2020 £m	2019 £m
Net assets of associate	18.1	16.4
Proportion of the Group's ownership interest in the associate	6.3	5.7
Goodwill	0.2	0.2
Carrying amount of the Group's interest in the associate	6.5	5.9

15. RECOGNISED DEFERRED TAX ASSETS AND LIABILITIES

Deferred tax assets and liabilities are attributable to the following:

	Assets 2020 £m	Assets 2019 £m	Liabilities 2020 £m	Liabilities 2019 £m	Net 2020 £m	Net 2019 £m
Property, plant and equipment	–	–	(13.1)	(18.9)	(13.1)	(18.9)
Right-of-use assets and lease liabilities	3.9	3.2	–	–	3.9	3.2
Intangible assets	–	–	(1.2)	(4.5)	(1.2)	(4.5)
Employee benefits	13.2	13.4	–	–	13.2	13.4
Provisions	11.4	8.1	–	–	11.4	8.1
Tax value of loss carried forward recognised	0.4	1.3	–	–	0.4	1.3
Other items	–	–	(0.7)	(1.5)	(0.7)	(1.5)
Offset	(14.5)	(20.0)	14.5	20.0	–	–
	14.4	6.0	(0.5)	(4.9)	13.9	1.1

15. RECOGNISED DEFERRED TAX ASSETS AND LIABILITIES *continued*

UNRECOGNISED DEFERRED TAX ASSETS

Deferred tax assets have not been recognised in respect of the following items:

	2020 £m	2019 £m
UK pension deficit	119.9	102.9
Tax losses	98.7	82.7
Capital losses	40.3	39.1
Other deductible temporary differences	61.4	57.4
	320.3	282.1

Deferred tax assets have not been recognised in relation to these temporary differences due to uncertainty surrounding future utilisation. Based on current tax legislation the tax losses will not expire. Although the Group as a whole is profitable, the unrecognised losses relate to entities where it is not probable that there will be future taxable profits against which these losses can be utilised.

MOVEMENTS IN TEMPORARY DIFFERENCES DURING THE YEAR

	31 December 2018 £m	Recognised in profit or loss £m	Recognised directly in equity £m	31 December 2019 £m	Recognised in profit or loss £m	Recognised directly in equity £m	31 December 2020 £m
Property, plant and equipment	(17.9)	(1.0)	–	(18.9)	5.8	–	(13.1)
Right-of-use assets and lease liabilities	–	(0.5)	3.7	3.2	0.7	–	3.9
Intangible assets	(5.4)	0.9	–	(4.5)	3.3	–	(1.2)
Employee benefits	11.3	(0.1)	2.2	13.4	(0.6)	0.4	13.2
Provisions	6.1	2.0	–	8.1	3.3	–	11.4
Tax value of loss carried forward recognised	1.2	0.1	–	1.3	(0.9)	–	0.4
Others	0.6	(1.7)	(0.4)	(1.5)	1.2	(0.4)	(0.7)
	(4.1)	(0.3)	5.5	1.1	12.8	–	13.9

Deferred income tax of £3.8 million (2019: £3.7 million) is provided on the potential unremitted earnings of overseas subsidiary undertakings.

16. INVENTORIES

	2020 £m	2019 £m
Raw materials and consumables	28.8	34.4
Work in progress	38.1	44.9
Finished goods	55.5	63.0
	122.4	142.3

The Group holds consignment inventory amounting to £24.0 million (2019: £23.1 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 are invoiced only when the material is required.

In 2020 provisions of £7.0 million were made against inventories and recognised in operating costs (2019: £5.1 million).

Notes to the consolidated financial statements

17. TRADE AND OTHER RECEIVABLES

	2020 £m	2019 £m
Non-current		
Trade and non-trade receivables	4.0	5.7
Current		
Gross trade receivables	132.2	170.4
Expected credit losses	(7.8)	(8.4)
Net trade receivables	124.4	162.0
Contract assets	0.5	1.0
Other non-trade receivables and prepayments ¹	18.7	18.0
	143.6	181.0

1. Other non-trade receivables and prepayments in 2019 have been re-presented to disaggregate contract assets from the balance.

The Group's exposure to credit and currency risks related to trade and other receivables is disclosed in note 22.

Contract assets relate to the Group's right to consideration for project-based business which was completed but not billed at the end of the year.

18. CASH AND CASH EQUIVALENTS

	2020 £m	2019 restated ¹ £m
Bank balances	139.7	123.7
Cash deposits	8.1	9.1
Cash and cash equivalents	147.8	132.8

1. As disclosed in note 1, the Group's cash and cash equivalents have been restated to meet the presentational requirements for offsetting in accordance with IAS 32. Comparative information for the year ended 31 December 2019 has increased from £68.7 million to £132.8 million. This has had no impact on the Group's net assets.

In 2020, the Group had restricted cash of £0.9 million (2019: £0.6 million) as a result of exchange controls in Argentina.

RECONCILIATION OF CASH AND CASH EQUIVALENTS TO NET DEBT*

	2020 £m	2019 restated ¹ £m
Opening borrowings and lease liabilities	(354.4)	(386.4)
Increase in borrowings	(7.9)	(67.1)
Reduction and repayment of borrowings	49.8	85.2
Payment of lease liabilities	9.9	9.6
Total changes from cash flows	51.8	27.7
New leases and lease remeasurement	(0.9)	(8.8)
Effect of movements in foreign exchange	0.1	13.1
Closing borrowings and lease liabilities	(303.4)	(354.4)
Cash and cash equivalents	147.8	132.8
Closing net debt²	(155.6)	(221.6)

1. 2019 has been restated to include the Group's cumulative preference shares within borrowings, this increased net debt* and decreased net assets by £0.4 million. Cash and cash equivalents and borrowings have been restated to meet the presentational requirements of IAS 32. This has had no impact on net assets or net debt*. Further details of both adjustments are described in note 1.

2. Definitions of these non-GAAP measures can be found in the glossary of terms on page 170, reconciliations of the statutory results to the adjusted measures can be found on pages 43 to 45.

18. CASH AND CASH EQUIVALENTS *continued*

The table below details changes in the Group's liabilities arising from financing activities, including both cash and non-cash changes.

	Borrowings £m	Lease liabilities £m	Total financing liabilities £m	Cash and cash equivalents £m	Movement in net debt ¹ £m
At 1 January 2019 restated²	(318.8)	(67.6)	(386.4)	138.5	(247.9)
Cash inflow	–	–	–	16.3	16.3
Borrowings and lease liability cash flow	18.1	9.6	27.7	–	27.7
Net interest paid	–	–	–	(14.2)	(14.2)
Net cash inflow	18.1	9.6	27.7	2.1	29.8
Share purchases	–	–	–	(3.3)	(3.3)
New leases and lease remeasurement	–	(8.8)	(8.8)	–	(8.8)
Exchange and other movements	10.6	2.5	13.1	(4.5)	8.6
At 31 December 2019	(290.1)	(64.3)	(354.4)	132.8	(221.6)
At 1 January 2020	(290.1)	(64.3)	(354.4)	132.8	(221.6)
Cash inflow	–	–	–	28.9	28.9
Borrowings and lease liability cash flow	41.9	9.9	51.8	–	51.8
Net interest paid	–	–	–	(10.3)	(10.3)
Net cash inflow/(outflow)	41.9	9.9	51.8	18.6	70.4
Share purchases	–	–	–	(1.8)	(1.8)
New leases and lease remeasurement	–	(0.9)	(0.9)	–	(0.9)
Exchange and other movements	(0.6)	0.7	0.1	(1.8)	(1.7)
At 31 December 2020	(248.8)	(54.6)	(303.4)	147.8	(155.6)

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 170, reconciliations of the statutory results to the adjusted measures can be found on pages 43 to 45.
2. 2019 has been restated to include the Group's cumulative preference shares within borrowings, this increased net debt* and decreased net assets by £0.4 million. Cash and cash equivalents and borrowings have been restated to meet the presentational requirements of IAS 32. This has had no impact on net assets or net debt*. Further details of both adjustments are described in note 1.

19. TRADE AND OTHER PAYABLES

	2020 £m	2019 £m
Non-current		
Trade and non-trade payables	4.9	2.5
Current		
Trade payables due to associate	0.3	0.3
Other trade payables	62.0	84.0
Contract liabilities	10.0	6.1
Non-trade payables and accrued expenses ¹	76.1	82.9
	148.4	173.3

1. Non-trade payables and accrued expenses in 2019 have been re-presented to disaggregate contract liabilities from the balance.

The Directors consider that the carrying amount of trade payables approximates to their fair value.

Contract liabilities relate to payments received from customers for project-based business in advance of the performance obligation being satisfied. All of the £10.0 million of contract liabilities as at 31 December 2020, are expected to be recognised as revenue in 2021. Contract liabilities outstanding as at 31 December 2019 of £6.1 million were recognised as revenue in 2020.

Included in trade payables are amounts due where extended payment terms have been agreed with the supplier using a supplier financing facility. The total amount outstanding on such extended payment terms at 31 December 2020 was £nil.

Notes to the consolidated financial statements

20. CAPITAL AND RESERVES

TRANSLATION RESERVE

The translation reserve comprises all foreign exchange differences arising from the translation of the financial statements of foreign operations.

HEDGING RESERVE

The cash flow hedge reserve represents the cumulative amount of gains and losses on hedging instruments deemed effective in cash flow hedges.

The cumulative deferred gain or loss on the hedging instrument is recognised in profit or loss only when the hedged transaction impacts the profit or loss, or is included directly in the initial cost or other carrying amount of the hedged non-financial items (basis adjustment).

	2020 £m	2019 £m
Balance at 1 January	0.8	(0.2)
Gain arising on changes in fair value of hedging instruments during the period	0.4	0.8
(Loss)/gain reclassified to profit or loss	(0.8)	0.2
Balance at 31 December	0.4	0.8

FAIR VALUE RESERVE

The fair value reserve includes the cumulative net change in the fair value of FVOCI investments until the investment is derecognised.

CAPITAL REDEMPTION RESERVE

The capital redemption reserve arose when the Company redeemed Preference shares wholly out of distributable profits.

RETAINED EARNINGS

The Company has acquired own shares to satisfy the requirements of the various share option incentive schemes. At 31 December 2020, 841,880 shares (2019: 1,245,133) were held by The Morgan General Employee Benefit Trust (the Trust) and are treated as a deduction from equity. No treasury shares were held by the Company (2019: none). All rights conferred by those shares are suspended until they are reissued.

A summary of the movements in own shares held by the Trust is set out in the table below:

	2020		2019	
	Shares	Cost £m	Shares	Cost £m
As at 1 January	1,245,133	3.3	968,287	2.7
New shares purchased	750,000	1.8	1,250,000	3.3
Exercise of share options	(1,153,253)	(3.0)	(973,154)	(2.7)
As at 31 December	841,880	2.1	1,245,133	3.3

Consideration received in respect of shares transferred to participants of employee share schemes was £0.4 million (2019: £0.8 million). The market value of shares held by the Trust at 31 December 2020 was £2.6 million (2019: £4.0 million).

DIVIDENDS

The following Ordinary dividends were declared and paid by the Company:

	Per share		Total	
	2020 pence	2019 pence	2020 £m	2019 £m
2018 final	–	7.00	–	19.9
2019 interim	–	4.00	–	11.4
2019 final ¹	–	–	–	–
2020 interim	2.0	–	5.7	–
	2.0	11.00	5.7	31.3

1. On 31 March 2020, the Group announced the Board's decision to withdraw the proposed 2019 final dividend due to the financial uncertainty resulting from the COVID-19 pandemic.

After 31 December 2020 the following dividends were proposed by the Directors for 2020. These dividends have not been provided for and there are no income tax consequences. The proposed 2020 final dividend is based upon the number of shares outstanding at the balance sheet date.

	£m
3.5 pence per qualifying Ordinary share	10.0
	10.0



20. CAPITAL AND RESERVES *continued*

CALLED-UP SHARE CAPITAL

	2020 £m	2019 £m
Equity share capital		
Fully paid: 285,369,988 (2019: 285,369,988) issued Ordinary shares of 25 pence each	71.3	71.3
	71.3	71.3

NUMBER OF ORDINARY SHARES IN ISSUE

	2020	2019
In issue at beginning and end of period	285,369,988	285,369,988

As at the date of this Report 285,369,988 Ordinary shares have been issued (2019: 285,369,988).

Details of options outstanding in respect of Ordinary shares are given in note 24.

Additionally the Company has authorised, issued and fully paid 437,281 (2019: 437,281) cumulative preference shares classified as borrowings totalling £0.4 million (2019: £0.4 million). The redeemable preference shares comprise 125,327 of 5.5% Cumulative First Preference shares of £1 each and 311,954 issued 5.0% Cumulative Second Preference shares of £1 each. The voting rights of these shares are set out below.

Dividends on the cumulative preference shares are presented within finance costs in the Group's consolidated income statement.

VOTING RIGHTS OF SHAREHOLDERS

Ordinary shares

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.

Preference shares

The 5.5% Cumulative First Preference shares of £1 each and the 5.0% Cumulative Second Preference shares of £1 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 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:

- (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.

Notes to the consolidated financial statements

21. BORROWINGS AND LEASE LIABILITIES

This note provides information about the contractual terms of the Group's borrowings and lease liabilities which are measured at amortised cost.

For more information about the Group's exposure to interest rate and foreign currency risk, see note 22.

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.

	2020 £m	2019 restated ¹ £m
Non-current liabilities		
Senior Notes	177.1	176.3
Cumulative preference shares	0.4	0.4
Lease liabilities	43.1	52.6
	220.6	229.3
Current liabilities		
Bank and other borrowings	71.3	113.4
Lease liabilities	11.5	11.7
	82.8	125.1

1. As disclosed in note 1, 2019 has been restated to include the Group's cumulative preference shares within borrowings. The Group's bank overdrafts have been restated to meet the presentational requirements for offsetting in accordance with IAS 32. Comparative information for bank and other borrowings for the year ended 31 December 2019 has increased from £49.3 million to £113.4 million.

In 2020, bank and other borrowings did not include any borrowings secured on the assets of the Group (2019: £nil).

As at 31 December 2020 the Group had available headroom under the bank syndication of £200.0 million (2019: £149.8 million).

22. 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.

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 centre for 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.

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 amount	
	2020 £m	2019 restated ¹ £m
FVOCI – equity instruments	0.7	0.6
Trade and other receivables	124.4	162.0
Cash and cash equivalents	147.8	132.8
Derivatives	1.0	1.5
	273.9	296.9

1. As disclosed in note 1, the Group's cash and cash equivalents have been restated to meet the presentational requirements for offsetting in accordance with IAS 32. Comparative information for the year ended 31 December 2019 has increased from £68.7 million to £132.8 million. This has had no impact on the Group's net assets.

22. FINANCIAL RISK MANAGERMENTS *continued*

FVOCI – EQUITY INSTRUMENTS

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, have 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 a provision that represents its estimate of expected credit losses in respect of trade and other receivables and investments. At the point the amount is considered irrecoverable it is written off against the financial asset directly.

The loss allowance for trade receivables by aging category is as follows:

	2020				2019			
	Expected credit loss rate £m	Gross trade receivables £m	Expected credit losses £m	Net trade receivables £m	Expected credit loss rate £m	Gross trade receivables £m	Expected credit losses £m	Net trade receivables £m
Not past due	0.4%	109.1	(0.4)	108.7	0.2%	137.0	(0.3)	136.7
Past due 0-30 days	1.8%	11.3	(0.2)	11.1	1.5%	19.8	(0.3)	19.5
Past due 31-60 days	4.0%	2.5	(0.1)	2.4	4.9%	4.1	(0.2)	3.9
Past due 61-90 days	12.0%	2.5	(0.3)	2.2	5.3%	1.9	(0.1)	1.8
Past due more than 90 days	100.0%	6.8	(6.8)	–	98.7%	7.6	(7.5)	0.1
		132.2	(7.8)	124.4		170.4	(8.4)	162.0

CASH, CASH EQUIVALENTS AND DERIVATIVES

Cash balances held by companies representing over 65% 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.

OFFSETTING FINANCIAL ASSETS AND LIABILITIES

The following table shows the amounts recognised for forward exchange contracts, which are subject to offsetting arrangements on a gross basis, and the amounts offset in the balance sheet.

The Group also has cash pooling agreements which cannot be offset under IFRS, but which could be settled net under the terms of master netting agreements, are also presented in the table to show the total net exposure of the Group.

	Gross amounts of recognised financial assets/ (liabilities) £m	Amounts set off £m	Net amounts presented on the balance sheet £m	Financial instruments not set off in the balance sheet £m	Net amount £m
2020					
Derivative financial assets	85.4	(84.4)	1.0	–	1.0
Derivative financial liabilities	(85.3)	84.4	(0.8)	–	(0.8)
Cash and cash equivalents	147.8	–	147.8	(69.8)	78.0
Bank and other borrowings	(71.3)	–	(71.3)	69.8	(1.5)
2019					
Derivative financial assets	107.4	(106.0)	1.5	–	1.5
Derivative financial liabilities	(106.6)	106.0	(0.6)	–	(0.6)
Cash and cash equivalents	132.8	–	132.8	(64.1)	68.7
Bank and other borrowings	(113.4)	–	(113.4)	64.1	(49.3)

Notes to the consolidated financial statements

22. FINANCIAL RISK MANAGERMENTS *continued*

LIQUIDITY AND FUNDING 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 borrowings and committed facilities to meet its medium-term financing requirements.

The following are the undiscounted contracted maturities of financial liabilities, including interest payments:

Cash flows associated with non-derivative financial liabilities

	31 December 2020							
	Effective interest rate	Year of maturity	Carrying amount £m	Contractual cash flows £m	Less than 1 year £m	1-2 years £m	2-5 years £m	More than 5 years £m
Non-derivative financial liabilities								
1.18% Euro Senior Notes 2023	1.18%	2023	22.4	23.1	0.3	0.3	22.5	–
3.17% US Dollar Senior Notes 2023	3.17%	2023	11.0	12.0	0.3	0.3	11.4	–
1.55% Euro Senior Notes 2026	1.55%	2026	22.4	24.4	0.3	0.3	1.1	22.7
3.37% US Dollar Senior Notes 2026	3.37%	2026	71.4	85.3	2.4	2.4	7.3	73.2
1.74% Euro Senior Notes 2028	1.74%	2028	9.0	10.2	0.2	0.2	0.6	9.2
2.89% Euro Senior Notes 2030	2.89%	2030	22.3	28.8	0.6	0.6	2.0	25.6
4.87% US Dollar Senior Notes 2026	4.87%	2026	18.6	23.2	0.9	0.9	2.8	18.6
Bank and other borrowings		Up to 2024	71.3	71.3	71.3	–	–	–
5.50% Cumulative First Preference shares	5.50%		0.1	–	–	–	–	–
5.00% Cumulative Second Preference shares	5.00%		0.3	–	–	–	–	–
Lease liabilities	4.68%	Up to 2051	54.6	75.5	11.5	9.1	19.9	35.0
Trade and other payables			62.3	62.3	62.3	–	–	–
			365.7	416.1	150.1	14.1	67.6	184.3

Bank and other borrowings include an unsecured multi-currency revolving credit facility set to mature in September 2024.

During the period the Group applied for the UK Government's 'COVID Corporate Financing Facility' (CCFF) with an issuer limit of £300 million, which was confirmed as successful on 10 June 2020. The facility was undrawn at 31 December 2020.

	31 December 2019 restated ¹							
	Effective interest rate	Year of maturity	Carrying amount £m	Contractual cash flows £m	Less than 1 year £m	1-2 years £m	2-5 years £m	More than 5 years £m
Non-derivative financial liabilities								
1.18% Euro Senior Notes 2023	1.18%	2023	21.2	22.1	0.2	0.2	21.7	–
3.17% US Dollar Senior Notes 2023	3.17%	2023	11.4	12.9	0.4	0.4	12.1	–
1.55% Euro Senior Notes 2026	1.55%	2026	21.2	23.4	0.3	0.3	1.0	21.8
3.37% US Dollar Senior Notes 2026	3.37%	2026	73.6	90.6	2.5	2.5	7.4	78.2
1.74% Euro Senior Notes 2028	1.74%	2028	8.5	9.6	0.1	0.1	0.4	9.0
2.89% Euro Senior Notes 2030	2.89%	2030	21.1	27.8	0.6	0.6	1.8	24.8
4.87% US Dollar Senior Notes 2026	4.87%	2026	19.2	24.8	0.9	0.9	2.8	20.2
Bank and other borrowings		Up to 2024	113.4	113.4	113.4	–	–	–
5.50% Cumulative First Preference shares	5.50%		0.1	–	–	–	–	–
5.00% Cumulative Second Preference shares	5.00%		0.3	–	–	–	–	–
Lease liabilities	5.02%	Up to 2051	64.3	85.1	11.7	9.7	20.4	43.3
Trade and other payables			84.3	84.3	84.3	–	–	–
			438.6	494.0	214.4	14.7	67.6	197.3

1. As disclosed in note 1, 2019 has been restated to include the Group's cumulative preference shares within borrowings. The Group's bank overdrafts have been restated to meet the presentational requirements for offsetting in accordance with IAS 32. Comparative information for bank and other borrowings for the year ended 31 December 2019 has increased from £49.3 million to £113.4 million.



22. FINANCIAL RISK MANAGERMENTS *continued*

CASH FLOWS ASSOCIATED WITH DERIVATIVES

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. All derivatives are net settled.

	Carrying amount £m	Contractual cash flows £m	Less than 1 year £m	1-2 years £m	2-5 years £m	More than 5 years £m
2020						
Cash flow hedges						
Forward exchange contracts – assets	0.8	64.9	64.9	–	–	–
Forward exchange contracts – liabilities	(0.7)	(64.7)	(64.7)	–	–	–
	0.1	0.2	0.2	–	–	–
Fair value flow hedges						
Forward exchange contracts – assets	0.2	20.6	20.6	–	–	–
Forward exchange contracts – liabilities	(0.1)	(20.6)	(20.6)	–	–	–
	0.1	–	–	–	–	–
	0.2	0.2	0.2	–	–	–
2019						
Cash flow hedges						
Forward exchange contracts – assets	1.4	89.0	88.8	0.2	–	–
Forward exchange contracts – liabilities	(0.5)	(88.1)	(87.9)	(0.2)	–	–
	0.9	0.9	0.9	–	–	–
Fair value flow hedges						
Forward exchange contracts – assets	–	18.4	18.4	–	–	–
Forward exchange contracts – liabilities	(0.1)	(18.5)	(18.5)	–	–	–
	(0.1)	(0.1)	(0.1)	–	–	–
	0.8	0.8	0.8	–	–	–

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 enters into derivatives 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. 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 instruments carrying amount	
	2020 £m	2019 restated ¹ £m	2020 £m	2019 restated ¹ £m
Financial assets	–	–	147.8	132.8
Financial liabilities	(232.1)	(240.9)	(71.3)	(113.4)
	(232.1)	(240.9)	76.5	19.4

1. As disclosed in note 1, 2019 has been restated to include the Group's cumulative preference shares within borrowings, this increased borrowings and net debt* by £0.4 million and decreased net assets by £0.4 million. Cash and cash equivalents and borrowings and overdrafts have been restated to meet the presentational requirements of IAS 32 as further described in note 1. This has had no impact on net assets or net debt*.

Notes to the consolidated financial statements

22. FINANCIAL RISK MANAGERMENTS *continued*

The fixed rate financial liabilities comprise the currency equivalent of £177.1 million (2019: £176.2 million) of Senior Notes, £0.4 million (2019: £0.4 million) of cumulative preference shares and lease liabilities of £54.6 million (2019: £64.3 million). The average cost of the Group's fixed rate instruments is 3.29% (2019: 3.50%) including lease liabilities and 2.87% (2019: 2.90%) excluding lease liabilities.

The variable rate financial assets include the bank balances and cash deposits detailed in note 18 and the variable rate financial liabilities include bank borrowings detailed in note 22. Where cash and overdrafts are included in Group cash pool arrangements interest is charged on net bank balances and borrowings. The average cost of the Group's variable rate instruments is 1.5% (2019: 2.3%).

An increase of 100 basis points in interest rates on the variable element of the Group's net floating rate liabilities and cash at the reporting date would have increased profit by £0.8 million (2019: £0.2 million). A decrease of 100 basis points would have decreased profit by £0.4 million (2019: £0.1 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 below 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.

	2020			2019		
	GBP £m	USD £m	Euro £m	GBP £m	USD £m	Euro £m
Functional currency of Group operations						
Trade receivables	15.8	0.3	0.9	1.7	7.7	2.0
Trade payables	(7.1)	(0.5)	(0.1)	(1.7)	(5.7)	(6.6)
Net debt ¹	(8.2)	0.9	0.7	1.1	5.2	0.9
Net balance sheet exposure	0.5	0.7	1.5	1.1	7.2	(3.7)

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 170, reconciliations of the statutory results to the adjusted measures can be found on pages 43 to 45.

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 2020 was an asset of £0.1 million (2019: £0.9 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 borrowing 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.

22. FINANCIAL RISK MANAGERMENTS *continued*

The Group's currency split of total borrowings was as follows:

	2020 £m	2019 restated ¹ £m
GBP	71.7	68.6
USD	101.0	149.3
Euro	76.1	72.1
Other	–	–
	248.8	290.0

1. As disclosed in note 1, 2019 has been restated to include the Group's cumulative preference shares within borrowings, this increased borrowings and net debt* by £0.4 million and decreased net assets by £0.4 million. Cash and cash equivalents and borrowings and overdrafts have been restated to meet the presentational requirements of IAS 32 as further described in note 1. This has had no impact on net assets or net debt*.

The Group's sensitivity to changes in foreign exchange rates on financial assets and liabilities as at 31 December 2020 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 £14.1 million (2019: £17.8 million). Conversely, if GBP had weakened by 10%, reported net financial liabilities would have increased by £17.3 million (2019: £21.6 million). Assuming the change occurred on the balance sheet date, there would be no impact on reported profit, as either the net financial liabilities are in the same currency as that of the respective Group entity, or the change would be offset by an equal and opposite change in the foreign currency monetary items in the Group's holding company.

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. 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.

HEDGING INSTRUMENTS

	Maturity date		Notional value:		Change in fair value for recognising hedge ineffectiveness		Carrying amount of the hedging instruments assets/(liabilities)	
			Local currency					
	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m
Cash flow hedges								
Highly probable forecast sales	to Dec 2021	to March 2021	26.5	32.3	0.8	(1.4)	(0.4)	(1.2)
Highly probable forecast purchases	to Dec 2021	to March 2021	8.1	9.3	–	0.2	0.1	0.1

Weighted average hedge rates for the year were as follows:

	Weighted average exchange rates	
	2020 £m	2019 £m
EUR/GBP	1.10	1.12
AUD/GBP	1.91	1.53
JPY/GBP	–	149.32
SGD/GBP	1.75	1.75
USD/GBP	1.32	1.27

Notes to the consolidated financial statements

22. FINANCIAL RISK MANAGERMENTS *continued*

Hedged items

	Change in value used for calculating hedge ineffectiveness		Balance in cash flow hedge reserve/foreign currency translation reserve for continuing hedges	
	2020 £m	2019 £m	2020 £m	2019 £m
Cash flow hedges				
Forecast sales	(0.8)	1.4	(0.4)	(0.9)
Forecast purchases	–	(0.2)	–	0.1

As at 31 December 2020 there was no balance in cash flow hedge reserve/foreign currency translation reserve arising from hedging relationships for which hedge accounting is no longer applied (2019: nil).

The Group expects highly probable sales and purchases in UK, Europe, North America, Australia and Asia. The Group has entered into foreign exchange forward contracts (for terms not exceeding 12 months) to hedge the exchange rate risk arising from these anticipated future transactions. It is anticipated that the transactions will take place during the next financial year, at which time the amount deferred in equity will be reclassified to profit or loss.

As a result of the decline in expected sales resulting from the COVID-19 pandemic and the related site closures, the Group has reviewed the foreign exchange hedging portfolio to confirm whether the underlying transactions remain highly probable. Any identified instance of over-hedging or ineffectiveness would result in immediate recycling to the income statement. A change in the timing of a forecast item does not disqualify a hedge relationship nor the assertion of 'highly probable' as there remains an economic relationship between the underlying transaction and the derivative. There were no instances of over-hedging identified.

All hedging instruments are presented within derivative financial instruments on the group balance sheet.

EXCHANGE RATES

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

	2020		2019	
	Closing rate	Average rate	Closing rate	Average rate
GBP to:				
USD	1.37	1.28	1.33	1.28
Euro	1.12	1.13	1.18	1.14

For illustrative purposes, the table below provides details of the impact on 2020 revenue, Group adjusted operating profit* and profit before tax if the actual reported results, calculated using 2020 average exchange rates, were restated for GBP weakening by 10 cents against USD in isolation and 10 cents against the Euro in isolation:

	2020			2019		
	Revenue £m	Group adjusted operating profit ¹ £m	Profit before tax £m	Revenue £m	Group adjusted operating profit ¹ £m	Profit before tax £m
Increase in revenue/Group adjusted operating profit/profit before tax if:						
GBP weakens by 10c against USD in isolation	33.9	4.3	3.7	39.7	6.3	5.5
GBP weakens by 10c against the Euro in isolation	17.4	1.8	1.6	19.9	2.9	2.7

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 170, reconciliations of the statutory results to the adjusted measures can be found on pages 43 to 45.

OTHER MARKET PRICE RISK

Equity price risk arises from FVOCI equity instruments 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.



22. FINANCIAL RISK MANAGERMENTS *continued*

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 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 indicators set out in the table below. These indicators are also presented excluding the impact of IFRS 16 Leases as these adjusted measures are more closely aligned to the Group's covenants.

DEBT TO ADJUSTED CAPITAL

	2020			2019 restated ¹		
	As stated £m	IFRS 16 impact £m	Excluding IFRS 16 £m	As stated £m	IFRS 16 impact £m	Excluding IFRS 16 £m
Borrowings and overdrafts	248.8	–	248.8	290.1	–	290.1
Lease liabilities	54.6	(54.6)	–	64.3	(64.3)	–
Less: cash and cash equivalents	(147.8)	–	(147.8)	(132.8)	–	(132.8)
Net debt ²	155.6	(54.6)	101.0	221.6	(64.3)	157.3
Total equity	240.0	–	240.0	311.7	–	311.7
Less: amounts accumulated in equity relating to cash flow hedges	(0.4)	–	(0.4)	(0.8)	–	(0.8)
Adjusted capital	239.6	–	239.6	310.9	–	310.9
Net debt ² to adjusted capital ratio	0.6	n/a	0.4	0.7	n/a	0.5

1. As disclosed in note 1, 2019 has been restated to include the Group's cumulative preference shares within borrowings, this increased borrowings and net debt* by £0.4 million and decreased net assets by £0.4 million. Cash and cash equivalents and borrowings and overdrafts have been restated to meet the presentational requirements of IAS 32 as further described in note 1. This has had no impact on net assets or net debt*.

2. Definitions of these non-GAAP measures can be found in the glossary of terms on page 170, reconciliations of the statutory results to the adjusted measures can be found on pages 43 to 45.

NET DEBT* TO EBITDA*

	2020			2019 restated ¹		
	As stated £m	IFRS 16 impact £m	Excluding IFRS 16 £m	As stated £m	IFRS 16 impact £m	Excluding IFRS 16 £m
Net debt ²	155.6	(54.6)	101.0	221.6	(64.3)	157.3
Operating profit before specific adjusting items	85.6	(3.5)	82.1	126.1	(3.0)	123.1
Depreciation and amortisation	48.0	(9.2)	38.8	50.5	(10.1)	40.4
EBITDA ¹	133.6	(12.7)	120.9	176.6	(13.1)	163.5
Net debt ² to EBITDA ² ratio	1.2x	n/a	0.8x	1.3x	n/a	1.0x

1. As disclosed in note 1, 2019 has been restated to include the Group's cumulative preference shares within borrowings, this increased borrowings and net debt* by £0.4 million and decreased net assets by £0.4 million. Cash and cash equivalents and borrowings and overdrafts have been restated to meet the presentational requirements of IAS 32 as further described in note 1. This has had no impact on net assets or net debt*.

2. Definitions of these non-GAAP measures can be found in the glossary of terms on page 170, reconciliations of the statutory results to the adjusted measures can be found on pages 43 to 45.

INTEREST COVER

	2020			2019		
	As stated £m	IFRS 16 impact £m	Excluding IFRS 16 £m	As stated £m	IFRS 16 impact £m	Excluding IFRS 16 £m
EBITDA ¹	133.6	(12.7)	120.9	176.6	(13.1)	163.5
Net finance costs (excluding IAS 19 pension charge)	9.3	(2.8)	6.5	12.3	(3.0)	9.3
Interest cover	14.4x	n/a	18.6x	14.4x	n/a	17.6x

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 170, reconciliations of the statutory results to the adjusted measures can be found on pages 43 to 45.

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.

Notes to the consolidated financial statements

22. FINANCIAL RISK MANAGERMENTS *continued*

FAIR VALUES

	31 December 2020				31 December 2019 restated ¹			
	Carrying amount £m	Fair value			Carrying amount £m	Fair value		
		Level 1 £m	Level 2 £m	Total £m		Level 1 £m	Level 2 £m	Total £m
Financial assets and liabilities held at amortised cost								
1.18% Euro Senior Notes 2023	(22.4)	–	(22.6)	(22.6)	(21.2)	–	(21.2)	(21.2)
3.17% US Dollar Senior Notes 2023	(11.0)	–	(11.4)	(11.4)	(11.4)	–	(11.3)	(11.3)
1.55% Euro Senior Notes 2026	(22.4)	–	(23.2)	(23.2)	(21.2)	–	(21.5)	(21.5)
3.37% US Dollar Senior Notes 2026	71.4	–	(75.1)	(75.1)	(73.5)	–	(72.1)	(72.1)
1.74% Euro Senior Notes 2028	(9.0)	–	(9.4)	(9.4)	(8.5)	–	(8.6)	(8.6)
2.89% Euro Senior Notes 2030	(22.3)	–	(24.3)	(24.3)	(21.1)	–	(22.2)	(22.2)
4.87% US Dollar Senior Notes 2026	(18.6)	–	(20.7)	(20.7)	(19.2)	–	(20.2)	(20.2)
5.50% Cumulative First Preference shares	(0.1)	–	(0.1)	(0.1)	(0.1)	–	(0.1)	(0.1)
5.00% Cumulative Second Preference shares	(0.3)	–	(0.3)	(0.3)	(0.3)	–	(0.3)	(0.3)
	(177.5)	–	(187.1)	(187.1)	(176.5)	–	(177.5)	(177.5)
Financial assets held at FVOCI	0.7	0.7	–	0.7	0.6	0.6	–	0.6
Derivative financial assets held at fair value	1.0	–	1.0	1.0	1.5	–	1.5	–
	1.7	0.7	1.0	1.7	2.1	0.6	1.5	0.6
Derivative financial liabilities held at fair value	(0.8)	–	(0.8)	(0.8)	(0.6)	–	(0.6)	(0.6)

1. 2019 has been restated to include the Group's cumulative preference shares within borrowings, see note 1 for further details.

The table above analyses financial instruments carried at fair value, by valuation method, together with the carrying amounts shown in the balance sheet.

The fair value of cash and cash equivalents, current trade and other receivables/payables and floating-rate bank and other borrowings are excluded from the preceding table as their carrying amount approximates their fair value.

FAIR VALUE HIERARCHY

The different levels have been defined as follows:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: not traded in an active market but the fair values are based on quoted market prices or alternative pricing sources with reasonable levels of price transparency. Fair value is calculated using discounted cash flow methodology, future cash flows are estimated based on forward exchange rates.
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

The major methods and assumptions used in estimating the fair values of financial instruments reflected in the preceding table are as follows:

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.

FIXED-RATE 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 borrowings are 0.9-2.4% (2019: 1.1-3.9%).

There have been no transfers between Level 1 and Level 2 during 2020 and 2019 and there were no Level 3 financial instruments in either 2020 or 2019.

23. PENSIONS AND OTHER POST-RETIREMENT 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, US and Europe and predominantly provide pensions based on service and career-average pay. In addition post-retirement medical plans are operated in the US.

SUMMARY OF NET DEFINED BENEFIT OBLIGATIONS

	2020 £m	2019 £m
Present value of unfunded defined benefit obligations	(52.6)	(48.2)
Present value of funded defined benefit obligations	(754.7)	(686.7)
Fair value of plan assets	631.0	578.1
	(176.3)	(156.8)

AMOUNTS RECOGNISED IN PROFIT OR LOSS

	Note	2020 £m	2019 £m
Current service cost		(2.8)	(2.6)
Past service cost		(0.1)	–
Administrative expenses recognised outside of the pension liability		(1.2)	(1.4)
Curtailments and settlements		0.3	0.2
Total expense within operating costs relating to defined benefit plans		(3.8)	(3.8)
Defined contribution plans		(11.6)	(11.3)
Total expense within operating costs	4	(15.4)	(15.1)
Net interest on net defined benefit liability	7	(2.6)	(4.6)
Total expense recognised in profit or loss		(18.0)	(19.7)

AMOUNTS RECOGNISED IN OTHER COMPREHENSIVE INCOME

	2020 £m	2019 £m
Experience gain/(loss) on plan obligations	3.9	6.1
Changes in financial assumptions underlying the present value of plan obligations – (loss)	(99.4)	(66.8)
Changes in demographic assumptions underlying the present value of plan obligations – gain/(loss)	1.3	37.0
Actual return on plan assets (excluding amounts included in net interest expense)	60.3	44.2
Remeasurements recognised in other comprehensive income	(33.9)	20.5
Deferred tax associated with the above	0.4	2.2
Total amount recognised in other comprehensive income	(33.5)	22.7

DEFINED CONTRIBUTION PLANS

The total expense relating to defined contribution plans in the current year was £11.6 million (2019: £11.3 million). The expense includes contributions to two US Multi-Employer Plans of £0.3 million (2019: £0.3 million) and a contribution to one German Multi-Employer Plan of £0.3 million (2019: £0.3 million). The Group expects to contribute £11.9 million to ongoing defined contribution arrangements in 2021.

23. PENSIONS AND OTHER POST-RETIREMENT EMPLOYEE BENEFITS *continued*

DEFINED BENEFIT PLANS

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 17 years.

The UK Schemes' assets are held in trustee-administered funds which are 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 which must consult with the Company on such matters. The Board of Trustees must be composed of representatives of the Company, plan participants and independent trustee directors, in accordance with the UK Schemes governing documents.

Funding legislation in the UK requires that schemes are fully funded on a scheme-specific basis, 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 reasonable period of time.

The most recent full actuarial valuations of the UK Schemes were undertaken as at 31 March 2019 and resulted in combined assessed deficits of £120.3 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 totaling £16.5 million a year from January 2020, increasing by 2.75% pa from April 2021 until 2025, with further payments to Morgan Pension Scheme for 2026 and 2027. New full valuations will be due with effective dates of 31 March 2022.

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. The Morgan Group Senior Staff Pension and Life Assurance Scheme was closed to the future accrual of benefits on and with effect from 6 April 2016. The Morgan Pension Scheme was closed to the future accrual of benefits with effect from 6 April 2018. Current employees, including those who were active in the Schemes at closure, were auto-enrolled into The Morgan Group Personal Pension Plan for their future pension benefits.

In 2018, the High Court ruled that the Trustee of the Lloyds Banking Group pension schemes needed to remove the inequalities in pension scheme benefits that arise from unequal Guaranteed Minimum Pensions (GMPs). A charge of £1.9 million was recognised during 2018 to reflect the potential cost of removing the GMP inequalities for the Group's UK defined benefit pension schemes. As a result of a further judgement in November 2020 relating to the need to equalise historical transfer payments, further charge of £0.1 million has been included in these accounts.

The Group has considered third-party powers and does 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, managers or any third party.

US Schemes

The Group operates a tax qualified defined benefit pension scheme in the US (MUSE DB Scheme), and a Supplemental Executive Retirement Plan (SERP) which is not tax approved (together 'the US Schemes'). The MUSE DB Scheme is frozen, and therefore employees accrue 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 10 years.

The qualified MUSE DB Scheme's 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 US, 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 MUSE DB Scheme was undertaken as at 1 January 2020 and the Scheme was fully funded this basis.

On the more stringent DBO (Defined Benefit Obligation) basis used for IAS 19 purposes, the deficit as at 31 December 2020 totalled £0.5 million.

No further significant contributions to the MUSE DB Scheme are anticipated in the medium-term.

23. PENSIONS AND OTHER POST-RETIREMENT 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.

	31 December 2020				
	UK £m	US £m	Europe £m	Rest of the World £m	Total £m
Summary of net obligations					
Present value of unfunded defined benefit obligations	–	(6.9)	(43.1)	(2.6)	(52.6)
Present value of funded defined benefit obligations	(603.4)	(140.6)	(2.2)	(8.5)	(754.7)
Fair value of plan assets	483.1	140.2	0.5	7.2	631.0
	(120.3)	(7.3)	(44.8)	(3.9)	(176.3)
Movements in present value of defined benefit obligation					
At 1 January 2020	(534.6)	(146.0)	(40.0)	(14.3)	(734.9)
Current service cost	–	–	(1.1)	(1.7)	(2.8)
Past service cost	(0.1)	–	–	–	(0.1)
Interest cost	(10.8)	(4.6)	(0.3)	(0.3)	(16.0)
Actuarial gain/(loss)					
Experience gain/(loss) on plan obligations	2.2	1.3	(0.2)	0.6	3.9
Changes in financial assumptions – gain/(loss)	(82.7)	(13.8)	(3.0)	0.1	(99.4)
Changes in demographic assumptions – gain/(loss)	–	1.3	–	–	1.3
Benefits paid	22.6	9.2	1.6	4.8	38.2
Curtailments and settlements	–	0.3	–	–	0.3
Contributions by members	–	–	–	–	–
Exchange adjustments	–	4.8	(2.3)	(0.3)	2.2
At 31 December 2020	(603.4)	(147.5)	(45.3)	(11.1)	(807.3)
Movements in fair value of plan assets					
At 1 January 2020	433.1	135.4	0.4	9.2	578.1
Interest on plan assets	8.9	4.3	–	0.2	13.4
Remeasurement gain/(loss)	47.2	13.5	–	(0.4)	60.3
Contributions by employer	16.5	0.9	1.6	2.7	21.7
Contributions by members	–	–	–	–	–
Benefits paid	(22.6)	(9.2)	(1.6)	(4.8)	(38.2)
Curtailments and settlements	–	–	–	–	–
Exchange adjustments	–	(4.7)	0.1	0.3	(4.3)
At 31 December 2020	483.1	140.2	0.5	7.2	631.0
Actual return on assets	56.1	17.8	–	(0.2)	73.7
Fair value of plan assets by category					
Equities ¹	57.8	–	–	–	57.8
Growth assets ²	99.1	8.0	–	–	107.1
Bonds	64.1	128.9	–	–	193.0
Liability-driven investments (LDI) ³	93.8	–	–	–	93.8
Matching insurance policies	164.4	–	0.5	4.5	169.4
Other	3.9	3.3	–	2.7	9.9
	483.1	140.2	0.5	7.2	631.0

1. Equity values include both physical equities and the value of equity futures contracts, used to gain leveraged exposure to global equity markets.

2. Growth assets include investment in Global Diversified and Multi-Asset Funds as well as UK Property.

3. The LDI assets are pooled funds in the UK that provide a leveraged return linked to long duration fixed interest and index-linked government bonds valued at the bid price of the units. This provides interest rate and inflation hedging equivalent in size to c.100% of the invested assets of the UK Schemes.

Notes to the consolidated financial statements

23. PENSIONS AND OTHER POST-RETIREMENT EMPLOYEE BENEFITS *continued*

The Group expects to contribute £20.8 million to these arrangements in 2021.

	UK £m	US £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 2021	16.8	0.8	1.7	1.5	20.8

	31 December 2019				
	UK £m	US £m	Europe £m	Rest of the World £m	Total £m
Summary of net obligations					
Present value of unfunded defined benefit obligations	–	(7.6)	(37.9)	(2.7)	(48.2)
Present value of funded defined benefit obligations	(534.6)	(138.4)	(2.1)	(11.6)	(686.7)
Fair value of plan assets	433.1	135.4	0.4	9.2	578.1
	(101.5)	(10.6)	(39.6)	(5.1)	(156.8)

Movements in present value of defined benefit obligation

	UK £m	US £m	Europe £m	Rest of the World £m	Total £m
At 1 January 2019	(544.4)	(138.8)	(37.3)	(13.6)	(734.1)
Current service cost	–	–	(1.0)	(1.6)	(2.6)
Interest cost	(14.4)	(5.9)	(0.6)	(0.1)	(21.0)
Actuarial gain/(loss)					
Experience gain/(loss) on plan obligations	9.6	(1.3)	(2.0)	(0.2)	6.1
Changes in financial assumptions – gain/(loss)	(46.4)	(16.6)	(3.4)	(0.4)	(66.8)
Changes in demographic assumptions – gain/(loss)	35.6	1.4	–	–	37.0
Benefits paid	25.4	9.3	1.8	0.7	37.2
Curtailments and settlements	–	0.2	–	–	0.2
Contributions by members	–	–	–	–	–
Exchange adjustments	–	5.7	2.5	0.9	9.1
At 31 December 2019	(534.6)	(146.0)	(40.0)	(14.3)	(734.9)

Movements in fair value of plan assets

	UK £m	US £m	Europe £m	Rest of the World £m	Total £m
At 1 January 2019	404.3	130.0	0.4	9.0	543.7
Interest on plan assets	10.8	5.4	–	0.2	16.4
Remeasurement gain/(loss)	30.8	13.6	–	(0.2)	44.2
Contributions by employer	12.6	0.9	1.8	1.7	17.0
Contributions by members	–	–	–	–	–
Benefits paid	(25.4)	(9.3)	(1.8)	(0.7)	(37.2)
Curtailments and settlements	–	–	–	–	–
Exchange adjustments	–	(5.2)	–	(0.8)	(6.0)
At 31 December 2019	433.1	135.4	0.4	9.2	578.1
Actual return on assets	41.6	19.0	–	–	60.6

Fair value of plan assets by category

	UK £m	US £m	Europe £m	Rest of the World £m	Total £m
Equities ¹	49.1	–	–	–	49.1
Growth assets ²	97.1	7.2	–	–	104.3
Bonds	56.1	126.0	–	–	182.1
Liability-driven investments (LDI) ³	69.8	–	–	–	69.8
Matching insurance policies	160.4	–	0.4	6.8	167.6
Other	0.6	2.2	–	2.4	5.2
	433.1	135.4	0.4	9.2	578.1

1. Equity values include both physical equities and the value of equity futures contracts, used to gain leveraged exposure to global equity markets.

2. Growth assets include investment in Global Diversified and Multi-Asset Funds as well as UK Property.

3. The LDI assets are pooled funds in the UK that provide a leveraged return linked to long duration fixed interest and index-linked government bonds valued at the bid price of the units. This provides interest rate and inflation hedging equivalent in size to c.100% of the invested assets of the UK Schemes.

23. PENSIONS AND OTHER POST-RETIREMENT EMPLOYEE BENEFITS *continued*

ACTUARIAL ASSUMPTIONS

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, (reflecting the recent announcement in the UK that RPI will align with CPIH from 2030), life expectancy and several other assumptions. In making these estimates and assumptions, the Directors consider advice provided by external advisers, such as actuaries.

The assumptions used are best estimate assumptions chosen from a reasonable range and 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 the US is material to the cost of the promised benefits. In the UK, the CMI2018 mortality projection tables have been retained, rather than updating for 2019, given the uncertainty caused by the current COVID-19 pandemic. This assumption will continue to be reviewed at each accounting period. In both the UK and Europe, the assumed increases in salaries and pensions in payment are derived from assumed future inflation.

The rates shown below are single equivalents for the obligations as a whole derived from discounting along the yield curve. In line with IAS 19, in determining the value of the annuity contract held in the UK we have reflected the same methodology as used to value the corresponding obligations, reflecting the actual cash flow profile and duration of the insured obligations, rather than those of the Schemes as a whole.

Actuarial assumptions were:

	UK %	US %	Europe %	Rest of the World %
2020				
Discount rate	1.23	2.34	0.40	2.40
Salary increase	n/a	n/a	2.10	5.00
Inflation (UK: RPI/CPI)	2.88/2.03	n/a	1.60	n/a
Pensions increase ¹	3.00/2.80/3.56	n/a	1.60	n/a
Mortality – post-retirement:	–	–	–	–
Life expectancy of a male aged 60 in accounting year (years)	26.3	24.6	24.9	n/a
Life expectancy of a male aged 60 in accounting year + 20 (years)	27.8	24.7	27.7	n/a
2019				
Discount rate	2.06	3.21	0.90	2.20
Salary increase	n/a	n/a	2.20	5.00
Inflation (UK: RPI/CPI)	2.73/1.88	n/a	1.70	n/a
Pensions increase ¹	3.00/2.70/3.50	n/a	1.70	n/a
Mortality – post-retirement:				
Life expectancy of a male aged 60 in accounting year (years)	26.2	24.3	24.6	n/a
Life expectancy of a male aged 60 in accounting year + 20 (years)	27.7	24.4	26.7	n/a

1. Pension increases in the UK reflect both fixed rate and RPI related increases to different elements of members' pensions.

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.



Notes to the consolidated financial statements

23. PENSIONS AND OTHER POST-RETIREMENT EMPLOYEE BENEFITS *continued*

The sensitivities of the Group's net balance sheet to the principal assumptions are:

	Change in assumption	2020		2019	
		Increase on defined benefit obligation £m	Increase on deficit £m	Increase on defined benefit obligation £m	Increase on deficit £m
Discount rate	Decrease by 0.1%	12.7	11.1	10.7	9.2
Inflation	Increase by 0.1%	5.1	4.8	3.6	3.4
Mortality – post-retirement	Pensioners live 1 year longer	38.6	25.8	32.8	21.9
Exchange rates	GBP weakens against USD by 10%	16.4	0.8	16.2	1.2
	GBP weakens against EUR by 10%	5.0	5.0	4.4	4.4

These sensitivities have been calculated to show the movement in the net balance sheet in isolation, and assume 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.

Risks

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.

The most significant risks to which the Group is exposed are:

- **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 the majority of the UK Schemes' pensioner 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 via bonds and various hedging instruments. In the UK, the bonds and LDI mandates target an interest rate hedge against movements in government bond yields for an amount equal to approximately 100% of the invested assets. In the US, the bond mandates provide an interest rate hedge of approximately 100% of the liabilities for funded plans.

In addition, the IAS 19 defined benefit obligation is linked to yields on AA-rated corporate bonds; however some 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.

24. SHARE-BASED PAYMENTS

The Group operates various share option programmes that allow Group employees to acquire shares in the Company. During 2020, awards were made to Executives and senior employees under the Morgan Advanced Materials plc Long-Term Incentive Plan (LTIP), the Morgan Advanced Materials plc Deferred Bonus Plan (DBP) and the Morgan Advanced Materials plc Restricted Stock Units (RSU). The Company also maintains a UK all-employee Sharesave scheme (Sharesave). Further details can be found in the Remuneration Report on page 71.

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 charge expensed to the income statement in 2020 was £0.7 million (2019: £2.4 million).

24. SHARE-BASED PAYMENTS *continued*

The following options and awards were outstanding at 31 December 2020 in respect of Ordinary shares:

	Employees entitled	Vesting conditions	Exercise/award price(s)	Number of shares outstanding	Exercise dates ranging	
					from	to
LTIP	Senior employees	Continued employment plus satisfaction of performance metrics	–	4,891,053	21 March 2021	5 October 2023
Sharesave	All UK employees	Continued employment	181.00p–278.00p	1,223,368	1 December 2020	31 May 2024
DBP	Senior employees	Continued employment	–	470,750	21 March 2021	20 May 2023
RSU	Select employees	Continued employment	–	1,947,582	27 April 2021	14 October 2023

The numbers and weighted average exercise prices of share options are as follows:

	2020		2019	
	Weighted average exercise price	Number of options	Weighted average exercise price	Number of options
Outstanding at the beginning of the period	54.22p	7,735,748	52.02p	6,235,388
Granted during the period	34.48p	3,186,419	60.79p	4,086,171
Forfeited during the period	82.09p	(816,918)	79.81p	(798,402)
Exercised during the period	34.37p	(1,161,159)	80.80p	(961,967)
Lapsed during the period	36.62p	(411,337)	81.60p	(825,442)
Outstanding at the end of the period	28.68p	8,532,753	54.22p	7,735,748
Exercisable at the end of the period	207.55p	87,569	205.77p	128,653

The weighted average share price at the date of exercise during the period was 217.14 pence (2019: 265.14 pence).

MEASUREMENT OF FAIR VALUES

The DBP is an award of deferred shares which include the accumulated value of any dividends which fall during the period from the date of grant to the vesting date. The RSU is an award of shares, which are released in tranches to the participant over a specified period of time with no performance conditions except continued employment by the Group. As such, the grant-date fair value of the DBP and RSU are equal to the share price at the date of grant.

	Awards made in 2020			
	LTIP	Sharesave	DBP	RSU
Share price at award date	232.50p	210.00p	200.00p	200.50p–243.00p
Exercise price	n/a	181.00p	n/a	n/a
Fair value at measurement date	89.00p–190.00p	39.00p	200.00p	200.50p–243.00p
Fair value measurement method	Binomial model	Modified binomial model	n/a	n/a
Fair value model inputs:				
Expected volatility (expressed as weighted average volatility used in the model)	30%	30%		
Option life (expressed as weighted average life used in the model)	3 years	3.3 years		
Expected dividends	3.5%	3.7%		
Risk-free interest rate	(0.1)%	(0.1)%		

The expected volatility is based on the historical 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 fair value of services received in return for share options granted is measured by reference to the fair value of share options granted. The weighted average fair value of options issued during 2020 was 176.09 pence (2019: 205.60 pence).

25. PROVISIONS AND CONTINGENT LIABILITIES

	Closure and restructuring provisions £m	Legal and other provisions £m	Environmental provisions £m	Total £m
Balance at 1 January 2020	2.4	8.8	6.9	18.1
Provisions made during the year	20.0	3.7	2.7	26.4
Provisions used during the year	(3.3)	(0.5)	(0.7)	(4.5)
Provisions reversed during the year	(0.9)	(1.9)	(0.6)	(3.4)
Effect of movements in foreign exchange	(0.9)	0.1	–	(0.8)
Balance at 31 December 2020	17.3	10.2	8.3	35.8
Current	16.7	6.6	4.0	27.3
Non-current	0.6	3.6	4.3	8.5
	17.3	10.2	8.3	35.8

CLOSURE AND RESTRUCTURING PROVISIONS

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. 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 until the restructuring programme is completed.

LEGAL AND OTHER PROVISIONS

Legal and other provisions mainly comprise amounts provided against open legal and contractual disputes arising in the normal course of business and long-service costs. Provisions are made for the expected costs associated with such matters, based on past experience of similar items and other known factors, taking into account professional advice received, and represent management's best estimate of the most likely outcome. The timing of utilisation of these provisions is frequently uncertain, reflecting the complexity of issues and the outcome of various court proceedings and associated negotiations.

Where obligations are not capable of being reliably estimated, or if a material outflow of economic resources is considered remote, it is classified as a contingent liability. The Group is of the opinion that any associated claims that might be brought can be defeated successfully and, therefore, the possibility of any material outflow in settlement is assessed as remote.

Subsidiary undertakings within the Group have given unsecured guarantees of £9.0 million (2019: £7.4 million) in the ordinary course of business.

ENVIRONMENTAL PROVISIONS

Environmental provisions are made for quantifiable environmental liabilities arising from known environmental issues. The amounts provided are based on the best estimate of the costs required to remedy these issues. At one site, a remediation feasibility study is currently being conducted in relation to a known environmental issue, in conjunction with the local Environmental Regulator. Whilst this study has yet to be finalised, sufficient work has been completed to enable an estimate to be made for the costs of remediating the known environmental issues at this site. This cost has been provided for in the table above.

ENVIRONMENTAL CONTINGENT LIABILITIES

The Group is subject to local health, safety and environmental laws and regulations concerning its manufacturing operations around the world. These laws and regulations may require the Group to take future action to remediate the impact of historical manufacturing processes on the environment or lead to other economic outflows. Such contingencies may exist for various sites which the Group currently operates or has operated in the past. There is a contingent liability arising from the as yet unknown environmental issues at the site referred to above, pending the completion of the feasibility study.

TAX CONTINGENT LIABILITIES

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. We have provided for estimates of the Group's likely exposures where these can be reliably estimated. These are disclosed in notes 8 and 15.

26. CAPITAL COMMITMENTS

In 2020, commitments for property, plant and equipment and computer software expenditure for which no provision has been made in these accounts amount to £2.4 million (2019: £2.4 million) for the Group.

27. RELATED PARTIES

IDENTIFICATION OF RELATED PARTIES

The Group has related party relationships with its subsidiaries (a list of all related undertakings and associates is shown in note 44), and with its Directors, executive officers and their close family members.

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 executive and non-executive Directors and members of the Executive Committee charged in the year was:

	2020 £m	2019 £m
Short-term employee benefits	3.4	5.5
Employer national insurance contributions	0.6	0.6
Pension and other post-employment costs	0.3	0.4
Share-based payment (credit)/expense ¹	(0.1)	1.3
Termination payments	–	–
Non-executive Directors' fees and benefits	0.4	0.4
Total compensation of key management personnel	4.6	8.2

1. Share-based payment expense represents the net IFRS 2 share-based payment (credit)/charge to the consolidated income statement in the year for the members of the Executive Committee. In 2020, due to changes in assumptions in non-market based performance conditions, a net credit of £0.1 million was recognised in the consolidated income statement (2019: charge of £1.3 million).

OTHER RELATED PARTY TRANSACTIONS

	2020 £m	2019 £m
Sales to associate	–	–
Purchases from associate	1.8	2.0
Trade receivables due from associate	–	–
Trade payables due to associate	0.3	0.3

The balances with the Group's associate are shown in note 19. In 2020 the Group does not have any trade receivables owed by associates that have been fully provided for (2019: £nil).

28. SUBSEQUENT EVENTS

There were no other reportable subsequent events following the balance sheet date.

Company balance sheet

AS AT 31 DECEMBER 2020

	Note	2020 £m	2019 restated ¹ £m
Non-current assets			
Intangible assets	31	4.6	2.2
Property, plant and equipment	32	6.5	6.2
Right-of-use assets	33	1.3	1.2
Investments in subsidiary undertakings	34	629.0	666.8
Debtors – amounts due after more than one year	35	254.3	256.8
		895.7	933.2
Current assets			
Debtors – amounts due within one year	35	46.3	71.8
Cash and cash equivalents		4.5	26.4
		50.8	98.2
Creditors – amounts falling due within one year	36	131.9	85.7
Net current (liabilities)/assets		(81.1)	12.5
Total assets less current liabilities		814.6	945.7
Non-current liabilities			
Creditors – amounts falling due after more than one year	37	199.5	264.2
Employee benefits: pensions	39	34.8	30.3
Provisions	40	3.6	0.5
		237.9	295.0
Net assets		576.7	650.7
Capital and reserves			
Equity shareholders' funds			
Share capital	41	71.3	71.3
Share premium		111.7	111.7
Merger reserve		17.0	17.0
Capital redemption reserve		35.7	35.7
Retained earnings		341.0	415.0
Shareholders' funds		576.7	650.7

1. See note 29 for details on the restatement of the 2019 balance sheet.

The financial statements were approved by the Board of Directors on 3 March 2021 and were signed on its behalf by:

Pete Raby
Chief Executive Officer

Peter Turner
Chief Financial Officer

Company statement of changes in equity

FOR THE YEAR ENDED 31 DECEMBER 2020

	Called-up share capital £m	Share premium account £m	Merger reserve £m	Capital redemption reserve £m	Profit and loss account £m	Total equity £m
Balance at 1 January 2019	71.3	111.7	17.0	35.7	413.1	648.8
Total comprehensive income for the period:						
Profit for the year	–	–	–	–	27.3	27.3
Other comprehensive income	–	–	–	–	5.6	5.6
Transactions with owners:						
Dividends	–	–	–	–	(31.3)	(31.3)
Equity-settled share-based payment transactions	–	–	–	–	2.8	2.8
Own shares acquired for share incentive schemes (net)	–	–	–	–	(2.5)	(2.5)
Balance at 31 December 2019	71.3	111.7	17.0	35.7	415.0	650.7
Balance at 1 January 2020	71.3	111.7	17.0	35.7	415.0	650.7
Total comprehensive income for the period:						
Profit for the year	–	–	–	–	(58.8)	(58.8)
Other comprehensive income	–	–	–	–	(9.3)	(9.3)
Transactions with owners:						
Dividends	–	–	–	–	(5.7)	(5.7)
Equity-settled share-based payment transactions	–	–	–	–	1.2	1.2
Own shares acquired for share incentive schemes (net)	–	–	–	–	(1.4)	(1.4)
Balance at 31 December 2020	71.3	111.7	17.0	35.7	341.0	576.7

29. ACCOUNTING POLICIES

BASIS OF PREPARATION

These financial statements were prepared in accordance with Financial Reporting Standard 101 Reduced Disclosure Framework ('FRS 101') and the Companies Act 2006.

The separate financial statements of the Company are presented as required by the Companies Act 2006. The Company meets the definition of a qualifying entity under FRS 100 Application of Financial Reporting Requirements issued by the FRC. Accordingly, these financial statements are prepared in accordance with Financial Reporting Standard 101 Reduced Disclosure Framework.

In these financial statements, the Company has applied the exemptions available under FRS 101 in respect of the following disclosures:

- a cash flow statement and related notes;
- comparative period reconciliations for share capital, tangible fixed assets and intangible assets;
- transactions with wholly owned subsidiaries;
- the effects of new but not yet effective IFRSs;
- the compensation of key management personnel; and
- 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:

- IFRS 2 Share-Based Payments in respect of Group-settled share-based payments; and
- the disclosures required by IFRS 7 Financial Instruments Disclosures.

The Company proposes to continue to adopt the reduced disclosure framework of FRS 101 in its next financial statements.

Under Section 408(4) of the Companies Act 2006 the Company is exempt from the requirement to present its own income statement or statement of comprehensive income.

The Company's financial statements are presented in its functional currency, Pounds Sterling, generally rounded to the nearest million.

The Company's financial statements are prepared on a going concern basis as set out in note 1 the consolidated financial statements of the Group.

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 for certain financial instruments that are measured at fair value.

FOREIGN CURRENCY

Transactions in foreign currencies are translated to the Company's functional currency 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. 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.

INTANGIBLE ASSETS

Intangible assets that are acquired by the Company are stated at cost less accumulated amortisation and less accumulated impairment losses.

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:

Software: 3-7 years

PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment is 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:

Plant, equipment and fixtures: 3-20 years
Buildings: 50 years

Depreciation methods, useful lives and residual values are reviewed at each balance sheet date.



29. ACCOUNTING POLICIES *continued*

LEASING

The Company assesses whether a contract is or contains a lease, at inception of the contract. The Company recognises a right-of-use asset and a corresponding lease liability with respect to all lease arrangements in which it is the lessee.

The lease liability is initially measured at the present value of future lease payments including adjustments for any lease incentives receivable. Lease payments to be made under reasonably certain extension options are also included in the measurement of the liability. Lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be readily determined, which is generally the case of leases in the company, the lessee's incremental borrowing rate is used, and being the rate the individual lessee would have to pay to borrow the funds necessary to obtain an asset of similar value on similar terms.

The right-of-use-assets comprise the initial measurement of the corresponding lease liability, lease payments made at or before the commencement date, less any lease incentives received and initial direct costs. They are subsequently measured at cost less accumulated depreciation and impairment losses.

Right-of-use assets are depreciated over the shorter period of the lease term and useful life of the underlying asset. The depreciation starts at the commencement date of the lease.

INVESTMENTS IN SUBSIDIARIES

Investments in subsidiaries are carried at cost less provision for impairment. The Company tests the investment balances for impairment annually or when there are indicators of impairment. If any such indication of impairment exists, the Company makes an estimate of its recoverable amount. Where the carrying amount of an investment exceeds its recoverable amount, the investment is considered impaired and is written down to its recoverable amount. Where these circumstances have reversed, the impairment previously made is reversed to the extent of the original cost of the investment.

FINANCIAL INSTRUMENTS

Financial instruments and financial liabilities are recognised in the Company balance sheet when the Company becomes party to the contractual provisions of the instrument.

CLASSIFICATION OF FINANCIAL INSTRUMENTS ISSUED BY THE COMPANY

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 recorded initially at transaction price and subsequently measured at amortised cost. This results in their recognition at nominal value less an allowance for any doubtful debts. The allowance for doubtful debts is recognised based on management's expectation of losses without regard to whether an impairment trigger happened or not (an 'expected credit loss' model). The Group measures the loss allowance for trade receivables at an amount equal to lifetime ECL.

Trade and other creditors

Trade and other creditors are recognised initially at transaction price. Subsequent to initial recognition they are measured at amortised cost using the effective interest method. The Directors consider that the carrying amount of trade payables approximates to their fair value.

Interest-bearing borrowings

Interest-bearing bank loans and overdrafts are initially recorded at fair value of the consideration received, net of direct issue costs. They are subsequently held at amortised cost using the effective interest method. Finance charges, including premiums payable on settlement or redemption and direct issue costs, are accounted for using an effective interest rate method and are added to or deducted from the carrying amount of the instrument to the extent that they are not settled in the period in which they arise.

29. ACCOUNTING POLICIES *continued*

Impairment of financial assets

The Company recognises provisions for expected credit losses (ECLs) on financial assets measured at amortised cost. The amount of expected credit losses is updated at each reporting date to reflect changes in credit risk with lifetime ECL recognised when there has been a significant increase in credit risk since initial recognition. Lifetime ECL represents the expected credit losses that will result from all possible defaults over the expected life of the financial instrument.

To assess whether the credit risk has increased significantly since initial recognition the Company compares the risk of a default occurring at the reporting date with the risk of default at the date of initial recognition. The Company utilises both quantitative and qualitative information to support this assessment, including historical experience and forward-looking information.

The Company considers amounts due by Group undertakings to be in default when the borrower is unlikely to pay its credit obligations to the Company in full. A financial asset is 'credit-impaired' when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred.

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. The Group enters into derivative financial instruments to manage its exposure to foreign exchange rate risks including non-designated foreign exchange forward contracts as detailed in note 45.

A derivative with a positive fair value is recognised as a financial asset whereas a derivative with a negative fair value is recognised as a financial liability. Derivatives are not offset in the financial statements unless the Group has both a legally enforceable right and intention to offset. The impact of the Master Netting Agreements on the Group's financial position is disclosed in note 22. A derivative is presented as a non-current asset or a non-current liability if the remaining maturity of the instrument is more than 12 months and it is not due to be realised or settled within 12 months. Other derivatives are presented as current assets or current liabilities.

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.

Actuarial gains and losses that have arisen since the adoption of FRS 101 are recognised in the period that 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'). The Company also guarantees certain obligations and liabilities to the employees that currently participate in the two UK Schemes. During 2016 the Company adopted a new policy to allocate costs associated with the UK pension schemes between itself, as Principal Employer, and the various Participating Employers, based on an evaluation of each entity's share of overall Scheme liabilities. This ensures that the pension liability is reflected in the entity that employed the participant. Previously all of the Scheme assets and liabilities were recognised on the balance sheet of the Company only. Further details are provided in note 39.

29. ACCOUNTING POLICIES *continued*

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. Share-based payment charges and credits relating to awards granted to employees of subsidiaries are recharged to those subsidiaries with a corresponding entry in the Company's income statement. 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.

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.

Disclosure of the share-based payment transactions can be found in note 24 to the Group financial statements.

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 where the effect of discounting is expected to be material.

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.

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.

USE OF JUDGEMENTS AND ESTIMATES

In preparing these financial statements, management has made judgements, estimates and assumptions that affect the application of the Company's accounting policies and the reported amounts of assets, liabilities, income and expenses.

In addition to the areas of judgements and estimates outlined in note 1 to the consolidated Group financial statements, the Company also identifies the assumptions required in investment impairment assessments as a source significant risk of resulting in a material adjustment to the asset carrying values of the Company. Assessment of impairment relies on the use of estimates of the future profitability in a multiple based valuation which may differ from the actual results achieved. Due to the current COVID-19 global pandemic, there is an increased level of risk and therefore a key source of estimation uncertainty in these assumptions, see note 34 for a sensitivity analysis.



Notes to the Company balance sheet

29. ACCOUNTING POLICIES *continued*

PRIOR PERIOD ADJUSTMENTS

	2019 As reported	Adjustments			2019 total adjustments £m	2019 Restated
		Preference shares	Amounts owed by Group undertakings	Derivatives		
Decrease in investments (loans)	1,119.4	–	(265.1)	(187.5)	(452.6)	666.8
Increase in non-current amounts owed by Group undertakings	–	–	247.0	–	247.0	247.0
Increase in non-current derivative financial assets	4.9	–	–	4.9	4.9	9.8
Increase in current amounts owed by Group undertakings	50.4	–	18.1	–	18.1	68.5
Impact on assets	1,174.7	–	–	(182.6)	(182.6)	992.1
Increase in non-current borrowings	176.2	0.4	–	–	0.4	176.6
Decrease in non-current amounts owed to Group undertakings	266.9	–	–	(183.2)	(183.2)	83.7
Increase in non-current derivative financial liabilities	2.7	–	–	0.6	0.6	3.3
Impact on liabilities	445.8	0.4	–	(182.6)	(182.2)	263.6
Decrease in net assets		(0.4)	–	–	(0.4)	–
Decrease in share capital	71.7	(0.4)	–	–	(0.4)	71.3
Impact on Shareholders' funds		(0.4)	–	–	(0.4)	

PREFERENCE SHARES

The Company financial statements have been restated to reclassify the Company's cumulative preference shares previously held as equity to borrowings. Following a review of the substance of the shares it was determined that the cumulative preference shares do not contain an equity element. There was no impact to the income statement as the dividends, previously classified as distributions from equity that have been reclassified to finance charges within the income statement totalled less than £0.1 million.

AMOUNTS OWED BY GROUP UNDERTAKINGS

Following a review of the amounts owed by Group undertakings to the Company management have reclassified loans not considered investment-like in nature from presentation within investments to presentation in current and non-current debtors depending on the term of the loan agreement and expectation of settlement date.

DERIVATIVES

As a result of the above outlined review, a reclassification between investments and amounts owed to Group undertaking has been recognised to reflect that the Company has the legal right and intends to settle on a net basis the notional amount of intragroup derivatives. The fair value of the intragroup derivatives is also now presented along with other derivatives.

30. STAFF NUMBERS AND COSTS

The average number of persons employed by the Company (including Directors) during the year was as follows:

Number of employees	2020	2019
Directors and corporate staff	63	54

Full details of the Directors' remuneration for the period can be found in the Remuneration Report on pages 68 to 86.

Aggregate employee-related costs were as follows:

	Note	2020 £m	2019 £m
Wages and salaries		8.0	9.6
Equity-settled share-based payment expense	24	0.7	2.4
Social security costs		1.4	1.1
Other pension costs		0.7	0.5
		10.8	13.6

In 2020, £1.3 million (2019: £1.6 million) of the equity-settled share-based payments amount was recharged to other Morgan Group companies.

31. INTANGIBLE ASSETS

	Software £m
Cost	
Balance at 1 January 2020	11.1
Additions – externally purchased	4.6
Disposals	(4.8)
Balance at 31 December 2020	10.9
Amortisation	
Balance at 1 January 2020	8.9
Amortisation for the year	1.5
Disposals	(4.1)
Balance at 31 December 2020	6.3
Carrying amounts	
At 31 December 2019	2.2
At 31 December 2020	4.6

32. PROPERTY, PLANT AND EQUIPMENT

	Plant, equipment and fixtures £m	Land and buildings £m	Total £m
Cost			
Balance at 1 January 2020	1.6	12.1	13.7
Additions	0.6	–	0.6
Disposals	(1.1)	–	(1.1)
Balance at 31 December 2020	1.1	12.1	13.2
Depreciation and impairment losses			
Balance at 1 January 2020	1.1	6.4	7.5
Depreciation charge for the year	0.2	0.1	0.3
Disposals	(1.1)	–	(1.1)
Balance at 31 December 2020	0.2	6.5	6.7
Carrying value			
At 31 December 2019	0.5	5.7	6.2
At 31 December 2020	0.9	5.6	6.5

33. LEASING

The reconciliation in the movement of carrying value in of right-of-use assets is set out in the table below:

	Plant and equipment £m	Land and buildings £m	Total £m
Balance at 1 January 2020	1.0	0.2	1.2
Additions	–	0.7	0.7
Depreciation charge for the year	(0.4)	(0.2)	(0.6)
Balance at 31 December 2020	0.6	0.7	1.3

The Company leases several assets including buildings and IT equipment. The average lease term at 31 December 2020 is 3.4 years (2019: 2.4 years).

At 31 December 2020, the Company has not applied any exemptions for short-term leases or leases of low-value assets.

34. INVESTMENT IN SUBSIDIARY UNDERTAKINGS

	Shares in Group undertakings £m	Loans £m	Total £m
Cost			
Balance at 1 January 2020 as reported	449.6	834.2	1,283.8
Correction of prior period ¹	–	(454.2)	(454.2)
Balance at 1 January 2020 restated	449.6	380.0	829.6
Additions	–	11.1	11.1
Disposals	(0.2)	–	(0.2)
Loan repayments	–	(2.1)	(2.1)
Effect of movement in foreign exchange	–	(4.1)	(4.1)
Balance at 31 December 2020	449.4	384.9	834.3
Provisions			
Balance at 1 January 2020 restated	107.5	56.9	164.4
Correction of prior period ¹	–	(1.6)	(1.6)
Balance at 1 January 2020 as restated	107.5	55.3	162.8
Provided in the year	48.9	9.7	58.6
Reversal of impairment	(16.5)	–	(16.5)
Disposals	(0.2)	–	(0.2)
Effect of movement in foreign exchange	–	0.6	0.6
Balance at 31 December 2020	139.7	65.6	205.3
Carrying amounts			
At 31 December 2019 restated ¹	342.1	324.7	666.8
At 31 December 2020	309.7	319.3	629.0

1. See note 29 for details on the restatement of the 2019 balances.

During the year management conducted a review of the Company's investment in subsidiaries undertakings following the economic uncertainty as a result of COVID-19. Following this review it was necessary to recognise impairment losses of £48.9 million (2019: £nil) and £9.7 million (2019: £0.2 million) against a number of Shares in Group undertakings and loans respectively which reflected the reduced expectation in future cash flows arising from these investments.

Following the same review management identified the reversal of impairment losses of £16.5 million (2019: £nil) against a number of Shares in Group undertakings which reflected the increased expectation in future cash flows arising from these investments.

The impairment assessment of shares in Group undertakings uses the Board approved, 2021 budgets in an EBITDA* multiple valuation, which is sensitive to changes in the principal assumptions. A 2% increase in either EBITDA* or the multiple would increase the carrying value of shares in Group undertakings by £7.9 million at 31 December 2020. A 2% decrease would decrease the carrying value by £7.9 million. Management consider these changes in assumption to be reasonably possible.

Note 44 to the financial statements gives details of the Company's fixed asset investments.



35. DEBTORS

	Note	2020 £m	2019 restated ¹ £m
Due within one year			
Amounts owed by Group undertakings		42.6	68.5
Other debtors		1.2	1.1
Derivative financial assets	45	1.4	1.7
Prepayments		1.1	0.5
		46.3	71.8
Due after more than one year			
Derivative financial assets	45	10.1	9.8
Amounts owed by Group undertakings		244.2	247.0
		254.3	256.8

1. See note 29 for details on the restatement of the 2019 balances.

36. CREDITORS: AMOUNTS FALLING DUE WITHIN ONE YEAR

	Note	2020 £m	2019 restated ¹ £m
Bank overdrafts	38	38.9	12.5
Borrowings	38	–	49.3
Lease liabilities		0.5	0.6
Trade creditors		3.3	2.3
Amounts owed to Group undertakings		77.4	10.7
Other creditors		3.1	4.1
Accruals		7.1	4.3
Derivative financial liabilities	45	1.6	1.9
		131.9	85.7

1. See note 29 for details on the restatement of the 2019 balances.

Notes to the Company balance sheet

37. CREDITORS: AMOUNTS FALLING DUE AFTER MORE THAN ONE YEAR

	Note	2020 £m	2019 restated ¹ £m
Amounts owed to Group undertakings		15.2	83.7
Borrowings	38	176.8	176.6
Lease liabilities		0.8	0.6
Derivative financial liabilities	45	5.0	3.3
Other creditors		1.7	–
		199.5	264.2

1. See note 29 for details on the restatement of the 2019 balances.

38. BORROWINGS AND LEASE LIABILITIES TERMS AND DEBT REPAYMENT SCHEDULE

	Currency	Effective interest rate	Year of maturity	2020		2019 restated ¹	
				Carrying amount £m	Fair value £m	Carrying amount £m	Fair value £m
Bank overdrafts	Various	1.95%		38.9	38.9	12.5	12.5
1.18% Euro Senior Notes 2023	EUR	1.18%	2023	22.4	22.6	21.2	21.2
3.17% US Dollar Senior Notes 2023	USD	3.17%	2023	11.0	11.4	11.4	11.3
1.55% Euro Senior Notes 2026	EUR	1.55%	2026	22.4	23.2	21.2	21.5
3.37% US Dollar Senior Notes 2026	USD	3.37%	2026	71.4	75.1	73.5	72.1
1.74% Euro Senior Notes 2028	EUR	1.74%	2028	9.0	9.4	8.5	8.6
2.89% Euro Senior Notes 2030	EUR	2.89%	2030	22.3	24.3	21.1	22.2
4.87% US Dollar Senior Notes 2026	USD	4.87%	2026	18.6	20.7	19.2	20.2
Syndicated revolving credit facility	GBP	0.45%	2024	(0.7)	(0.7)	4.1	4.1
Syndicated revolving credit facility	USD	0.70%	2024	–	–	45.2	45.2
5.50% Cumulative First Preference Shares	GBP	5.50%		0.1	0.1	0.1	0.1
5.00% Cumulative Second Preference Shares	GBP	5.00%		0.3	0.3	0.3	0.3
Lease liabilities	GBP	2.30%	2022-2025	1.3	1.3	1.2	1.2
				217.0	226.6	239.5	240.5

1. See note 29 for details on the restatement of the 2019 balances.

In 2020, no borrowings were secured on the assets of the Company (2019: £nil).

39. EMPLOYEE BENEFITS: PENSIONS

DEFINED BENEFIT PLANS

The Company participates in two defined benefit pension schemes, the Morgan Pension Scheme and the Morgan Group Senior Staff Pension and Life Assurance Scheme (the Schemes). The 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. The Morgan Group Senior Staff Pension and Life Assurance Scheme was closed to the future accrual of benefits on and with effect from 6 April 2016. The Morgan Pension Scheme was closed to the future accrual of benefits on and with effect from 6 April 2018. Current employees, including those who were active in the Schemes at closure, were auto-enrolled into The Morgan Group Personal Pension Plan for their future pension benefits.

	2020 £m	2019 £m
Pension plans and employee benefits		
Present value of funded defined benefit obligations	(195.5)	(175.5)
Fair value of plan assets	160.7	145.2
Net obligations	(34.8)	(30.3)
Movements in present value of defined benefit obligation		
At 1 January	(175.5)	(178.2)
Interest cost	(3.5)	(4.6)
Remeasurement (losses)/gains:		
Changes in financial assumptions	(25.3)	(14.9)
Changes in demographic assumptions	–	7.8
Experience adjustments on benefit obligations	0.8	6.0
Benefits paid	8.0	8.4
At 31 December	(195.5)	(175.5)
Movements in fair value of plan assets		
At 1 January	145.2	139.2
Interest on plan assets	2.8	3.7
Remeasurement gains	15.3	6.7
Contributions by employer	5.4	4.0
Benefits paid	(8.0)	(8.4)
At 31 December	160.7	145.2
Actual return on assets	18.1	10.4
Expense recognised in the income statement		
	2020 £m	2019 £m
Administrative expenses (including administration expenses incurred by the Company directly)	(0.8)	(0.4)
Net interest on net defined benefit liability	(0.7)	(0.5)
Total expense recognised in the income statement	(1.5)	(0.9)

The fair values of the plan assets were as follows:

	2020 £m	2019 £m
Equities and growth assets	44.0	37.1
Bonds	46.9	36.3
Matching insurance policies	68.3	66.7
Other	1.5	5.1
Total	160.7	145.2

Notes to the Company balance sheet

39. EMPLOYEE BENEFITS: PENSIONS *continued*

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:	2020 %	2019 %
Inflation (RPI/CPI)	2.88/2.03	2.73/1.88
Discount rate	1.23	2.06
Pensions increase	3.00/2.80/3.56	3.00/2.70/3.50
Salary increase	n/a	n/a
Mortality – post-retirement:		
Life expectancy of a male aged 60 in accounting year (years)	26.3	26.2
Life expectancy of a male aged 60 in accounting year + 20 (years)	27.8	27.7

Funding

The most recent full actuarial valuations of the Schemes were undertaken as at 31 March 2019 and resulted in combined assessed deficits of £120.3 million. On the basis of these full valuations, the Trustees of the Schemes, having consulted with the Group, agreed past service deficit recovery payments totalling £16.5 million a year from January 2020 (Company: £5.4 million), increasing by 2.75% pa from April 2021 until 2025, with further payments to Morgan Pension Scheme for 2026 and 2027. New full valuations are due with effective dates of 31 March 2022.

Sensitivity analysis

The sensitivities of the Company's net balance sheet to the principal assumptions are:

	Change in assumption	2020 Increase effect £m	2019 Increase effect £m
Discount rate	Decrease by 0.1%	2.5	2.0
Inflation	Increase by 0.1%	1.1	0.9
Mortality – post-retirement	Pensioners live 1 year longer	6.0	4.4

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 (except where a fully matching insurance policy is held where this asset is assumed to change in value to match the change in obligations). 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 total Company expense relating to defined contribution plans in 2020 was £0.6 million (2019: £0.5 million).

40. PROVISIONS AND CONTINGENT LIABILITIES

	Dilapidation provisions £m	Other provisions £m	Total £m
Balance at 1 January 2020	0.1	0.4	0.5
Provisions made during the year	0.2	3.0	3.2
Provisions used during the year	–	(0.1)	(0.1)
Balance at 31 December 2020	0.3	3.3	3.6

Other provisions relate to legal claims and are based on the Company's assessment of the probable cost of these activities.

Contingent liabilities

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.

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 Company's financial position.

There are no other contingent liabilities in the Company as at 31 December 2020.

41. SHARE CAPITAL

	Ordinary Shares	
In issue at beginning and end of the period	285,369,988	
	2020 £m	2019 £m
Allotted, called up and fully paid		
Ordinary shares of 25 pence each	71.3	71.3
	71.3	71.3

Refer to note 20 for details of the rights to dividends, voting rights and return of capital relating to the Preference shares.

Additionally the Company has authorised, issued and fully paid 437,281 (2019: 437,281) cumulative preference shares classified as borrowings totalling £0.4 million (2019: £0.4 million). The redeemable preference shares comprise 125,327 of 5.5% Cumulative First Preference shares of £1 each and 311,954 issued 5.0% Cumulative Second Preference shares of £1 each.

Refer to note 20 for details of the rights to dividends, voting rights and return of capital relating to the Preference shares.

For proposed Ordinary dividends see the consolidated income statement on page 99.

42. SHARE PREMIUM AND RESERVES

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 20.

Apex Financial Services (Trust Company) Limited administer The Morgan General Employee Benefit Trust (the 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 1 March 1996 (as amended).

The total number of own shares held by the Trust at 31 December 2020 was 841,880 (2019: 1,245,133) and at that date had a market value of £2.6 million (2019: £4.0 million).

In 2020, the amount of reserves of Morgan Advanced Materials plc that may be distributed under Section 831(4) of the Companies Act 2006 was £148.3 million (2019: £222.4 million). This comprises a portion of the profit and loss account.

43. RELATED PARTIES

The Company has related party relationships with its subsidiaries, its associate, its Directors and executive officers and their close family members. The Company is exempt from providing information relating to these parties with the exception of transactions with entities where the Company does not directly or indirectly own 100% of the shareholding, these are set out in the table below:

	2020 £m	2019 £m
Transactions with subsidiaries		
Income from management services	2.0	2.7
Net interest income	4.3	4.3
Dividend income	13.0	12.8
Loans owed by related parties	–	9.8
Other amounts owed by related parties	3.0	24.3
Other amounts owed to related parties	1.1	3.0

Notes to the Company balance sheet

44. FIXED ASSET INVESTMENTS

In accordance with Section 409 of the Companies Act 2006, a full list of related undertakings as at 31 December 2020 is disclosed below. Related undertakings include subsidiary undertakings, all significant holdings (being 20% or more interest), associated undertakings, joint ventures and qualifying partnerships. Unless otherwise stated the Group's shareholding represents Ordinary shares held indirectly by the Company.

Name of undertaking	Country of incorporation	Registered office address	% shareholding owned by the Group
Carbo San Luis S.A.11	Argentina	Talcahuano 736, 4th Floor, Buenos Aires, C1013AAP, Argentina	100.00%
Morgan Technical Ceramics Australia Pty Ltd	Australia	4 Redwood Drive, Clayton, VIC 3168, Australia	100.00%
Morganite Australia Pty Ltd ¹²	Australia	Unit 4, 92-100 Belmore Road, Riverwood, NSW 2210, Australia	100.00%
Morgan Mechanical Carbon Australasia Pty Ltd ¹	Australia	Unit 4, 92-100 Belmore Road, Riverwood, NSW 2210, Australia	100.00%
Morganite Brasil Ltda ³	Brazil	Avenida do Taboão 3265, Taboão, São Bernardo do Campo, São Paulo, CEP 09656-000, Brazil	100.00%
Morgan Advanced Materials Canada Inc. ¹⁴	Canada	1185 Walkers Line, Burlington, ON L7M 1L1, Canada	100.00%
Carbo Chile S.A.	Chile	Avenida San Eugenio 12462, Sitio 3, Loteo Estrella del Sur, Santiago, Chile	100.00%
Dalian Morgan Ceramics Company Ltd ⁵	China	No. 931 Xi'an Road, Shahekou District, Dalian, Liaoning Province 116200, China	100.00%
Morgan Guangzhou Trading Company Limited	China	Room 204, No. 10, Dalang north street, Huangpu district, Guangzhou, China	100.00%
Morgan Haldenwanger Technical Ceramics (Wuxi) Co. Ltd ¹⁵	China	Gongyuanxi Road, Ding Shu Zhen, Yixing, Jiangsu Province 214221 China	100.00%
Morgan Molten Metal Systems (Suzhou) Co. Ltd ^{1, 16}	China	108 Tongsheng Road, Suzhou Industrial Park, Suzhou, Jiangsu Province, 215126, China	100.00%
Morgan Technical Ceramics (Suzhou) Co. Ltd	China	Room #101, Building #4, No. 188 Jialing Jiang Road, Suzhou New District, Suzhou 215163, Jiangsu Province, China	100.00%
Morgan Thermal Ceramics (Shanghai) Co. Ltd ^{1, 15}	China	18 Kang An Road, Kang Qiao Industrial Zone, Pudong, Shanghai 201315, China	100.00%
Morgan International Trading (Shanghai) Co. Ltd ^{1, 15}	China	18 Kang An Road, Kang Qiao Industrial Zone, Pudong, Shanghai 201315, China	100.00%
Shanghai Morgan Advanced Material and Technology Co. Ltd ^{1, 16}	China	4250 Long Wu Road, Shanghai, 200241, China	100.00%
Jiangsu Morgan Ceramic Core Technology Co. Ltd ¹³	China	2 Liye Road, Economic Development Zone, Wuxi, Jiangsu Province, 214131, China	100.00%
Beijing Morgan Ceramics Co. Ltd ¹⁵ (in liquidation)	China	6th Floor, building 17, No. A1Chaoqian Road, Changping District, Beijing 102200, China	100.00%
Morgan AM&T (Shanghai) Co. Ltd ^{5, 13}	China	4250 Long Wu Road, Shanghai, 200241, China	70.00%
Morgan Kailong (Jingmen) Thermal Ceramics Co. Ltd ^{5, 15}	China	20-1 Quankou Road, Jingmen City, Hubei Province, 448032, China	70.00%
Dalian Morgan Refractories Ltd ^{5, 15}	China	No. 931 Xi'an Road, Shahekou District, Dalian, Liaoning Province 116200, China	70.00%
Yixing Morgan Thermal Ceramics Co. Ltd ^{6, 15}	China	2 Beidan Road, Taodu Industrial Park, Ding Shu Zhen, Yixing, Jiangsu, 214222, China	51.00%
Thermal Ceramics de Colombia ⁹	Colombia	Calle 18 No. 23-31, Bodega 1, Guadalajara de Buga-Valle, AA 5086, Colombia	100.00%
Morgan Carbon France S.A.	France	6 rue du Réservoir, 68420 Eguisheim, France	100.00%
Thermal Ceramics de France S.A.S.U. ¹⁶	France	Centre de Vie BP 75, 3 rue du 18 Juin 1827, 42162 Andrézieux-Bouthéon, France	100.00%
Marshall Morganite S.A. (in liquidation)	France	5 bis rue Retrou, 92600 Asnières-sur-Seine, France	99.88%
Thermal Ceramics S.A. ^{10, 16}	France	Centre de Vie BP 75, 3 rue du 18 Juin 1827, 42162 Andrézieux-Bouthéon, France	100.00%

44. FIXED ASSET INVESTMENTS *continued*

Name of undertaking	Country of incorporation	Registered office address	% shareholding owned by the Group
Morgan Advanced Materials Haldenwanger GmbH ¹⁷	Germany	Teplitzerstraße 27, 84478 Waldkraiburg, Germany	100.00%
Morgan Electrical Carbon Deutschland GmbH	Germany	Zeppelinstraße 26, 53424 Remagen, Germany	100.00%
Morgan Thermal Ceramics Deutschland GmbH	Germany	Borsigstraße 4-6, 21465 Reinbek, Germany	100.00%
Morgan Molten Metal Systems GmbH	Germany	Noltinastraße 29, 37297 Berkatal-Frankenhain, Germany	100.00%
Morgan Deutschland Holding GmbH	Germany	Zeppelinstraße 26, 53424 Remagen, Germany	100.00%
Porextherm Dämmstoffe GmbH	Germany	Heisingerstraße 8/10, 87437 Kempten (Allgäu), Germany	100.00%
Morgan Holding GmbH	Germany	Zeppelinstraße 26, 53424 Remagen, Germany	100.00%
The Morgan Crucible Management GmbH	Germany	Zeppelinstraße 26, 53424 Remagen, Germany	100.00%
Wesgo Ceramics GmbH	Germany	Willi-Grasser-Straße 11, 91056 Erlangen, Germany	100.00%
Ceramicas Termicas S.A.	Guatemala	20 Calle 1860, Apartamento 2, Zona 10, Guatemala City, Guatemala	100.00%
Refractarios Múltiples S.A.	Guatemala	Km. 34.5, Ruta al Pacífico, Palín, Escuintla, Guatemala	100.00%
Refractarios Nacionales S.A.	Guatemala	Km. 34.5, Ruta al Pacífico, Palín, Escuintla, Guatemala	100.00%
Morgan AM&T Hong Kong Company Ltd	Hong Kong	Units 4-6, 11/F, Siu Wai Industrial Centre, 29-33 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong	100.00%
Morgan Materials Hungary Limited Liability Company ¹⁵	Hungary	Csillagvirág utca 7, 1106 Budapest, Hungary	100.00%
Morgan Advanced Materials India Private Ltd	India	P-11, Pandav Nagar, Mayur Vihar Phase I, Delhi, 110091 India	100.00%
Morganite Crucible (India) Ltd	India	B-11, MIDC Industrial Area, Waluj, Aurangabad, 431136, Maharashtra, India	75.00%
Ciria India Limited ¹⁵	India	P-11, Pandav Nagar, Mayur Vihar Phase I, Delhi, 110091 India	70.00%
Murugappa Morgan Thermal Ceramics Ltd ⁶	India	PO Box 1570, Dare House Complex, Old No. 234/New No. 2, NSC Bose Road, Chennai, 600001 India	51.00%
Thermal Ceramics Italiana S.R.L. ¹³	Italy	Via Delle Rogge 6, Casalpusterlengo, 26841 LODI, Italy	100.00%
Morgan Carbon Italia S.R.L.	Italy	Via Roma 338, Martinsicuro Terni, 64014 d Italy	100.00%
Morganite Carbon Kabushiki Kaisha	Japan	30-31 Enoki-Cho, Suita City, Osaka 564-0053, Japan	100.00%
Shin-Nippon Thermal Ceramics Corporation	Japan	Portus Center Building 12F, 4-45-1 Ebisujimacho, Sakai-ku, Sakai-shi, Osaka 590-0985, Japan	50.00%
Morgan Korea Company Ltd ^{4, 18}	Korea	27 Nongongjoongang-ro 46 gil, Nongong-eup, Dalseong-gun, Daegu-si, Republic of Korea	93.19%
Morganite Luxembourg S.A.	Luxembourg	BP 15, Capellen, L-8301 Luxembourg	100.00%
Grafitos y Maquinados S.A. de C.V. ^{1, 19}	Mexico	Cerrada de la Paz No. 101, Col. Industrial La Paz, Pachuca Hidalgo, Mexico	100.00%
Grupo Industrial Morgan S.A. de C.V. ^{1, 19}	Mexico	Cerrada de la Paz No. 101, Fraccionamiento Industrial La Paz, Mineral de la Reforma, 42181 Hidalgo, 42092 Mexico	100.00%
Morgan Technical Ceramics S.A. de C.V. ¹⁹	Mexico	Av. Fulton No. 20, Fraccionamiento Industrial Valle de Oro, San Juan del Rio, Queretaro C.P. 76802, Mexico	100.00%
Morgan Holding Netherlands B.V.	Netherlands	Oude Veiling 3, 1689 AA Zwaag, The Netherlands	100.00%
Gunac B.V.	Netherlands	Oude Veiling 3, 1689 AA Zwaag, The Netherlands	100.00%
Morgan Terrassen B.V.	Netherlands	Oude Veiling 3, 1689 AA Zwaag, The Netherlands	100.00%
Morgan AM&T B.V.	Netherlands	Oude Veiling 3, 1689 AA Zwaag, The Netherlands	100.00%
Thermal Ceramics Benelux B.V.	Netherlands	Tramweg 27, 3255 MB Oude Tonge, The Netherlands	100.00%
Morgan Donald Brown Limited	New Zealand	KPMG, Chartered Accountants, KPMG Centre, 18 Viaduct Harbour Avenue, Maritime Square, Auckland, 1010, New Zealand	100.00%
Morgan Carbon Polska Sp.zoo	Poland	ul. Iskry 26, 01-472 Warszawa, Poland	100.00%
Thermal Ceramics Polska Sp.zoo	Poland	Towarowa 9, 44-100 Gliwice, Poland	100.00%

Notes to the Company balance sheet

44. FIXED ASSET INVESTMENTS *continued*

Name of undertaking	Country of incorporation	Registered office address	% shareholding owned by the Group
Morgan Thermal Ceramics Sukhoy Log LLC ²⁰	Russia	Russia 624800, Sverdlovsk District, Sukhoy Log 624800, Ul. Militseyskaya 2	51.00%
Morgan Ceramics Asia Pte Ltd ¹	Singapore	150 Kampong Ampat, #05-06A, KA Centre, 368324 Singapore	100.00%
Morganite Ujantshi (Pty) Ltd	South Africa	149 South Rand Road, Tulisa Park, Johannesburg 2197, South Africa	74.90%
Thermal Ceramics South Africa (Pty) Ltd	South Africa	149 South Rand Road, Tulisa Park, Johannesburg 2197, South Africa	100.00%
Morganite South Africa (Pty) Ltd	South Africa	149 South Rand Road, Tulisa Park, Johannesburg 2197, South Africa	100.00%
Thermal Ceramics España S.L.	Spain	Juan Pablo II, no. 6, 2, Local A, 12003 Castellon, Spain	100.00%
Morganite Española S.A.	Spain	Juan Pablo II, no 6. 2e Local A, 12003 Castellon, Spain	100.00%
Morgan Matroc S.A. (in liquidation)	Spain	Roger de Lluria 104 5 ^a -2 ^a , 08037 Barcelona, Spain	100.00%
Morgan Advanced Materials (Taiwan) Co. Ltd	Taiwan	25 Hsin-Yeh Street, Hsiao Kang, Kaohsiung 81208, Taiwan	100.00%
Morganite Thermal Ceramics (Taiwan) Ltd	Taiwan	c/o Baker & McKenzie, 15/f, 168 Tun Hwa North Road, Taipei 105, Taiwan	88.00%
Morgan Holdings (Thailand) Ltd ²	Thailand	22nd-25th Floor, No. 990 Rama IV Road, Khwaeng Silom, Bangrak District, Bangkok 10500, Thailand	100.00%
		990, 22nd-25th Floor, Rama IV Road, Khwaeng Silom Sub-district, Bangrak District, Bangkok, 10500, Thailand	
Morgan Technical Ceramics (Thailand) Ltd ²	Thailand	No. 958 On-nuch Road, Khwaeng Suanluang, Khet Suanluang, Bangkok, 10250, Thailand	100.00%
MKGS Morgan Karbon Grafit Sanayi Anonim Sirketi	Turkey	Osmangazi Mahallesi 2647, Sokak No. 27/3, Kiraç, Esenyurt, Istanbul 34522, Turkey	100.00%
Morgan Advanced Materials Industries Ltd	United Arab Emirates	KHIA4-07A, Khalifa Industrial Zone Abu Dhabi (KIZAD), Abu Dhabi, United Arab Emirates	100.00%
Morgan Ceramics Middle East FZE	United Arab Emirates	Post Box 16426, #404B, Business Centre, 4 RAK Economic Zone, Ras Al Khaimah, United Arab Emirates	100.00%
Certech International Limited ¹	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
MCCo Limited ⁷	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
MNA Finance Limited ¹	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
Morgan Electro Ceramics Limited ¹	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
Morgan Europe Holding Limited ¹	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
Morgan European Finance Limited	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
Morgan Finance Management Limited	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
Morgan Holdings Limited ¹	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
Morgan International Holding Limited	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
Morgan North America Holding Limited ¹	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
Morgan Technical Ceramics Limited	United Kingdom	Morgan Advanced Materials – Technical Ceramics, Morgan Drive, Stourport-on-Severn, Worcestershire DY13 8DW, UK	100.00%
Morgan Trans Limited ¹	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
Morganite Carbon Limited ¹	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
Morganite Crucible Limited ¹	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
Morganite Electrical Carbon Limited	United Kingdom	Upper Fforest Way, Morriston, Swansea, West Glamorgan, SA6 8PP, UK	100.00%
Morganite Special Carbons Limited ¹	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
Petty France Investment Nominees Limited ¹	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
TCG Guardian I Limited	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%

44. FIXED ASSET INVESTMENTS *continued*

Name of undertaking	Country of incorporation	Registered office address	% shareholding owned by the Group
TCG Guardian 2 Limited	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
Terrassen Holdings Limited ⁸	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
The Morgan Crucible Company Limited ¹	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
Thermal Ceramics Europe Limited ⁷	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
Thermal Ceramics Limited ⁷	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
Thermal Ceramics UK Limited	United Kingdom	Tebay Road, Bromborough, Wirral, CH62 3PH, UK	100.00%
Clearpower Ltd ^{3, 21}	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	99.01%
Jemmtec Ltd ²²	United Kingdom	Magma Ceramics, Low Road, Earlsheaton, Dewsbury, West Yorkshire WF12 8BU, UK	34.96%
Law Debenture MC Senior Pension Trust Corporation	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	n/a
Morgan Crucible Pension Trustees Limited	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	n/a
Certech, Inc. ²³	United States	1 Park Place West, Wood-Ridge, New Jersey 07075, USA	100.00%
Graphite Die Mold, Inc. ²³	United States	18 Air Line Park, Durham, Connecticut 06422-1000, USA	100.00%
Morgan Advanced Ceramics, Inc. ²³	United States	2425 Whipple Road, Hayward, California 94544, USA	100.00%
Morgan Advanced Materials and Technology Inc. ²³	United States	441 Hall Avenue, St Marys, Pennsylvania 15857, USA	100.00%
Morganite Crucible Inc. ²⁴	United States	22 N. Plains Industrial Road, Suite 1, Wallingford, Connecticut 06492, USA	100.00%
Morganite Industries Inc. ²⁵	United States	4000 West Chase Blvd, Suite 170, Raleigh, North Carolina 27607, USA	100.00%
National Electrical Carbon Products, Inc. ¹⁴	United States	PO Box 1056, 251 Forrester Drive, Greenville, South Carolina 29602, USA	100.00%
Thermal Ceramics Inc. ²³	United States	PO Box 923, 2102 Old Savannah Road, Augusta, Georgia 30906, USA	100.00%
Thermal Ceramics de Venezuela C.A. ¹⁵	Venezuela	Zona Ind. El Recreo, Av. 87 N°105-121, Flor Amarillo, Valencia Edo. Carabobo, Venezuela	100.00%

1. Directly owned by Morgan Advanced Materials plc.
2. 99.98% owned by Morgan Advanced Materials plc.
3. 99% owned by Morgan Advanced Materials plc.
4. 93.19% owned by Morgan Advanced Materials plc.
5. 70% owned by Morgan Advanced Materials plc.
6. 51% owned by Morgan Advanced Materials plc.
7. 50% owned by Morgan Advanced Materials plc.
8. 8.18% owned by Morgan Advanced Materials plc.
9. 4% owned by Morgan Advanced Materials plc.
10. 1.98% owned by Morgan Advanced Materials plc.
11. Ownership held in Class A and Class B Common Stock.
12. Ownership held in Ordinary and Non-Cumulative Non-Participating Redeemable Preference Shares.
13. Ownership held in Quotas.
14. Ownership held in Common Stock of no par value.
15. Ownership held in Registered Capital.
16. Ownership held in Ordinary Shares of no par value.
17. Ownership held in Partnership Shares.
18. Ownership held in Common and Preference Shares.
19. Ownership held in Series A and Series B.
20. Subsidiary not included in consolidated accounts as the Company does not exercise management control.
21. Ownership held in Ordinary A, B and C and Preference A and B Shares.
22. Ownership held in Ordinary A and B Shares.
23. Ownership held in Common Stock.
24. Ownership held in Preferred Stock and no par Common Stock.
25. Ownership held in Class A, Class B and Class C Common Stock.

45. DERIVATIVE FINANCIAL ASSETS AND LIABILITIES

	2020 £m	2019 restated ¹ £m
Derivative financial assets		
Forward foreign exchange contracts non-designated	11.5	11.5
Derivative financial liabilities		
Forward foreign exchange contracts non-designated	(6.6)	(5.2)

1. See note 29 for details on the restatement of the 2019 balances.

Fair values are measured using a hierarchy where the inputs are:

- Level 1 – quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2 – not traded in an active market but the fair values are based on quoted market prices or alternative pricing sources with reasonable levels of price transparency. Fair value is calculated using discounted cash flow methodology, future cash flows are estimated based on forward exchange rates.
- 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.

Group statistical information

UNDER ADOPTED IFRS

	2016 Results before specific adjusting items restated ^{1,2} £m	2017 Results before specific adjusting items restated ^{1,2,3} £m	2018 Results before specific adjusting items restated ² £m	2019 Results before specific adjusting items restated ² £m	2020 Results before specific adjusting items restated ² £m
Revenue	958.8	1,001.4	1,033.9	1,049.5	910.7
Profit from operations before restructuring costs, other items and amortisation of intangible assets	116.8	120.7	124.8	134.2	91.7
Restructuring costs and other items:					
Restructuring costs	(1.4)	–	–	–	–
Gain on disposal of properties	0.5	–	–	–	–
Profit from operations before amortisation of intangible assets	115.9	120.7	124.8	134.2	91.7
Amortisation of intangible assets	(6.5)	(7.3)	(8.0)	(8.1)	(6.1)
Operating profit	109.4	113.4	116.8	126.1	85.6
Net financing costs	(20.0)	(22.5)	(13.2)	(16.9)	(11.9)
Share of profit of associate (net of income tax)	0.6	0.2	0.8	0.5	0.6
Profit before taxation	90.0	91.1	104.4	109.7	74.3
Income tax expense	(26.9)	(26.9)	(29.0)	(29.9)	(20.2)
Profit after taxation before discontinued operations	63.1	64.2	75.4	79.8	54.1
Discontinued operations	(0.1)	(1.0)	(1.4)	0.7	–
Profit for the period	63.0	63.2	74.0	80.5	54.1
Assets employed					
Property, plant and equipment	303.7	297.8	314.5	317.2	267.6
Right-of-use assets	–	–	–	49.1	35.5
Intangible assets	240.4	217.0	215.6	204.8	185.4
Investments and other receivables	10.7	11.7	12.2	12.2	11.2
Deferred tax assets	6.1	9.1	6.9	6.0	14.4
Net current assets	91.6	129.4	106.8	125.1	136.7
Total assets less current liabilities	652.5	665.0	656.0	714.4	650.8
Employee benefits: pensions	271.1	218.0	190.4	156.8	176.3
Non-current provisions and other items	208.9	202.7	177.9	241.0	234.0
Deferred tax liabilities	8.3	10.5	11.0	4.9	0.5
	164.2	233.8	276.7	311.7	240.0
Equity					
Total equity attributable to equity holders of the Parent company	120.3	194.7	232.3	270.2	202.3
Non-controlling interests	43.9	39.1	44.4	41.5	37.7
Total equity	164.2	233.8	276.7	311.7	240.0
Ordinary dividends per share⁴	11.0p	11.0p	11.0p	4.0p	5.5p
Earnings per share					
Continuing and discontinued operations					
Basic earnings/(loss) per share	18.4p	37.8p	16.2p	25.7p	(7.9)p
Diluted earnings/(loss) per share	18.4p	37.5p	16.1p	25.5p	(7.9)p
Adjusted earnings per share ⁵	22.7p	22.8p	26.7p	28.0p	19.0p
Diluted adjusted earnings per share ⁵	22.7p	22.7p	26.6p	27.8p	18.9p

1. The Group disposed of the Composites and Defence Systems business in 2018, the disposal group formed the Composites and Defence Systems operating segment and has been classified as a discontinued operation under IFRS 5. Figures for 2016-2017 have been restated to reflect these changes.

2. Figures for 2016-2019 have been restated to classify the Group's cumulative preference shares as borrowings. See note 1 to the consolidated financial statements.

3. 2017 has been restated to reflect the adoption of IFRS 15 Revenue from Contracts with Customers in 2018. Figures for 2016 have not been restated for these changes.

4. On 31 March 2020, the Group announced the Board's decision to withdraw the proposed 2019 final dividend due to the financial uncertainty resulting from the COVID-19 pandemic.

5. Definitions of these non-GAAP measures can be found in the glossary of terms on page 170, reconciliations of the statutory results to the adjusted measures can be found on pages 43 to 45.



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 in assessing 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 forward-looking 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

Constant-currency¹	Constant-currency revenue and Group adjusted operating profit are derived by translating the prior year results at current year average exchange rates.
Corporate costs	Corporate costs consist of the costs of the central head office.
Free cash flow before acquisitions, disposals and dividends¹	Cash generated from continuing operations less net capital expenditure, net interest paid, tax paid and lease payments.
Group earnings before interest, tax, depreciation and amortisation (EBITDA)¹	EBITDA is defined as operating profit before specific adjusting items, amortisation of intangible assets and depreciation.
Group adjusted operating profit¹	Operating profit adjusted to exclude specific adjusting items and amortisation of intangible assets.
Group organic¹	The Group results excluding acquisition, disposal and business exit impacts at constant-currency.
Adjusted earnings per share (EPS)¹	Adjusted earnings per share is defined as operating profit adjusted to exclude specific adjusting items and amortisation of intangible assets, plus share of profit of associate less net financing costs, income tax expense and non-controlling interests, divided by the weighted average number of Ordinary shares during the period.
Net debt¹	Borrowings, bank overdrafts and lease liabilities less cash and cash equivalents.
Net cash and cash equivalents¹	Net cash and cash equivalents is defined as cash and cash equivalents less bank overdrafts.
Return on invested capital (ROIC)¹	Group adjusted operating profit (operating profit excluding specific adjusting items and amortisation of intangible assets) divided by the 12-month average adjusted net assets (excludes long-term employee benefits, deferred tax assets and liabilities, current tax payable, provisions, cash and cash equivalents, borrowings, bank overdrafts and lease liabilities).
Specific adjusting items	See note 6 and note 1 to the consolidated financial statements for further details.

1. Reconciliations of these non-GAAP measures to GAAP measures can be found on pages 43 to 45.

ANALYSIS OF ORDINARY SHAREHOLDINGS AS AT 31 DECEMBER 2020

		Number of holdings	% of total holdings	Number of shares	% of share capital
Size of holding	1-2,000	4,284	76.11%	2,147,236	0.75%
	2,001-5,000	680	12.08%	2,173,926	0.76%
	5,001-10,000	248	4.41%	1,747,635	0.61%
	10,001-50,000	199	3.53%	4,292,138	1.50%
	50,001-100,000	45	0.80%	3,296,370	1.16%
	100,001 and above	173	3.07%	271,712,683	95.22%
		5,629	100.00	285,369,988	100.00%
Holding classification	Individuals	4,958	88.08%	7,674,800	2.69%
	Nominee companies	370	6.57%	256,028,965	89.72%
	Trusts (pension funds etc.)	5	0.09%	30,689	0.01%
	Others	296	5.26%	21,635,534	7.58%
		5,629	100.00%	285,369,988	100.00%

KEY DATES

6 May 2021	2021 Annual General Meeting (AGM), commencing at 10:30am.
29 July 2021	Half-Year results announced via the Regulatory News Service and on the Company's website. Since 2015 Half-Year results are available online only.

2020 AND (PROPOSED) 2021 DIVIDEND PAYMENT DATES

1 October 2020	Dividend payment date in respect of the 5.5% Cumulative First Preference shares of £1 each and the 5.0% Cumulative Second Preference shares of £1 each. Please note this payment included the deferred dividend payment from 1 April 2020.
11 December 2020	An interim cash dividend of 2.0 pence per Ordinary share of 25 pence each was paid to shareholders registered at the close of business on 20 November 2020.
21 May 2021	Subject to shareholders' approval at the 2021 AGM, a final cash dividend of 3.5 pence per Ordinary share of 25 pence each will be paid to shareholders registered at the close of business on 30 April 2021.
1 April 2021 and 1 October 2021	Dividend payment dates in respect of the 5.5% Cumulative First Preference shares of £1 each and the 5.0% Cumulative Second Preference shares of £1 each.

OTHER INFORMATION

Capital gains tax	The market values of quoted shares and stocks at 31 March 1982 were: Ordinary shares of 25 pence each 122.5 pence 5.5% Cumulative First Preference shares of £1 each 30.5 pence 5.0% Cumulative Second Preference shares of £1 each 28.5 pence For capital gains tax purposes, the cost of Ordinary shares is adjusted to take account of rights issues. Any capital gains arising on disposal will also be adjusted to take account of indexation allowances. Since the adjustments will depend on individual circumstances, shareholders are recommended to consult their professional advisers.
Share price	The price can be obtained on the Company's website: www.morganadvancedmaterials.com
ISIN Code	GB0006027295
LEI	14K14LL95N2PHDL7EG85
Ticker symbol	MGAM

Shareholder information

COMPANY DETAILS

Company name change	The Company changed its name to Morgan Advanced Materials plc (from The Morgan Crucible Company plc) on 27 March 2013. Following this change, share certificates issued in the name 'The Morgan Crucible Company plc' remain valid (replacement share certificates in the name 'Morgan Advanced Materials plc' were not issued to existing shareholders).
Registered office	York House, Sheet Street, Windsor, SL4 1DD Registered in England and Wales No. 286773 Telephone: +44 (0)1753 837000 www.morganadvancedmaterials.com
Website	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 financial results, shareholder meetings and dividends, and providing access to frequently asked questions. Current and past annual, half-year and EHS reports are also available to view and download.
Company registrars	Equiniti Limited, Aspect House, Spencer Road, Lancing, West Sussex, BN99 6DA Telephone: +44 (0)371 384 2412 Website: www.shareview.co.uk Lines are open between 8.30am and 5.30pm, Monday to Friday (excluding UK public holidays). Shareholders with queries relating to their shareholding should contact Equiniti directly. Alternatively, shareholders may find the Investors section of our website useful for general enquiries.
Shareview portfolio www.shareview.co.uk	The most efficient way to communicate with Equiniti is by registering for a portfolio at www.shareview.co.uk . This is a service, which enables shareholders to manage their shareholdings online.
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 avoid the inconvenience of depositing a cheque and cheque fraud is reduced. If you are a shareholder who has a UK bank or building society account you can arrange to have dividends paid direct via a bank/building society mandate. You can add or change your mandate online at www.shareview.co.uk , or by contacting Equiniti. Overseas payments If you live overseas and would like dividends paid to an overseas account, please contact Equiniti by post to set up or amend a mandate. They offer an overseas payment service for 90 countries worldwide. Please see further information at www.shareview.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 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 Equiniti.
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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 www.sharegift.org or by telephoning +44 (0)20 7930 3737.
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