

Resilient, Sustainable, Innovative



Morgan Advanced Materials is a purpose driven organisation, with a long history of innovation.

Founded in the UK in 1856, we have deep expertise in ceramics and carbon materials and we exploit our knowledge and experience to solve difficult problems for our customers. Our model means we serve customers where they need us, across a diverse range of markets, and this has seen us grow to become a global organisation with around 70 manufacturing sites in 20 countries.

Our focus is on helping customers push the limits of their processes and products to meet demanding requirements, from higher process temperatures and higher product performance, to increasing miniaturisation.

Sustainable solutions for a greener future

Our purpose is to use advanced materials to make the world more sustainable and to improve the quality of life. We deliver on that purpose through the products that we make, and the way that we make them.

We play a role in helping the world become more sustainable. Our products help our customers to be more efficient – to use less energy in their manufacturing process or in their product, and to generate less CO₂.

Our approach to sustainability is embedded within our strategy. We see this as fundamental to our future growth and resilience, and to delivering exceptional value to our stakeholders, while building a company that our people can be proud of.

→ Read more on [pages 34 to 53](#)



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Our strategy in action

Making a big positive difference

→ See [page 23](#)



Delighting the customer

→ See [page 24](#)



Innovating to grow

→ See [page 25](#)



Morgan in numbers

We assess our performance across a wide range of metrics.

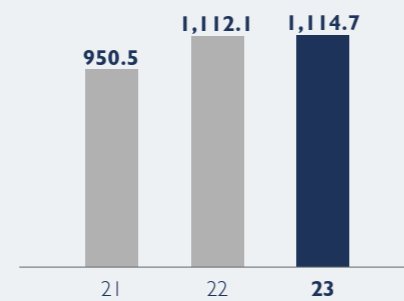
To support the Group's strategy and to monitor performance, the Board of Directors and the Executive Committee use a number of financial key performance indicators (KPIs).

Financial KPIs (statutory and adjusted performance KPIs)

Revenue (£m)

Performance

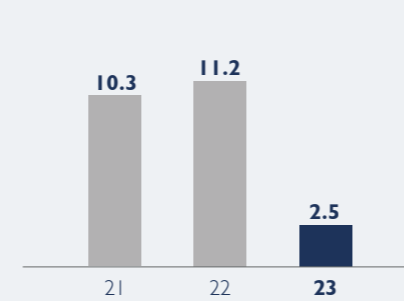
On a reported basis, revenue increased by £2.6 million, 0.2%. Growth is lower than prior year but reflects strong recovery in the second half of the year following the cyber security incident experienced in January 2023. See the Review of operations on pages 62 and 63 for more detail.



Organic constant currency revenue growth* (%)

Performance

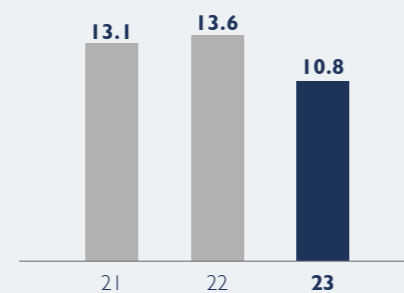
On an organic constant currency* basis revenue grew by 2.5%. Growth is lower than prior year but reflects strong recovery in the second half of the year following the cyber security incident experienced in January 2023. See the Review of operations on pages 62 and 63 for more detail.



Adjusted operating profit margin* (%)

Performance

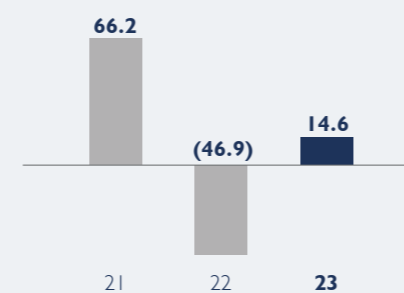
Adjusted operating profit margin has decreased following the cyber security incident in January 2023, with strong recovery in the second half of the year. Pricing and efficiency savings continue to more than offset inflation. See the Review of operations on pages 62 and 63 for more detail.



Free cash flow before acquisitions, disposals and dividends* (£m)

Performance

We continue to invest in capital expenditure to support future growth. Increase in 2023 reflects improvement in working capital.



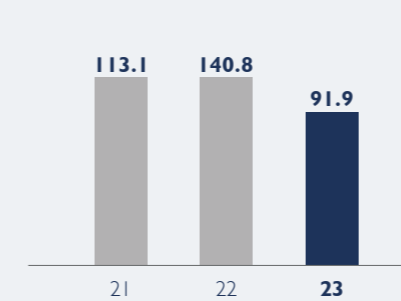
* Throughout the Annual Report, including the Strategic Report, adjusted measures are used to describe the Group's financial performance. These adjusted measures are not recognised under IFRS or other generally accepted accounting principles (GAAP). These measures are shown because the Directors consider 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. 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 72 to 75.

Our financial KPIs are a balanced set of metrics which help the Board and the Executive Committee assess performance and progress against our execution priorities and business plans. These and other KPIs are used to evaluate operating performance and make financial, strategic and operating decisions.

Operating profit (£m)

Performance

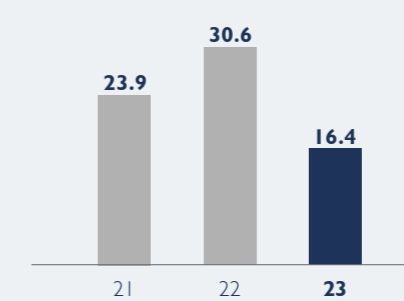
Operating profit has decreased following the cyber security incident in January 2023, with strong recovery in the second half of the year. Pricing and efficiency savings continue to more than offset inflation. See the Review of operations on pages 62 and 63 for more detail.



Continuing EPS (p)

Performance

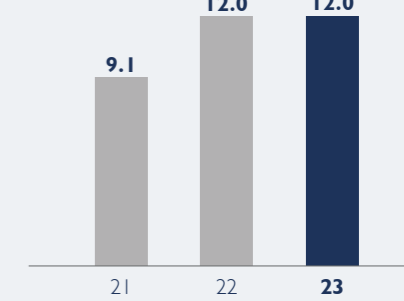
Reduction driven by the impact of the cyber security incident in January 2023, with strong recovery in the second half of the year.



Dividend per share (p)

Performance

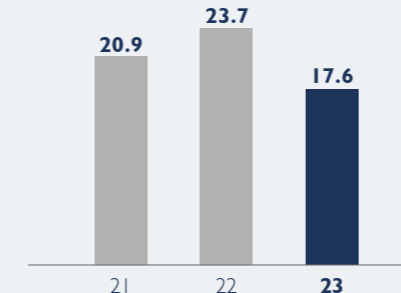
For the year ended 31 December 2023, the Board is recommending a dividend of 12.0 pence, in line with last year.



Return on invested capital* (%)

Performance

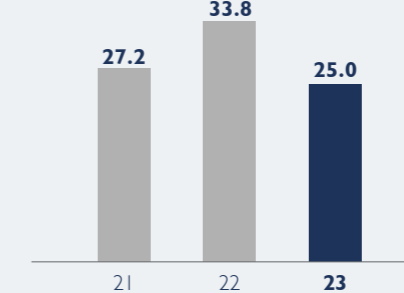
Return on invested capital for the year ended 31 December 2023 remains within our financial framework (see page 22).



Adjusted EPS* (p)

Performance

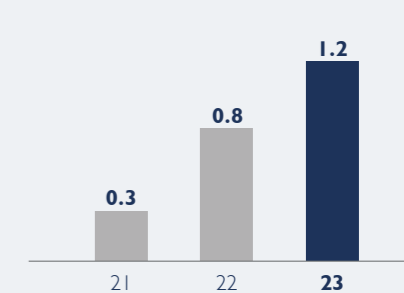
Reduction driven by the impact of the cyber security incident in January 2023, with strong recovery in the second half of the year.



Net debt* to EBITDA* (excluding lease liabilities) (X)

Performance

Net debt* to EBITDA* (excluding lease liabilities) was 1.2 times following increased investment in capital expenditure and working capital, and costs associated with the cyber security incident.



The ROIC calculation has been simplified so that it can be calculated from published information. Prior period comparatives have been restated to follow the same methodology. Please see page 75 for further information.

Morgan in numbers continued

At Morgan Advanced Materials we are committed to a sustainable future. In March 2021, we set stretching goals across a number of environmental, social and governance areas.

Key environmental, social and governance (ESG) KPIs

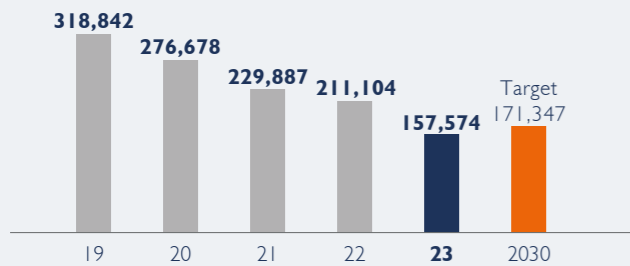
CO₂e scope 1 and 2 emissions (metric tonnes)

Alignment to strategy

1 2 3

Why do we measure this KPI?

Our sustainability agenda includes actions to reduce greenhouse gas (GHG) emissions and combat climate change. In March 2021, we announced a commitment to reduce absolute GHG emissions (scope 1 and 2) by 50% (against 2015 levels) by 2030. See page 37 for more information



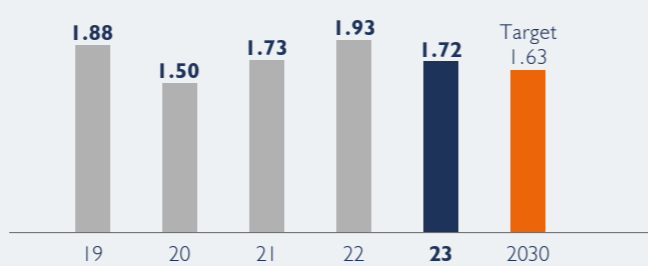
Total water withdrawal (million m³)

Alignment to strategy

1 2 3

Why do we measure this KPI?

By 2030, we will reduce our total withdrawal of water by 30% (against our 2015 baseline), and we are implementing water sustainability projects globally to achieve this goal. See page 38 for more information.



Water withdrawal in water stressed areas* (% reduction from 2015 baseline)

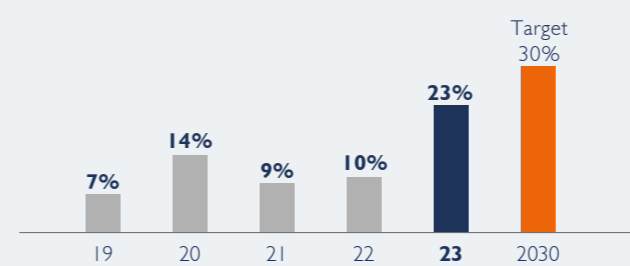
Alignment to strategy

1 2 3

Why do we measure this KPI?

We recognise that in some instances our water demands are in areas of increasing water stress. Approximately 30% of our manufacturing operations are in these water stress areas.

Our goal is to deliver a 30% reduction by 2030. By improving our water use in these areas, we will positively impact the local communities in which we operate. See page 38 for more information.



* Water stressed areas include Spain, Italy, Turkey, Mexico, India, United Arab Emirates, Argentina, Australia and the state of California, USA. Using the most recent WRI data, 2023 and prior years have been restated to include China. See page 38 for details.

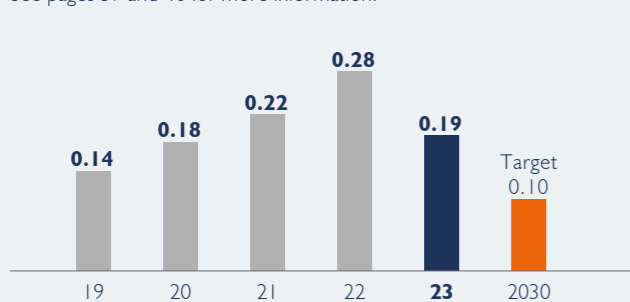
Lost-time accident (LTA) rate*

Alignment to strategy

1 2 3

Why do we measure this KPI?

We are working towards our aspiration of 'zero harm' to all our employees. We are committed to conducting all our activities in a manner that builds a caring safety culture and develops a world-class safety system that supports this effort. See pages 39 and 40 for more information.



* A lost-time accident (LTA) is defined as an accident or work-related illness which results in one or more days of lost time. Calculated as total number of lost-time accidents in the year, multiplied by 100,000 hours worked, divided by total number of hours worked.

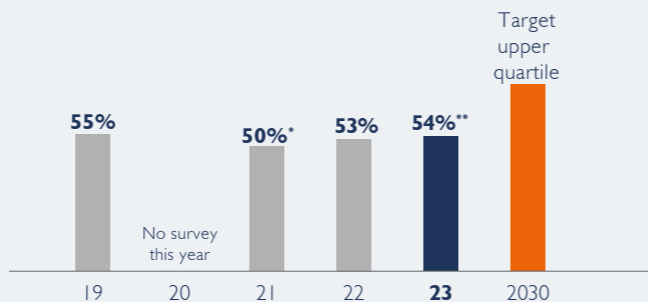
Employee engagement rate

Alignment to strategy

1 2 3

Why do we measure this KPI?

We measure the engagement of our people through an employee engagement survey called 'Your Voice'. As a result of the survey we build tailored engagement plans to address key issues across our sites, businesses and the Group. See page 39 for more information.



* New yearly survey introduced.
** This was a pulse survey including employees with a Morgan Advanced Materials email address only. On a like-for-like basis, engagement went down by ~1%. A full survey will take place in 2024.

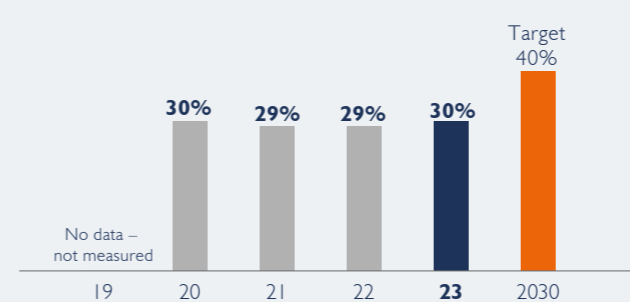
Female representation in leadership*

Alignment to strategy

1 2 3

Why do we measure this KPI?

A greater gender diversity is good for Morgan Advanced Materials and good for employees. We are continuing to take action to achieve a more balanced proportion of women in senior positions. See page 39 for more information.



* Includes Executive w/o CEO/CFO plus 2nd to 4th tier.

Alignment to strategy

To deliver our strategy and to achieve our ESG goals we align our efforts to our three execution priorities.

- 1 Big positive difference
- 2 Delight the customer
- 3 Innovate to grow

→ Read more on pages 23 to 25

Business overview – what we do

We are a global manufacturer of advanced carbon and ceramic materials for complex and technologically demanding applications. Working across many industries, you will find our products all around you.

Our applications range from ceramic cores for casting aero engine turbine blades to silicon carbide focus rings for semiconductor etch, and from carbon brushes in onshore wind turbines to thermal insulation solutions for hydrogen reformers.

In each of these applications, in each of these markets, we bring our deep materials and engineering expertise to bear. We act as a design partner for our customers, translating their needs into product solutions, distinguishing ourselves through the application engineering that we provide.

We help our customers push the limits of their processes and products to meet the demanding requirements they face: from higher process temperatures, to higher product performance and increasing miniaturisation. And we do all of this while helping our customers to reduce their energy consumption, emissions and operating costs; helping them to improve the sustainability of their products and processes.

Innovation is at the heart of our business

Whether we are innovating in our faster growing market segments, or supporting the changing requirements through our energy saving solutions for more traditional industries, our materials innovations enable rapid change. Our deep expertise in carbon and ceramics is maintained and strengthened through our ongoing process of research and development. Each business has a clear strategy and a technology roadmap, and we invest in application testing to inform our technology and product development, resulting in many bespoke solutions.

Our strategy focuses on three core capabilities



Materials science



Application engineering



Customer focus



The Group operates as five distinct global business units

Business unit

Products include

Thermal Ceramics

The Thermal Ceramics business makes advanced temperature insulation for high-temperature processes and fire protection. Our solutions help customers, especially those operating energy-intensive processes, to reduce energy consumption, emissions and operating costs. Our products and systems 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.

- > High-temperature insulating fibre products (Low biopersistent fibres, Superwool® family, RCF, Polycrystalline)
- > Microporous products (WDS®, Min-K®)
- > Firebricks and mortars
- > Heat shields

Molten Metal Systems

Molten Metal Systems provides crucibles for foundries, die-casters and melting facilities working with customers in non-ferrous castings, metal powder production, refining and recycling of precious metals, and the production of pure aluminium for electronics applications. Extensive applications experience and process knowledge help us to put together the optimal system for a customer's needs.

- > Crucibles (Morganite® and Noltina®)
- > Foundry products
- > Furnace Industries furnace range

Electrical Carbon*

The Electrical Carbon business provides speciality graphite components, engineers high-performance graphite materials, components and sub-assemblies to address customer-specific technical challenges. Working in selected segments of the semiconductor, energy, healthcare, industrial, petrochemicals, security and transport markets, we apply our materials science expertise and engineer elegant and reliable solutions to individual customer problems.

- > Semiconductor consumables
- > Collector strips and carbon brushes
- > Graphite powders

Seals and Bearings*

The Seals and Bearings business makes high-performance self-lubricating bearing and seal components, predominantly used 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 the use of lubricants in extreme temperatures, corrosive or hygienic environments where access is restricted, and are engineered into products which provide customer-specific solutions. The main markets served are specialist applications in the oil and gas, automotive, industrial, water pump, aerospace and home appliance sectors.

- > Face seals
- > Sliding bearings
- > Shafts
- > Rotary vane pump components

Technical Ceramics

Our Technical Ceramics business employs advanced materials science and applications expertise to produce parts that enhance reliability or improve the performance of customers' products. Products are designed to be used in demanding, harsh or critical environments, where we work with selected segments of the electronics, energy, healthcare, industrial, petrochemicals, security and transport markets, typically in close collaborative customer relationships.

- > Components from our specialist alumina formulations
- > Ceramic cores
- > Extruded products
- > Laser products
- > MACOR™ machinable glass ceramic
- > Semiconductor products

* In 2024 we will streamline our management structures and manage the Company through three distinct segments: Thermal Products, Performance Carbon and Technical Ceramics. See further details on page 31.

Investment case

1. We are well positioned in large and fast-growing markets driven by global mega trends

The demand for renewable energy is growing rapidly as the world seeks to decarbonise. Ongoing urbanisation drives the need for clean energy and transportation solutions.

Our growing and ageing population places more and more complex demands on healthcare. Digitisation brings huge benefits in efficiency and increases in capability, and with that we see ever increasing demand for more and faster processing.

This all translates into a robust growth outlook for our business. Revenues from our faster growing segments, semiconductors, healthcare, clean energy and clean transportation, are expected to grow between 7% and 12% per year (through the cycle). Revenue from our core business is expected to grow 2% to 4% per year.

+2.5%

2023 ORGANIC CONSTANT-CURRENCY REVENUE GROWTH

+10.4%

2023 CONSTANT-CURRENCY GROWTH IN OUR FASTER GROWING MARKETS

2. We have leading differentiated positions, and this all starts with our strategy

Our development of strategic capabilities supports the positions we have in each of our markets.

We have deep expertise in carbon and ceramic materials. We spend around £30 million in research and development each year to maintain and strengthen our technical leadership.

We have 440 scientists and engineers across the Group, representing 17% of our white-collar workforce. They work in four Centres of Excellence, and within the businesses, sustaining our current materials portfolio, and developing new materials and products. Each business unit has a clear strategy and has technology roadmaps that flow from this to inform the prioritisation of development resources.

Our application engineers are the bridge between our materials expertise and the specifics of our customers' markets and applications. Our application engineers work with customers every day to take their technical challenge and marry it up to a material, and then a manufacturing process.

Through the execution of our strategy, we are strengthening our market positions and steadily building closer relationships with our customers.

£32.9m

RESEARCH AND DEVELOPMENT SPEND

Our purpose, our strategy and our people differentiate us at Morgan Advanced Materials, altogether driving superior value for our stakeholders. We are experts in materials science with a track record of delivering for our customers, drawing on more than 160 years of innovation.

3. We play a crucial role in helping the world become more sustainable

We do this through the products we make, and the way that we make them.

Our products help our customers to be more efficient – to use less energy in their manufacturing process or in their product, and to generate less CO₂.

We are also working hard to decarbonise our own operations – to produce our products more efficiently and to reduce our own CO₂ emissions and manage our water usage more sustainably.

We have a solid plan for the coming years and are making excellent progress so far. At this point our absolute scope 1 and scope 2 CO₂ emissions are around 54% down on our 2015 starting point, whilst our water usage is 26% down on our 2015 starting point.

-54%

REDUCTION IN SCOPE 1 & 2 CO₂ EMISSIONS

4. We are resilient, delivering attractive through-cycle returns

This resilience comes from the robustness of our strategy and market positions, and from the diversity in our portfolio.

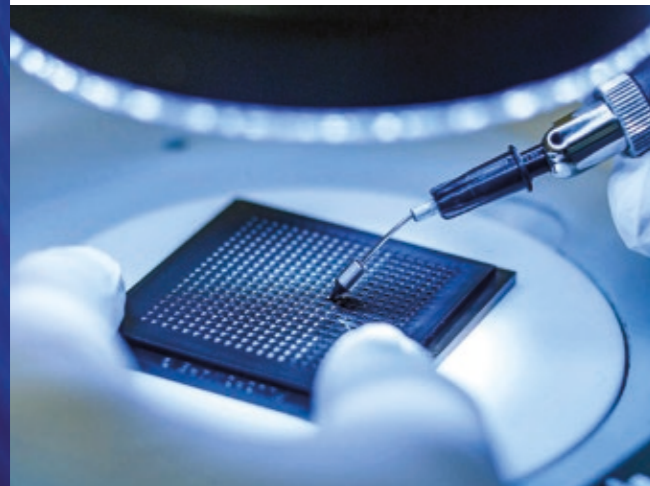
We operate in a diverse set of markets. Some are global, some are regional, but across these markets we have early and later cycle, and counter cyclical exposures.

We have a widely spread customer base. Our largest customer accounts for only 1.7% of our revenues. Our top 10 equate to around 10.4% of revenues, meaning a loss of one customer has limited impact on the Group.

We largely make products where we sell them, with a localised supply chain, and this gives us resilience against local shocks. You can see this resilience in our financial performance over the last seven years. Despite the impact of the cyber security incident in January 2023 impacting the full year results, our operating margins in the second half of 2023 returned to 12.5%.

+1.4%

ADJUSTED EPS CAGR 2016–2023



Chair's statement



“Since joining the business in February 2023, I have spent time meeting my new colleagues and major shareholders to build a full understanding of the challenges we face as well as the many opportunities we have to grow.”

Ian Marchant
NON-EXECUTIVE CHAIR

All our colleagues across the organisation have shown tremendous dedication, rising to the challenge of supporting our customers and one another since the cyber security incident which occurred in January 2023. I am proud of their resilience and continued commitment and I want to thank them for their outstanding efforts.

The Group has emerged from the cyber security incident in good shape and we are well placed as we enter 2024. We have a clear strategy for growth and are investing in the business to deliver this growth.

We are starting to see the benefits of the capital investment programme which will grow capacity in our faster growing markets as well as our core markets and the increased investment in our IT estate, accelerating our modernisation plans and improving our resilience.

As we prepare for the future, I am confident in our prospects and that our team will continue to help deliver on our purpose – to use advanced materials to make the world more sustainable and to improve the quality of life.

Looking back at 2023

Our first imperative is the safety and wellbeing of our colleagues and I am pleased to report that during 2023 our safety performance improved, reflecting the significant focus on employee safety and wellbeing.

The lost time accident (LTA) rate, the headline measure for health and safety, was 0.19 (2022: 0.28). Supporting the executive team, your Board has spent a significant amount of time discussing how safety performance and culture can be improved. My fellow non-Executive Directors and I will continue to support the executive team to achieve a position of 'zero harm'.

While it has been a challenging year, with the continuing supply chain issues, inflation on input costs and challenges in labour supply, we have seen the benefits of our positioning in attractive, high-growth markets, our leading, differentiated market positions and our diverse, geographic footprint.

We are well placed to benefit from the long-term growth driver of providing sustainable solutions to support the energy transition.

We delivered organic revenue growth in 2023, driven by strong growth in our faster growing markets and more moderate growth in the core markets. Operating margins declined, reflecting the impact of the cyber security incident and the slower end market demand.

Following the cyber security incident, our teams worked quickly to compartmentalise the network and shut down our systems to limit the damage and minimise the impact on operations. Despite their efforts, there was considerable damage to networks and systems. Our factories nonetheless operated throughout the disrupted first half and our teams worked closely with our customers to manage their deliveries. Customer demand remained robust during our recovery.

Further details can be found on page 20.

The Board in 2023

The Board invited me to take on the role of Chair from Douglas Caster following his decision to stand down, having served nine years on the Board. I would like to thank Douglas on behalf of the Board for his hard work in helping the Group evolve its strategy and growth journey.

The change of Chair comes at an opportune time, with the Group's strategy pivoting to leveraging the progress made in the Group's transformation to drive growth.

I am confident I can help the Group as it seeks to achieve these growth ambitions and I look forward to working with the Board to lead the Group in the next stage of its journey.

During 2023, the Nomination Committee commenced the search for three new non-Executive Directors to replace existing Directors nearing the end of their nine-year tenure, as part of a phased succession programme. Two Directors will be recruited in 2024 and with a third Director recruited in 2025. Further information on the process can be found on pages 102 and 103.

Responsible business

The Board takes its responsibilities to all its stakeholders seriously and we are committed to maintaining direct and productive relationships with our shareholders, colleagues and communities, taking a range of perspectives and feedback into account in our decision-making and stewardship.

The wellbeing of our colleagues remained a priority throughout the year. We have listened to their views through regular engagement surveys and employee listening sessions. Information on how we as a Board and business responded to their views and some of the actions we took locally and globally to improve their experiences can be found on pages 85 to 86.

We have invested in supporting our colleagues through the ongoing cost-of-living pressures, both through salary increases and through a wide range of other support measures.

I am pleased by the progress we have made this year in reducing the Group's environmental impact. We reduced scope 1 and 2 emissions during the year and are now 54% below our 2015 baseline. Whilst we have met this 2030 goal, continued focus is needed to maintain this as the business grows. We also reduced our overall water usage as well as usage of water in high-stress areas.

We are on track to meet our 2030 goals. Not only are we making our manufacturing processes more efficient, but more importantly our products, which have properties to withstand heat and endure other extreme environments, assist our customers in reducing their environmental impact, either by lasting longer or improving the efficient use of resources.

Dividend

The Board is recommending a final dividend for 2023 of 6.7p (2022: 6.7p). Combined with the interim dividend of 5.3p (2022: 5.3p), the resulting total dividend in respect of 2023 is 12.0p (2022: 12.0p).

The dividend will be payable on 17 May 2024 to shareholders on the register on 26 April 2024, subject to shareholder approval. The Board has committed to grow the Ordinary dividend as the economic environment and the Group's earnings improve, targeting a dividend cover of around 2.5 times over the medium term.

HIGHLIGHTS

0.19

LOST-TIME ACCIDENT FREQUENCY
PER 100,000 HOURS WORKED
(2022: 0.28)

12.0p

DIVIDEND PER SHARE
(2022: 12.0p)

Looking forward to 2024

As we enter 2024, we remain cautious about the pressures on some of our geographical markets with the ongoing geopolitical risks. We nonetheless expect our faster growing markets, in particular semiconductors and healthcare, to continue to grow strongly.

We expect the slowdown in parts of our core markets to be countered by recovery and growth in other parts. We are focused on capitalising on the increased capacity in our business from the capital investment programme and remain open to inorganic growth opportunities.

We are confident that continued focus on the strengths of the business, underpinned by our resilient balance sheet and the efficiency and productivity gains related to our restructuring programme will support the further progress and the success of the Group in the years ahead.

Ian Marchant
NON-EXECUTIVE CHAIR

Business model

Our purpose

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 knowledge and process capability to solve customer problems and deliver on our purpose.

> We support the United Nations Sustainable Development Goals

> We aim to be a CO₂ net zero¹ business by 2050



Our markets



1. Scope 1 and scope 2.

Market environment and industry trends

There are a number of significant trends or megatrends shaping our world: climate change, resource scarcity, urbanisation and migration, a growing middle class, an ageing population and digitisation. These trends drive an ever greater need for advanced materials, as our customers push the limits of their process and product technology. We manufacture an extensive range of specialist products, satisfying a variety of niche applications across numerous end-markets.

Faster growth markets

We are specifically targeting our faster growing markets: semiconductors, healthcare, clean energy and clean transportation. These are market segments where demands on materials are increasingly stringent, and our materials expertise is increasingly relevant.

We have dedicated market specialists who face into these industries and ensure we address the needs of today, while developing new products and approaches for the needs of tomorrow.

Semiconductors

Trends

Our world is becoming more digital and increasingly connected. The quantity and complexity of semiconductor devices is increasing, and this is driven by many of the megatrends around us – cars are getting smarter, greater computation and data storage is supporting digitisation and artificial intelligence, wireless technologies are growing and semiconductors play a big role in the transition.

Consumables used during silicon chip fabrication is an area expected to grow 8% per year through 2025, as leading-edge semiconductors require new processing technologies.

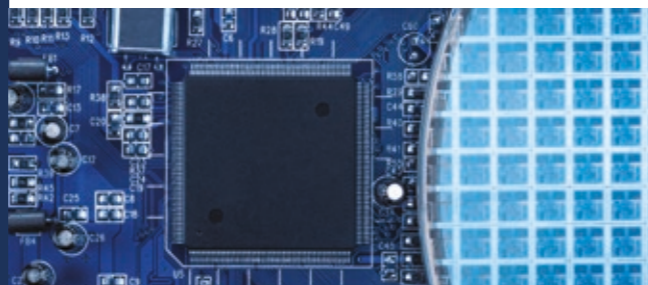
Consumables used during the manufacture of silicon carbide semiconductor materials are expected to grow at a 28% compound annualised growth rate.

Opportunities and solutions

We make consumables used during silicon chip fabrication. Our products are leading, best in class carbon-, graphite- and ceramic-based components used during the manufacture of chips.

We also make consumables used during the manufacture of silicon carbide semiconductor material. Silicon carbide is a new compound being adopted in power devices. Electric vehicle car makers are developing cars with silicon carbide main power inverters, as these are lighter, more efficient and lower the system cost.

Until recently, silicon carbide wafers could not be made in sufficient quality, cost, and quantity to support the growth in this space. Our products have become a key enabler to unlock adoption.



Healthcare

Trends

An aging global population is looking for solutions to chronic diseases to improve their quality of life.

In emerging markets, a growing middle class is experiencing related ailments due to exposure to more processed and higher-calorie foods. More vehicle accidents are occurring due to the increased accessibility of transportation, and air quality challenges are increasing with further industrialisation.

These factors, combined with innovative new therapies, are driving the accelerated demand for healthcare technology solutions, with an increased focus on materials for test and measurement equipment.

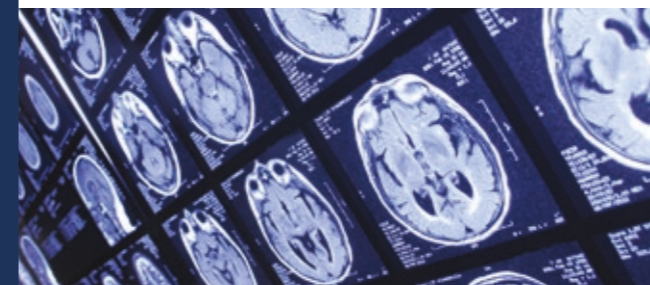
The demand in this space is expected to grow by over 6% to 2025.

Opportunities and solutions

We manufacture a broad variety of components for use in medical instrumentation as well as in tools for treatment and surgery. Biocompatibility, excellent chemical and electrical resistance and low wear rates, plus our high-quality, volume manufacturing means we are perfectly placed to supply components for medical applications.

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

Our deep understanding of ceramic material properties, together with our expertise in braze alloy design, allows us to produce high-density, highly reliable feedthroughs for a range of medical applications, including cochlear implants and neuro-stimulation. Our components are also used for critical functions in gear pumps, apheresis systems, micro-dosing systems and oxygen compression.



Clean energy and clean transportation

Trends

The demand for renewable energy is growing rapidly as the world seeks to decarbonise, while car companies specifically are racing to develop electric vehicles to comply with locally set emissions targets.

These markets are expected to grow at a 9% compound annualised growth rate to 2025.

Opportunities and solutions

Our new ceramic materials for customers producing solar panels support the latest generation of production technology. We produce some of the leading brush grades for wind turbines, offering longer lifetimes. In addition to enabling wind technology, we also drive lower maintenance activity, and costs, for the wind farm operators, further reducing their CO₂ footprint.

We support the EV market with carbon seals and bearings for cooling pumps which are produced to fine dimensional tolerance, improving efficiency and minimising pump noise. We have a leading range of products and solutions that provide fire protection around battery packs and we are constantly innovating these to meet evolving requirements.

Our thermal insulation Superwool® is used in heat recovery steam generators, fuel cells and energy storage walls to improve energy efficiency.

In the electrified rail market we produce a range of collector strips and carbon shoes to connect the train to the power cable or rail. In the metro market in China we have developed a wide range of high-performance material grades to perform in the varied climatic conditions across China. Our products directly enable electrified rail, and offer superior lifetimes, further reducing CO₂ emissions.



Market environment and industry trends continued

Core markets

Our core market portfolio is diversified and differentiated. Our core markets make up 79% of Group revenues. In these core markets, we are leading, or are among the market leaders, with strong customer loyalty, a respected brand and deep application expertise.

Industrial

Trends

Need for customers to reduce their energy consumption and carbon dioxide emissions to make their business more sustainable.

Opportunities and solutions

We engineer components which are highly resistant to chemical and physical wear, corrosion and extreme temperatures. These components sit at the heart of many industrial processes.

In the industrial market:

- > We are engineering thermal ceramic fibre like Superwool® XTRA to support better energy consumption
- > We have produced reduced wear, reliable seals which extend pump life by up to 4x, (compared to spray coated stainless steel rings), resulting in the significant reduction of through life costs
- > Our Pyro-Bloc® modules for regenerative thermal oxidisers reduce the number of through-joints between modules, resulting in fewer opportunities for heat loss, and reduced fuel related expenses.



Conventional transportation

Trends

Ongoing urbanisation is driving the need for more sustainable transportation solutions.

Increased requirement for materials to withstand exposure to greater heat sources and run more efficiently.

Opportunities and solutions

We make high-performance components and sub-assemblies to exacting standards for aerospace, automotive, marine and rail applications, including carbon brushes for trains, and high-temperature fibre products used for emission control in vehicles.

In aerospace we continue to enable more efficient jet engines through the production of more complex cores for casting turbine blades. Customers come to us for their most demanding applications, for example when they need to hold very fine features on small components. And these demanding applications arise as the next generation engines run hotter to be more efficient. Our cores enable these advances in engine technology.

Our seals and bearings are used in vehicle fuel and thermal management, providing near frictionless running and low wear rates, whilst our fused silica and mullite rollers enable thermal annealing of automotive chassis parts.



Petrochemical and chemical

Trends

Demand for better insulation solutions and lower carbon options to meet sustainability targets.

Opportunities and solutions

We manufacture a range of components ideally suited to the uniquely demanding operating environments found in the global petrochemical and chemical industry.

Our products and materials are routinely chosen to fulfil critical applications for on- and offshore exploration, drilling and downstream processing owing to their resistance to chemical and physical wear, corrosion and extreme heat.

Our self-lubricating seals and bearings and our ceramic shafts are reducing the energy consumption of pumps in chemical plants.



Security and defence

Trends

Increased demands for digitisation in this market, with AI led advances increasing.

Need for further materials that can withstand greater strains and pressures.

Opportunities and solutions

We supply precision-engineered materials, components and assemblies to meet the exacting standards of the global defence and security market. Our components for night vision systems enable superior performance. Our ceramic tiles are used to build high-performance body and vehicle armour.

Our advanced ceramic materials offer superior dimensional stability, strength, stiffness and chemical resistance across a wide range of temperatures.



Energy

Trends

Climate change and shareholder influence is supporting the shift by oil companies as they invest heavily in renewable energy and hydrogen.

Electricity demand is growing as economies grow and modernise.

More efficient seals are required for the development of new pumps.

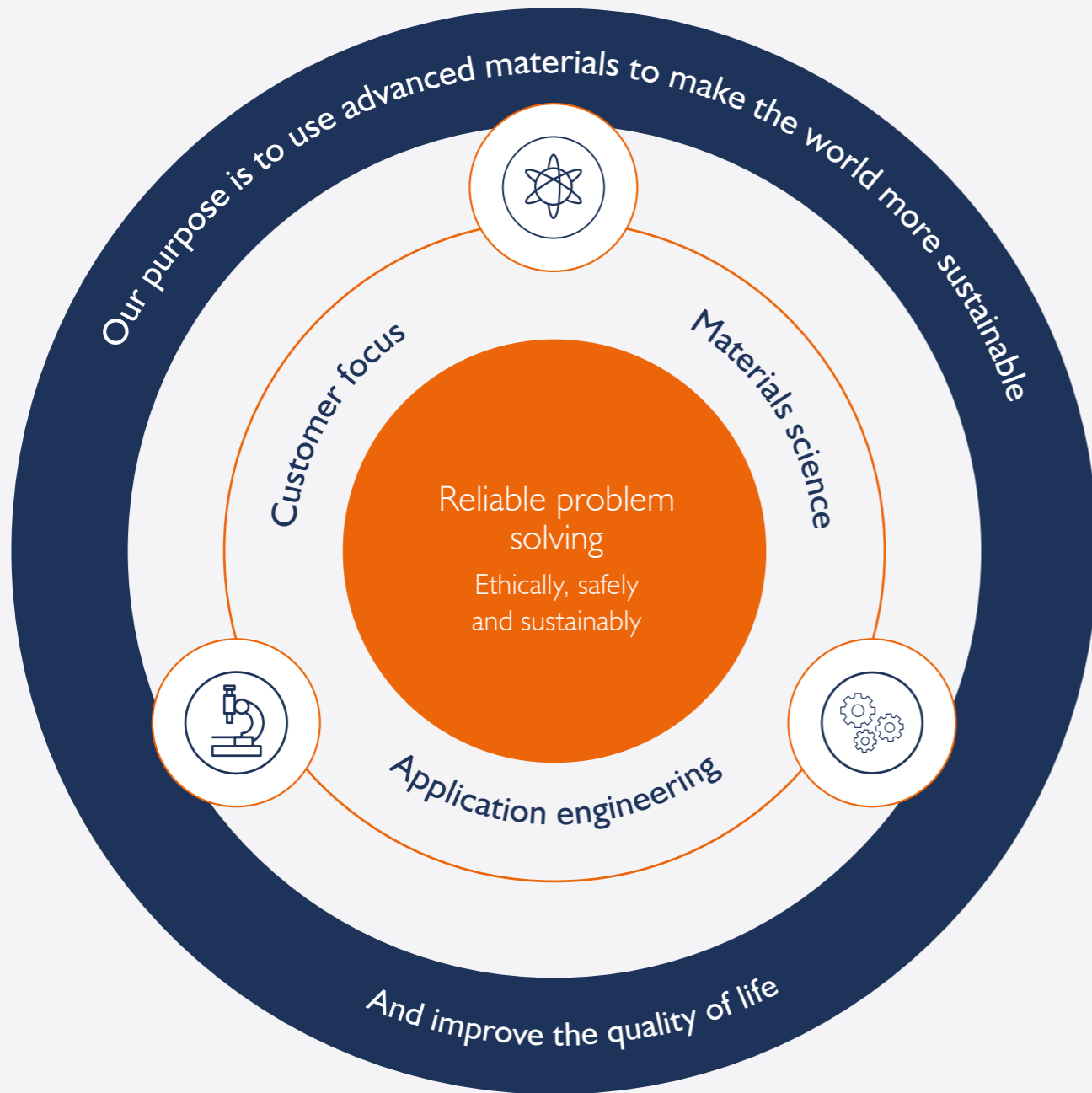
Opportunities and solutions

We manufacture products for power generation from hydroelectric, nuclear and traditional sources and insulation materials for heat management. Our carbon brushes are integral to efficient power generation systems.



Our advanced thermal insulation is being used to insulate heat recovery steam generators in power and industrial plants.



Our strategy



Our strategy is to build distinctive capabilities in three areas

- 
Materials science
 We are an acknowledged leader in materials science for our chosen technology families. We have four global materials Centres of Excellence (CoE) which consolidate the Group's R&D efforts.
- 
Application engineering
 We have built an understanding of the application of our materials science in our customers' products and processes, in order to provide maximum benefit through advanced application engineering.
- 
Customer focus
 Our success comes from aligning everything we do to focus on the customer. We build deep and trusted relationships with our customers, working to understand their business and their markets, and their technical challenges and product roadmaps. We align our materials development to solve our customers' problems.

We apply these skills to solve difficult problems for our customers while operating safely, ethically and sustainably. We will operate businesses that are, or can be:

- > **At scale.** Among the leaders of their markets and big enough to be resilient and able to invest to sustain their position.
- > **Scalable.** Running on a global basis, getting synergies in technology, operations and sales.

We have three execution priorities which we are pursuing over the medium term to enhance our capabilities and improve our strategy execution.

- 1. Big positive difference**
 We will build a sustainable business, getting to net zero¹ by 2050, and create a fair and inclusive working environment that is reflective of the communities we operate in. A business where everyone is welcome and can do their best.
 [Read more on page 23](#)
- 2. Delight the customer**
 We will make our businesses more customer-centric. We are getting feedback from our customers and making improvements to customer service, responsiveness and delivery. We are simplifying and improving our digital communication.
 [Read more on page 24](#)
- 3. Innovate to grow**
 We will win in our core markets by providing products and solutions that make our customers more sustainable. We will increase our exposure to our faster growing markets that reflect global trends: semiconductors, healthcare, clean energy and clean transportation.
 [Read more on page 25](#)

1. Scope 1 and scope 2.

Chief Executive Officer's review



“Our business and our people have demonstrated great resilience this year, responding to and recovering from a cyber security incident while keeping each other safe and delivering for our customers. I would like to thank all of our people for their commitment and support during the year.”

Pete Raby
CHIEF EXECUTIVE OFFICER

While it has been a tough year, we are well placed as we head into 2024. We have good positions in our core markets, a significant capital programme underway to add growth capacity for our faster growing segments and for the core, and increased investment going into our IT estate, accelerating our modernisation plans and improving our resilience. We are taking steps to reduce costs and we have a strong balance sheet to support our organic and inorganic growth ambitions.

Cyber security incident

On 8 January 2023, we experienced a cyber security incident in our network. Our teams worked quickly to compartmentalise the network and shut down our systems to limit the damage. Despite the rapid action of our teams, there was considerable damage to networks and systems, in particular in our US businesses.

During the first half we recovered our core ERP systems and started recovery of supporting applications. In parts of the business, representing around 27% of revenues, ERP systems could not be restored and we implemented a new ERP solution, accelerating the work we had underway to implement a new, common, Group system.

By the end of the year, we had largely recovered with a few applications still to be restored and some local network constraints still being addressed.

We have accelerated our IT modernisation programme which includes changes to our network design, the deployment of additional security tooling and acceleration of our Group ERP programme. Our factories operated throughout the disrupted first half. Our teams worked closely with our customers to manage their deliveries and customer demand remained robust during our recovery.

The cyber security incident impacted revenues and profitability largely in the first half, and £14.7 million of exceptional costs associated with the IT remediation.

Group results

Markets have been mixed during the year with high inflation persisting in some geographies leading to high interest rates as central banks look to cool economies and contain inflation. Growth in our faster growing segments, driven by power semiconductor demand for electric vehicles, along with growth in aerospace and petrochemical has offset contraction in European and Chinese industrial and metals markets.

We have grown the business 2.5% organically during the year with growth accelerating after the cyber security incident.

Adjusted operating profit margins declined to 10.8% reflecting the cyber security incident and the slower end market demand. The majority of the impact of the cyber incident was experienced in the first half, with second half operating margins of 12.5%, in our target range.

Financial results

- Group revenue in 2023 was £1,114.7 million, 0.2% ahead of the prior year at reported rates and 2.5% higher on an organic constant-currency basis
- Statutory operating profit was £91.9 million, profit before tax was £77.8 million, earnings per share was 16.4p
- Adjusted operating profit* was £120.3 million representing adjusted operating profit margin* of 10.8%
- Group adjusted earnings per share* was 25.0p (2022: 33.8p)
- Net capital expenditure was £58.5 million (2022: £57.4 million), with investment focused on health, safety and environmental improvements, investments in efficiency, capacity expansion and improvements to the underlying infrastructure of the Group
- Free cash flow* was £14.6 million inflow (2022: £46.9 million outflow)
- Net debt* excluding lease liabilities* was £185.2 million, with a net debt* excluding lease liabilities to EBITDA* ratio of 1.2 times

Sustainability

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

In 2021, we set out five long-term goals for our business together with intermediate goals for 2030:

- A scope 1 and 2 CO₂ net zero business by 2050, with a 2030 goal of a 50% reduction in scope 1 and 2 CO₂ emissions.

We reduced scope 1 & 2 emissions by 25% during the year and are now 54% below our 2015 baseline.

As our business grows, continued focus is needed on process efficiencies and technological advancements to maintain this.

We are on track to meet our 2030 goal.

- Use water sustainably across our business, with 2030 goals of reducing water use and water use in high-stress areas by 30%.

Our overall water usage reduced by 11% and water in high-stress areas reduced by 14%.

We are on track to meet our 2030 goal.

- 'Zero harm' to our employees, with a 2030 goal of a lost-time accident (LTA) rate of 0.10.

Our LTA rate was 0.19 (2022: 0.28), an improvement over the prior year reflecting the significant focus on employee safety and wellbeing.

During the year we refreshed our 'Take 5' for safety process, introducing new templates and training all of our people.

We also completed further work to improve the safety of our high-temperature processes and deployed a new EHS system to facilitate reporting and management of EHS activities.

- A workforce reflective of the communities in which we operate, with a 2030 goal of 40% of our leadership population being female.

Our gender diversity position was unchanged over the year with 30% females in our leadership population.

While we have done a lot to improve our business as an environment for female leaders, we have yet to make progress on this metric and we will be taking further steps in 2024 including further policy improvements, ensuring diverse shortlists when filling roles and accelerating the development of our female leaders.

- A welcoming and inclusive environment where employees can grow and thrive with a 2030 goal of a top-quartile engagement score.

We completed a pulse engagement survey in December 2023 sampling 2,559 employees and our engagement score was 54, one point down on the equivalent population in the prior year.

We will be completing a full survey in June 2024 and are continuing to drive actions locally and globally to improve the experience of our people.

* 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). 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. 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 72 to 75.

Chief Executive Officer's review continued

Investment proposition

I believe the Group remains an attractive investment opportunity. There are four reasons to invest in us:

1. We are well positioned in attractive, high-growth markets
2. We have leading, differentiated market positions
3. We provide sustainable solutions to support the energy transition
4. We are a resilient Group delivering attractive through-cycle returns.

Medium-term targets

In support of our investment proposition, we have set out a clear through-cycle financial framework consisting of:

- > Organic revenue growth* of 4%–7% per annum
- > 12.5%–15% adjusted operating profit margin*
- > Return on invested capital* of 17%–20%
- > Leverage of 1.0–2.0 times with the combination of organic growth, M&A and shareholder returns to deliver enhanced EPS growth.

We have upgraded our constant-currency* growth guidance in 2024 (previously 3%–6%) in anticipation of the significant semiconductor investment.

This is a credible set of goals, and an attractive investment proposition for the Group, consistent with the performance we have delivered in recent years.

Our organic performance will be enhanced by M&A and/or shareholder returns given our strong balance sheet and the substantially de-risked pension position.

Even with the impact of the cyber incident in 2023, we have delivered ROIC and leverage within the range, and margins in the range in the second half. Revenue growth was just below the range with an estimated 2–3% reduction in growth from the cyber security incident.

Outlook

As has been typical in recent years, there is a high level of uncertainty as we head into 2024, with ongoing geopolitical risks and a broad range of possible outcomes.

We expect our faster growing markets to continue to grow strongly, driven by semiconductors and healthcare in particular.

In our core markets, our central case is for European and South East Asian markets to start to recover in the second half, and the US to slow in the first half.

We expect strong growth in India and continued strength in aerospace and defence markets.

We expect inflation to continue to moderate and we will continue to recover inflationary impacts through pricing, with pricing and continuous improvement more than offsetting inflation.

Pete Raby
CHIEF EXECUTIVE OFFICER

Strategy in action

We are making a big positive difference by driving inclusion and diversity and reducing energy and water consumption at our plants. Here are just some of the ways that we made a difference in 2023.

I.

Big positive difference

Learning

Our people really embraced a culture of learning in 2023, clocking an impressive 6,640 hours on Percipio – our online learning tool. That's 13,211 courses completed during the year. Our goFLUENT language platform, available to all our people, also saw nearly 600 individuals brush up on their language skills, helping us to collaborate more effectively across our global footprint.

Earth Day

We ran a photo competition for Earth Day, focused on demonstrating positive environmental changes, where 29 of our sites took part. Winners across four categories were chosen, with donations made to local reforestation projects on behalf of each winning site.

Energy

We completed the installation of an on-site solar array at our plant in South Africa in 2022, generating nearly 500MWh of green electricity in 2023. Another project helping to cut our carbon emissions.

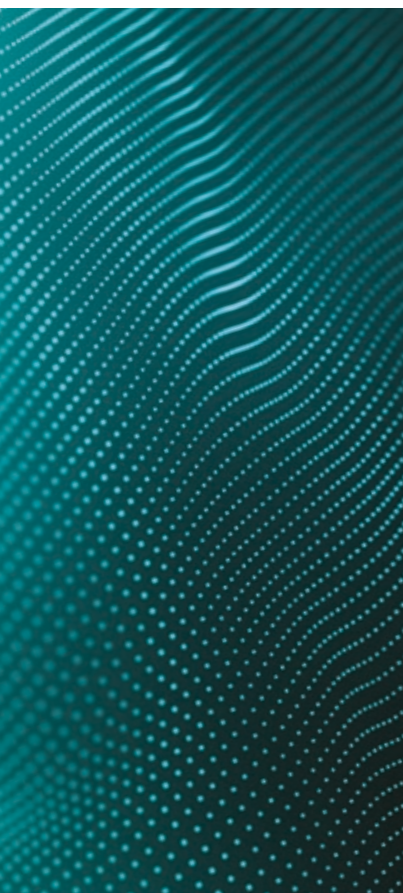
Diversity

To support greater diversity and especially our women at Morgan, in 2023 we:

- > Completed our first female mentoring pilot
- > Created a Morgan 'wall of appreciation' to highlight the fantastic role women play in our organisation and linked this to International Women's Day celebrations
- > Held female focused talks on key issues impacting women at Morgan and across the world, such as menopause and the gender pension gap.

Environment

- > We made further substantial reductions to scope 1 and scope 2 CO₂ emissions and water usage during the year.



Strategy in action continued

2.

Delight the

We know that the more we understand our customers, their businesses, markets, and technical challenges, the more effective we are at providing them with solutions. That is why we are building trusted partnerships with our customers and investing in understanding our customer segments.

We are shaping our product and service offerings based on customer needs and key 'voice of the customer feedback', and monitor our performance closely including our customer service performance, our focus on safety, quality control and delivery metrics, so we can meet and exceed our customers' expectations.

This also means we collaborate closely at the technical level to ensure that our products pass any customer's stringent and extensive performance tests.

customer



Innovation in materials, products and services enables rapid change for our customers. We are innovating in our core markets to support customers' transition to more sustainable products and solutions and increasing our exposure to our faster growing markets: semiconductors, healthcare, clean energy and clean transportation.

3.

Innovate to grow

- > In aerospace our innovative materials are enabling higher efficiency engines, ultimately reducing carbon emissions.
- > In high-temperature industrial processes our material solutions are producing a more energy efficient process for our customers.

In our growth markets we are:

- > Increasing the lifetime and performance of solar, wind and energy storage, providing much-needed clean energy
- > Creating best-in-class materials and miniaturisation technology, helping the healthcare industry make huge leaps forward
- > Developing higher performance materials for the most demanding process steps in the semiconductor market
- > Providing superior materials which support the longer lifetime of products in the clean transportation field.

Our deep expertise in carbon and ceramics is maintained and strengthened through our ongoing process of research and development, centred around our four global Centres of Excellence. As a business, we continue to invest approximately £30 million each year in R&D, furthering our materials science knowledge and solutions expertise.

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.

The Board seeks regular feedback from our investors, customers, employees and pension trustees through various mechanisms and requires management to have action plans to improve that engagement. From this feedback we have identified what matters to our stakeholders.

Investors

Those who own shares or wish to own shares in Morgan Advanced Materials

Why our investors are important to us

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.

It is important to us that we foster an open and transparent relationship to enable investors to make effective investment decisions.

How we engage with investors

We engage with our investors directly through formal presentation of results and market updates, and periodic capital markets events to update on specific markets and opportunities and describe aspects of our business and business model in more detail. We 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.

We provide a dedicated section on our website which offers timely information on how we are performing against our stated sustainability goals, including full disclosure of metrics and ratings linked to environmental performance.

What matters to our investors?

- > Capital gain through share price appreciation
- > Capital return via dividends
- > Profitability and business growth potential
- > Quality of governance
- > Responsibility and fairness
- > The protection of the environment through the use of more sustainable materials and the reduction of carbon emissions, reduction in water use and improved waste management
- > Demonstrating our 'good governance' approach throughout our decision-making
- > Demonstrating the positive contribution we make to society through the employment opportunities we provide, through our interactions with the communities where we have our sites and through the support we provide our people

→ To find out more about investing in Morgan Advanced Materials, please visit our website: morganadvancedmaterials.com/invest-in-us/



Customers

Those who have purchased our products or will do so in the future

Why our customers are important to us

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 to and engage with them.

We develop relationships with our customers based on mutual trust and constructive dialogue.

We have a diverse customer base across the globe, which we serve directly, and also through joint venture partnerships and local suppliers.

We are seeing growing demand for advanced materials as customers push the boundaries of technology.

We have been working closely with our customers to develop new solutions for their next generation of products and processes.

We are providing products that are differentiated from those of our competitors.

How we engage with customers

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 and physical channels.

Our sales and service colleagues also keep customers updated on the progress of manufacturing, sometimes working alongside the customer to fine-tune the product and production process.

We also gather key feedback from customers about the service we provide and use this to help improve relationships and secure future business.

What matters to our customers?

- > Reliable and consistent service
- > Quality products that are value for money
- > 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



Suppliers

Those from whom we purchase goods or services

Why our suppliers are important to us

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.

We aim to use all our resources as efficiently as possible, minimising the environmental and social impact on ourselves, our suppliers, our customers and the world around us.

How we engage with suppliers

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.

We behave ethically in our interactions with our suppliers, seeking to build long-term relationships with trust at the centre. We seek to ensure our suppliers operate in a responsible way. We publish a Supplier Code of Conduct which we expect our suppliers to sign up to. The Morgan Supplier Code of Conduct defines the minimum standards that must be met by our suppliers, vendors, subcontractors and contract manufacturers, and we have regular checkpoints to ensure that this is adhered to.

What matters to our suppliers?

- > Human rights
- > Environmental and climate impact
- > Quality management
- > Fair treatment and timely payment
- > Growing their business
- > Cost-efficiency
- > Ethical trading policies and sustainable sourcing
- > Developing long-term relationships



Employees

Anyone directly employed by Morgan Advanced Materials

Why our employees are important to us

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.

Our employees have been instrumental in making Morgan Advanced Materials the company it is today. They are key to driving the business forward and ensuring it remains relevant in the future.

We work to attract, develop and retain the right people and ensure they are in the right roles.

How we engage with employees

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 our leaders and teams.

At a local level, leadership teams use feedback from surveys, focus groups, pilot groups, manager one-to-one conversations and employee communications to shape engagement activities with employees.

At a Group level we solicit feedback through our annual employee survey 'Your Voice', through social media channels both internally and externally, and through employee satisfaction platforms such as Glassdoor. We also listen to and work closely with representatives from our three employee resource groups (ERGs): PRISM, Women@Morgan and Military@Morgan. These ERGs are a key tool in understanding the needs of our people and help to shape thinking and policy changes.

At all levels we engage on subjects important to our people including mental health at work, safety, the environment, developing a diverse and inclusive culture, and the important role of community and charity.

What matters to our employees?

- > Meaningful roles linked to our purpose
- > Flexible working
- > Focus on wellbeing
- > Career development
- > Recognition and competitive compensation
- > A safe, ethical and inclusive working environment

Our people contribute to the culture and are the driving force behind our success.

Pensioners and pension trustees

Why our pensioners and pension trustees are important to us

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.

How we engage with our pensioners and pension trustees

We engage with both current pensioners and those yet to retire through regular pension communications in conjunction with our pension trustees.

New employees receive communications about our pension schemes in a bid to promote financial wellbeing.

In 2023, as part of a wider set of communications on reward and benefits, we have engaged our current employees further on the subject of pensions. In conjunction with our Women@Morgan ERG we gave employees the chance to talk to leading UK pension experts on the gender pension gap. Our goal is to help people feel more engaged with their pension and gain further understanding.

What matters to our pensioners and pension trustees?

The commitment of the Company to ensure the pension scheme is fully funded and any deficit reduction plan is maintained.

Communities

Those who live or operate in areas where we work – for example, residents, businesses and charities

Why our communities are important to us

Our people live and work within wider communities and relationships with these communities are key in supporting our business for the future.

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.

We seek to build trust by understanding the issues core to our communities, operating responsibly and addressing concerns that are material to them.

We aim to create long-term relationships with the communities where we operate, that drive positive change and help build a more sustainable future.

How we engage with communities

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.

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

What matters to our communities?

- > 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



We aim to have a positive impact on those around us, from supporting job creation and skills advancement to providing a helping hand in our local communities.

Section 172(I) statement

We believe that considering our stakeholders in key business decisions is not only the right thing to do but is fundamental to our ability to drive value creation over the longer term and deliver on our purpose.

It is not always possible to provide positive outcomes for all stakeholders and the Board sometimes has to make decisions based on balancing the competing priorities of stakeholders. Our stakeholder engagement processes enable our Board to understand what matters to stakeholders, and to consider carefully all the relevant factors and select the course of action that best leads to high standards of business conduct and the success of Morgan Advanced Materials in the long term.

The principles underpinning Section 172 of the Companies Act 2006 are not only considered at Board level, they are part of our culture. They are embedded in all that we do as a company.

The differing interests of stakeholders are considered in the business decisions we make across the Company, at all levels, and are reinforced by our Board setting the right tone from the top. All of the Board's significant decisions are subject to a Section 172 evaluation to identify the likely consequences of any decision in the long term and the impact of the decision on our stakeholders.

Details of our key stakeholders, how we have engaged with them during the year and the outcomes of that engagement are set out on pages 26 to 29 and are incorporated by reference into this Section 172(I) statement. Engagement activities specifically carried out by the Board collectively and individually can be found on [page 87](#).

In performing their duties during 2023, the Directors have had regard to the matters set out in Section 172. You can read more on how the Board had regard to each matter, during the year, as follows:

Key decisions in the year

Application of the capital allocation framework

The Board applied the capital allocation framework (see page 32), disclosed at the capital markets event in December 2022, when considering the relative priorities for the use of cash during 2023.

Accelerate our IT modernisation programme

How the Board reached its decisions

During the year, the Board took the decision to accelerate our IT modernisation programme which includes changes to our network design, the deployment of additional security tooling, and acceleration of our Group ERP programme. The Board received several presentations during the year from management and third-party consultants on lessons learnt following a post-cyber security incident review and recommendations to improve the security posture of the business. The newly appointed Chief Information Officer also presented the refreshed IT strategy, which was discussed in detail and approved. The Board considered the impact of the increased spend on the capital allocation framework before taking the decisions.

Stakeholder considerations Colleagues

- › The changes will enable our colleagues to carry out their work more efficiently to meet customer demand; and
- › Ensuring effective engagement with colleagues on the changes, communicating how the changes will impact them and giving them the opportunity to input into the changes that will impact on their work.

Customers and suppliers

- › Enabling the businesses to more efficiently meet customer demand; and
- › Increasing efficiencies and reducing costs associated with supply chain management.

Shareholders

- › Adequacy of return on invested capital; and
- › Expected stronger financial profile supporting a progressive dividend policy.

Outcome and impact of the decision

The Board approved the acceleration of the programme. The business is already benefiting from the improvements made to its security posture and the roll out of the Group ERP programme is underway, which will deliver business-wide benefits.

Capital investment programme to add growth capacity for our faster growing segments and for the core segments

How the Board reached its decisions

We announced at the capital markets event that we would focus on organic investment to enhance growth and returns, including investing an additional £60 million of capital in our semiconductor manufacturing capacity over the next few years. During the year, the Board took the decision to increase that investment to £100 million to add growth capacity for our faster growing segments and for the core segments. The Board received several presentations during the year from management outlining the business case for making the investment, environmental, health and safety considerations and impact on stakeholders.

Stakeholder considerations Customers

- › Enabling the business to meeting increased customer demand for existing products; and
- › Opportunities to enhance our product portfolio, enabling us to deliver new products to existing and new customers.

Shareholders

- › Adequacy of return on invested capital; and
- › Expected stronger financial profile supporting a progressive dividend policy.

Colleagues

- › Creation of new jobs in new and existing sites and refurbishment of sites to support this expansion. Ensuring safe processes and practices are embedded in the sites;
- › Management bandwidth to deliver the programme.

Communities

- › Creation of new jobs; and
- › Ensuring new plant and equipment are as efficient as possible and meet environmental standards.

Outcome and impact of the decision

The programme is on track and progressing well. The Board continues to receive regular progress updates from the presidents of the global business units on the delivery of these investments.

Approval of a progressive dividend policy

How the Board reached its decisions

We also announced at the capital markets event that we would enhance regular returns via a progressive dividend policy, by growing the regular dividend through the cycle with adjusted earnings cover of circa 2.5x, and provide additional returns of surplus capital to shareholders as appropriate.

When considering the proposals to pay interim and final dividends during 2023, the Board considered cash generation, the performance of the underlying business and the long-term impact of paying the dividends on the liquidity and solvency positions. The Board also considered the impact of the dividend decisions on expectations relating to the dividend policy.

Stakeholder considerations Shareholders

- › Shareholders' expectations in relation to the payment of dividends, both from a capital return perspective and as a signal of future performance; and
- › The Board also considered the impact of the dividend decisions on expectations relating to the dividend policy.

Lenders and debt holders

- › The impact of paying dividends on whether the business remained within the financial covenants agreed with lenders.

Colleagues

- › For colleagues who participate in the Group's employee share schemes, the payment of dividends enabled returns for those colleagues.

Outcome and impact of the decision

Following due consideration of all the matters set out in Section 172, the Board recommended a full-year dividend of 12.0p per share, with payment of a final dividend of 6.7p to shareholders in May 2024 and an interim dividend of 5.3p in November 2023. This recommendation reflected the Group's resilient performance for 2023 and the Board's confidence in the Group's structural growth drivers into the future. The Board concluded that it was in the long-term interest of the Company to proceed with the payment of the dividends.

Restructuring programme

How the Board reached its decisions

In the development of the capital allocation framework, some degree of restructuring had been identified to address the cost base in parts of the business and streamline our organisation through the simplification of our business into three distinct segments (Thermal Products, Performance Carbon and Technical Ceramics) and the closure of some uneconomic sites. Restructuring costs for the year of £6.5 million have been presented as a specific adjusting item. The programme will continue into 2024.

The Board received detailed papers on the impact of the restructuring programme, including the potential synergies arising from the combination of the business units, the approach which will be taken to manage the programme and the expected payback from the programme.

Stakeholder considerations Colleagues

- › The impact of the changes on affected colleagues, ensuring the communication is carefully planned and the systems are in places to support them through the changes;
- › Management bandwidth to deliver the programme, given other projects already underway; and
- › The need to allay any concerns that colleagues may have about the changes and reassure them that they are a necessary step to deliver on our strategy and growth ambitions.

Shareholders

- › The need to explain the restructuring charges to provide overall context as to the type of restructuring we are doing and to explain the phasing of estimated savings; and
- › Impact on distributable reserves and ability to pay dividends.

Customers and suppliers

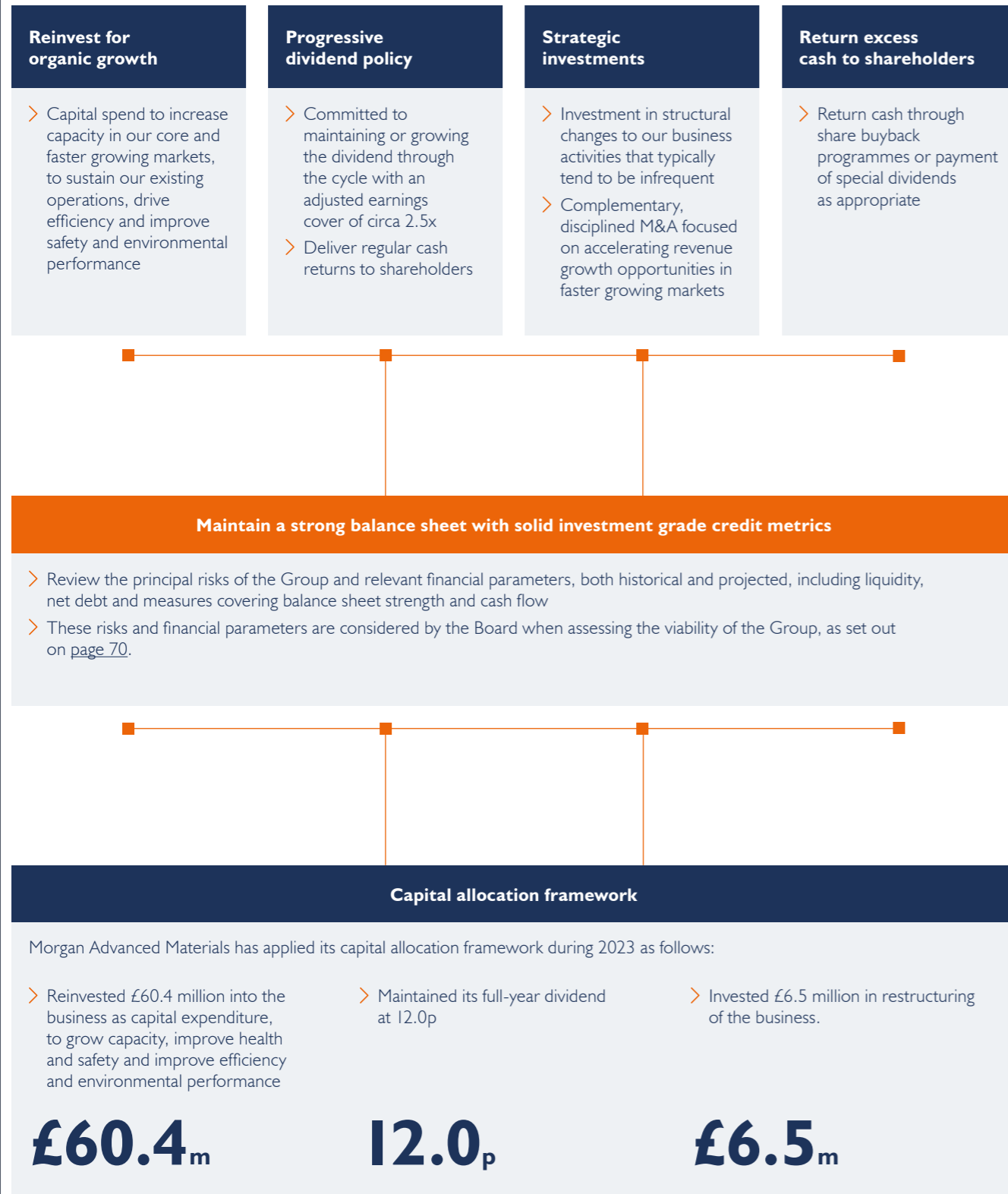
- › The steps which will be taken to ensure that supply chain changes are well-planned and we maintain the service levels for our customers.

Outcome and impact of the decision

The implementation of the programme is underway, with the initial phase partially completed. The Board continues to receive regular progress updates on the programme.

Section 172(1) statement continued

Morgan Advanced Materials' capital allocation framework is used to prioritise the use of cash generated by the Group. The framework addresses the investment needs of the business, regular dividend payments and additional returns to shareholders. The framework also seeks to maintain an appropriate capital structure for the business and a strong balance sheet with solid investment grade credit metrics. The diagram below summarises the key priorities.



Non-financial and sustainability information statement

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

Our business model on [pages 12 and 13](#) provides an insight into the key resources and relationships that support the generation and preservation of value within Morgan Advanced Materials.

All of our non-financial KPIs are presented together on [pages 4 and 5](#).

A summary of our principal and emerging risks, including those related to ESG matters, as well as a description of our risk management process, starts at [page 54](#).

Areas of impact	Related principal risks, pages 55 to 61	Outcome of policies, due diligence, and impact of activities	Annual report page references and relevant sections on our website
Employees The Group has an overarching policy designed to attract, develop, reward, retain and engage talented people and support an inclusive, safe and ethical workplace. The Group policy is supplemented by a number of people policies specific to the business or jurisdiction. Our Environmental, Health and Safety (EHS) Policy is designed to promote a culture of 'zero harm' for our employees, contractors and visitors, and eliminate and control health risks proactively.	<ul style="list-style-type: none"> Environment, health and safety Technical leadership 	<ul style="list-style-type: none"> Employee engagement is at 54%, from a pulse survey conducted during the year LTA rate, the headline measure for health and safety, was 0.19 	<ul style="list-style-type: none"> Our people and communities, pages 39 to 42 Stakeholders, pages 26 to 29 Focusing on culture, pages 84 to 85 Listening to employees, page 86 ESG policies People and communities Health and safety Diversity, inclusion and equity Gender pay gap reporting Wellbeing
Environmental matters Our EHS 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, protect biodiversity and aim to maximise the positive impact of our products. For our CFD regulation disclosure see pages 44 to 53 .	<ul style="list-style-type: none"> Climate change Environment, health and safety 	<ul style="list-style-type: none"> Data gathering on GHG emissions Audits under the EHS programme Annual self-certification Our 'Speak Up' hotline Internal audit processes 	<ul style="list-style-type: none"> TCFD, pages 44 to 53 ESG goals, pages 35 to 36 The environment, pages 37 to 38 Environmental Policy ESG goals Sustainability and responsibility report TCFD reporting Net zero Energy, water and waste
Social and community matters Our sites take ownership of local community engagement, to support our strategic priorities and benefit local communities.	<ul style="list-style-type: none"> Tax Supply chain/business continuity 	<ul style="list-style-type: none"> Our business and our employees are more deeply connected to our local communities 	<ul style="list-style-type: none"> Big positive difference, page 23 Stakeholders, pages 26 to 29 ESG policies Community
Human rights Our Human Rights Policy establishes our commitment to protect the human rights of everyone who works for the Group and all those who have dealings with us. The Policy is supplemented by the Morgan Code.	<ul style="list-style-type: none"> Compliance 	<ul style="list-style-type: none"> No incidents of human rights abuse or modern slavery were identified during 2023 Monitoring of compliance with the Morgan Code Supplier due diligence processes Publication of our Modern Slavery Statement on our website 	<ul style="list-style-type: none"> Stakeholders, pages 26 to 29 ESG goals, pages 35 to 36 ESG policies Modern slavery Human rights Whistleblowing Policy
Anti-bribery, and anti-corruption The Morgan Code; Bribery, Corruption & Facilitation Payments Policy; Gifts & Entertainment Policy and Donations & Sponsorships Policy make up our key anti-bribery and corruption policies. 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.	<ul style="list-style-type: none"> Compliance 	<ul style="list-style-type: none"> Regular training provided to employees, via e-learning modules, with high completion rates Any reports of breaches in compliance are investigated and reported to the Audit Committee, and appropriate action is taken 	<ul style="list-style-type: none"> Focusing on culture, pages 84 to 85 Internal control and risk management, pages 97 to 98 Ethics and compliance The Morgan Code Supplier Code of Conduct

A responsible business

We believe that being a responsible business matters.

It helps us to achieve our purpose and contribute positively to society, while balancing the protection of our environment. We estimate that around 60% of our products make a positive contribution, making the world more sustainable and improving the quality of life. We are also proud that through their life, our products typically save tens or hundreds of times the CO₂ emitted during manufacture, allowing our customers to lessen the impact of climate change. We are committed to a more sustainable future and this is why in 2021 we set stretching targets across a number of Environmental, Social and Governance (ESG) areas.

Environment

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.

Social

Our people contribute to the culture and are the driving force behind our success. In return, we aim to be a caring 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. This ethos affects how we treat our people, how we support the communities we work in and how we engage our stakeholders.

Governance

We view good governance as crucial to business success, and conducting and managing our activities in a responsible manner has always been an important part of our strategy. We are fulfilling our responsibilities to our stakeholders and seek continuous improvement in the standards of governance that apply across all of our businesses.

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Our ESG goals

We have set stretching goals to reduce our environmental impact, manage our business well and to make sure we do the right thing for our people and society.

Net zero

Our goal is to be a scope 1 and 2 net zero business by 2050. Our 2030 target is to reduce our scope 1 and scope 2 CO₂ emissions by 50% (from a 2015 baseline). We started to measure scope 3 emissions in 2023 (with coverage increasing over time).

Water

Our aspiration is to use water sustainably across our business. Our 2030 target is to reduce our overall water usage by 30% and reduce our water usage in high-stress areas by 30% (from a 2015 baseline). As approximately 20% of our total water usage is in stressed areas we maintain a 30% target across both stressed and non stressed areas to ensure we are taking positive steps to reduce our overall impact.

Safety

Our aspiration is 'zero harm' to our employees. Our 2030 target is a LTA rate below 0.1 (lost time accidents per 100,000 hours worked).

Diversity and inclusion

Our aspiration is that our employee demographics reflect the communities that we operate in. Our 2030 target is for 40% female representation across our leadership population of our organisation.

Our aspiration is a welcoming and inclusive environment where our employees can grow and thrive. Our 2030 target is to attain a top quartile employee engagement score.

Alignment to strategy

To improve the execution of our strategy and deliver our sustainability goals we have set three execution priorities for the coming years:

1. Big positive difference
2. Delight the customer
3. Innovate to grow.

We also align our efforts to the United Nations Sustainable Development Goals (UNSDG).

The Goals aim to overcome global challenges such as inequality and climate change, and present the opportunity to put the world on a more sustainable path. We have identified nine goals that directly relate to our purpose and ambitions for creating a more sustainable world.

The UN goals covering environment and sustainability are; Goal 7, Affordable and Clean Energy; Goal 9, Industry, Innovation and Infrastructure; and Goal 11, Sustainable Cities and Communities.

To meet these Goals, we help our customers to manage heat and reduce their energy usage, as well as enable green energy production through wind and solar. We contribute to the electrification of public transport, reducing emissions and increasing efficiency, and we help create safer medical devices and better fire protection.

To support Goals 12, 13 and 6, governing Responsible Consumption and Production, Climate Action, and Clean Water and Sanitation, we have introduced clear water, waste and energy reduction goals to help protect our environment, including programmes to reduce greenhouse gas emissions through more efficient manufacturing processes.

To support Goal 3, Good Health and Well-Being; Goal 5, Gender Equality; and Goal 8, Decent Work and Economic Growth, we have set targets for gender diversity, safety and employee engagement and have programmes underway to meet them.



We have set targets for gender diversity, safety and employee engagement and have programmes underway to meet them.

A commitment to net zero

Our sustainability strategy includes actions to reduce greenhouse gas (GHG) emissions and combat climate change. We are making this happen through the products that we manufacture and the way we manufacture them.

Our products help our customers to be more efficient – to use less energy in their manufacturing processes or in their products and to generate less CO₂.

We are also working hard to decarbonise our own operations – to produce our products more efficiently and to reduce our own CO₂ emissions:

- We are migrating to carbon-free electricity across the Group. 72% of our power was carbon free at the end of 2023
- We continue to improve the efficiency of our gas-fired kilns and continue to move to electrically fired options for some kiln types.

During 2023 we reduced our absolute scope 1 and 2 CO₂e emissions by 25.4%.

Our decarbonisation roadmap

The risks and opportunities considered by the Board have directly informed the Company's strategy to deliver on our 2030 goals and 2050 aspirations. These risks and opportunities form the foundation of our net zero roadmap, to ensure we achieve our targets.

Our plans cover:

- Short-term (0–3 years) – preparing for the future
- Medium-term (3–10 years) – scaling up
- Long-term (10–25 years) – investment in key technologies.

For further information on our path to net zero, please see refer to page 49 of our full Task Force on Climate-Related Financial Disclosures report.

Science Based Targets initiative (SBTi)

The SBTi is a global body enabling businesses to set ambitious emissions reduction targets in line with the latest climate science.

SBTi has approved our near-term science-based emissions reduction targets and has classified our scope 1 and 2 target ambition as in line with a well below 2°C trajectory:

- We commit to reduce absolute scope 1 and 2 GHG emissions 50% by 2030 from a 2015 base year*
- We commit to increase active annual sourcing of renewable electricity from 0% in 2015 to 80% in 2025 and 100% by 2030
- We commit to reduce absolute scope 3 GHG emissions 15% by 2030 from a 2019 base.

* The target boundary includes biogenic land-related emissions and removals from bioenergy feedstocks.

AAA MSCI ESG rating

In 2023 we were awarded an 'AAA' ESG rating by MSCI.

An MSCI ESG rating is designed to measure a company's resilience to long-term, industry material ESG risks. MSCI uses a rules-based methodology to identify industry leaders and laggards according to their exposure to ESG risks, and how well they manage those risks relative to peers.

The ESG ratings range from Leader (AAA) to Laggard (CCC). As a result of our efforts to date, we have been awarded the AAA rating consecutively in 2023, 2022 and 2021.

These ratings highlight our commitment to a sustainable future and demonstrate our resilience to long-term ESG risks.

50%

REDUCE ABSOLUTE SCOPE 1 AND 2 GHG EMISSIONS BY 2030

100%

SOURCING OF RENEWABLE ELECTRICITY BY 2030

The environment

Energy

As public concern grows, more customers are asking about our GHG emissions as part of the manufacturing process. The increasing demand for low-carbon products and processes, and the need to consider the effects of climate change in general, have had an impact on our long-term strategy.

Our progress

Scope 1 and 2 CO₂e emissions reduced by 25% in 2023 (compared with 2022). This was driven by improvements in:

- Increased sourcing of renewable electricity
- Efficiency improvements in our high-temperature processes
- Continued investment in electric furnaces.

We have a broad-based improvement programme underway covering energy procurement, process improvements and behavioural changes in our plants.

In 2023, we improved our energy intensity, price adjusted, by around 11% and continued the transition to carbon-free energy for a number of our sites. Nearly three-quarters of our electricity now comes from green or carbon-free sources.

Energy performance in 2023

- Total GHG emissions (tCO₂e) were 157,574 tonnes, a 25% decrease over 2022 levels and 54% decrease over 2015 values
- Scope 1 GHG emissions (tCO₂e) from stationary fuel combustion were 105,946 tonnes and scope 1 GHG emissions (tCO₂e) from process emissions were 4,617 tonnes. For 2023, total scope 1 GHG emissions (tCO₂e) accounted was 110,563 tonnes, which is a 9% decrease over 2022 values and 46% decrease over 2015 values

- Market-based scope 2 GHG emissions (tCO₂e) were 47,011 tonnes, which is a 47% decrease over 2022 values and 66% decrease over 2015 values

- Achieved a "B" management score for Climate Change from CDP recognising we are taking co-ordinated action on climate issues.

Energy procurement

The total energy consumption (fuel and electricity) for the Group was 969.9 GWh for 2023, which is 8.5% lower than 2022. In 2023, we reached the milestone of 72% green (renewable and carbon-free) electricity.

Scope 3 emissions

Details of our scope 3 screening exercise can be found on page 51 of the TCFD section of this report.

Greenhouse gas emissions

The Group's 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, ie, carbon dioxide equivalents (CO₂e).

Waste

Through continuous improvement efforts we are reducing all hazardous and non-hazardous waste streams.

Every year, we aim to decrease waste intensity by 5% and increase recycling efforts by the same percentage compared to the previous year. We achieve this through Kaizen and 6S (Sort, Set in order, Shine, Standardise, Sustain and Safety) activities, which focus on eliminating waste, improving quality, increasing efficiency, reducing idle time and minimising unnecessary activities.

Our year-on-year progress in each category are shown in the following tables.

	Unit	2023	2022	2021	2020	2019	2018
Total waste generated	metric tonnes	36,853	47,879	39,918	35,660	48,676	46,605
Waste generation intensity	metric tonnes/£m	33	43	42	39	46	45
	Unit	2023	2022	2021	2020	2019	2018
Total waste recycled	metric tonnes	17,384	25,406	21,547	18,214	27,833	25,943
% Recycling of total waste	%	47	53	54	51	57	56

The Group's environment and sustainability data is calculated with reference to our Basis of Reporting (BoR) and EHS Definitions documents. These are available on request from info@morganplc.com.

The environment continued

Water

Water is a precious resource and we're committed to using water effectively in our production processes and across our sites. Water scarcity is an increasing challenge in many parts of the world.

As the world tackles climate change, our bioenergy demands will exacerbate water demand, meaning many will face water scarcity due to both physical shortages and scarcity in access. We use water in a number of our manufacturing processes, and we recognise that in some instances our water demands are in areas of increasing water stress. By improving our water usage we will positively impact the local communities in which we operate, and therefore society more generally.

Water is used both for production operations and sanitary purposes in our facilities. Our aim is to utilise water sustainably throughout our business. By 2030, we intend to reduce our overall water consumption by 30% and decrease water usage in high-stress areas by 30% (compared to a 2015 baseline).

2023 progress and performance

- Total water withdrawal is 1.72 million m³; which is an 11% decrease over 2022 levels and a 26% decrease over 2015. This reduction was driven by our investment in water recirculation projects in late 2022 and through 2023, better water management practices and changes in product mix
- Water withdrawal intensity is measured at 1,543m³/£m, compared to 1,738m³/£m of 2022

- Total water withdrawal in water-stressed areas was 332,687m³. This is 14% lower than 2022 with a 23% decrease over 2015.
- Achieved a 'B-' management score for water security from CDP, recognising we are taking co-ordinated action on water issues.

Water-stressed areas

Morgan Advanced Materials identifies water-stressed sites using the 'Aqueduct Projected Water Stress Country Rankings'. We determine our water-stressed sites by referring to the list of countries categorised into high (40–80% | score 3–4) and extremely high (>80% score 4–5) water stress levels.

We utilise the 2030 business-as-usual scenario for industrial water usage to classify sites in water-stressed areas. For 2023 the list of water-stressed countries was revised to include Spain, Italy, Turkey, Mexico, India, UAE, Argentina, China and Australia. Additionally, our sites in the state of California USA, are included in our water stress figures, based on water stress issues within the state. Following this, we have restated our 2015 baseline and all metrics are now compared to the new baseline.

Biodiversity

Investors and funding agencies now recognise biodiversity loss as a significant risk, and are beginning to request that organisations monitor, report and mitigate their biodiversity risks.

As a result, the manufacturing sector is aligning itself to understand their impact on biodiversity and is taking measures to mitigate the impact.

Biodiversity at Morgan Advanced Materials

We value the protection of biological diversity as a means of preserving natural resources, and flora and fauna survival. We understand the interdependence of our raw material usage, freshwater consumption and waste generation on the natural ecosystem.

Our 2030 ESG objectives are consistent with the UNSDGs, particularly Goal 6 (Clean Water and Sanitation), Goal 12 (Responsible Consumption and Production), and Goal 13 (Climate Action).

Our EHS&S policy and our corporate sustainability goals, such as those related to product manufacturing, circular economy, water management, material consumption, GHG reduction and climate protection, are aimed at mitigating the risks to biodiversity.

Biodiversity strategy

Our focus moving forward will centre on three key areas of impact: responsible production at our manufacturing sites, the effects of our products on the ecosystem, and our supply chain. As part of our ESG strategy, we intend to conduct assessments to determine the impact on ecosystems and dependencies within the Group's manufacturing value chain.



Our people and communities

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. Our employees have been instrumental in making Morgan Advanced Materials the company it is today. In return we aim to be a caring organisation where everyone feels valued and appreciated. We use our 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.

Our aspirations and 2030 goals outline our focus for making Morgan Advanced Materials a better place for our people.

Our aspirations	Our 2030 goals	Progress in 2023
'Zero harm' to our employees	0.10 lost time accident rate	EHS performance is monitored by the Group Executive Committee and the Board. Our LTA rate was 0.19 (2022: 0.28), with the improvement reflecting the significant focus on employee safety and wellbeing. During 2023, we refreshed our 'take 5 for safety' process, improved the safety of our high-temperature processes and deployed a new EHS system to facilitate the reporting and management of EHS activities. Safety continues to receive a high level of focus throughout the organisation.
Our employee demographics will be inclusive and reflective of the communities in which we operate	40% of our leadership population will be female	In 2023 30% of our leadership population is female, compared to 29% in 2022. We supported our employees by asking them what would help them to progress further within the organisation. This led to the introduction of WeeCare and PME Familienservice to support employees with caring responsibilities. We have created a new employer brand that features real Morgan people to open up our culture to our communities, so they can see what it is like to work for us.
A work environment where all employees are valued and can do their best work.	Top quartile engagement score.	We listened to the feedback of our employees, especially what they told us on the themes of retention and recognition of talent, and simplifying or improving our systems. For example, we introduced better benefit communications to help our people understand what we have to offer. We've simplified our performance management system and explained more clearly our bonus structure for our salaried employees, in order to set expectations. Our engagement score is 54% based on a pulse survey and on a like-for-like basis, engagement went down ~1%.

Our plans for 2024 and beyond



We are bringing the experience alive of what it means to work at Morgan Advanced Materials through our new employer brand. In 2024 this will be rolled out further, with a focus on real Morgan people. We are also going to showcase local sites and opportunities through new dedicated 'life at our sites' pages on our [website](#).



We are bringing further training to our HR teams and hiring managers to help support them in achieving greater diversity. One such way is helping them to use more inclusive language within job descriptions and adverts.



We are working on new policy initiatives to support the growing diversity of our teams, including engaging our people to have greater understanding of their entitlements today.



To support our reward goals we will roll out a new recognition scheme that aligns with our execution priorities and offers on the spot recognition for great contributions.

Our people and communities continued

Health and safety

We are working towards our aspiration of 'zero harm' to all our employees. We are committed to conducting all our activities in a manner that builds a caring safety culture and develops a world-class safety system that supports this effort.

By 2030, we aim to accomplish the following objectives:

- First, we aspire to prevent any occurrence of injuries or illnesses by promoting a culture of care. Our approach involves designing equipment and processes that eliminate or control potential risks. In situations where engineering solutions are not feasible, we continually assess and implement standards to safeguard people from hazards
- Second, we prioritise the elimination of risks that could result in serious injury. We aim to eradicate all cases of employee and contractor injuries and occupational illnesses not only at work but encourage the same best practices at home.

To achieve our ambitious safety objective of zero accidents and injuries, the involvement of every individual affiliated with Morgan Advanced Materials – employees, contractors, and visitors – is crucial.

Our employees play a pivotal role in influencing health and safety processes and protocols by providing valuable input through various channels, such as safety teams and committees, site communication meetings, pre-shift meetings and training sessions.

We proactively identify and mitigate hazards through a corrective and preventive action process. Our approach to health and safety employs several tools, such as machine-specific risk assessments, 'Take 5' for safety assessments, root cause incident investigations, permit to work processes, and 'Don't Walk By' hazard and Good Practice reporting.

Progress in 2023

In 2023 our LTA rate reduced to 0.19. This is an improvement of 58% against our 2015 baseline of 0.45, and improvement against 2022 (0.28) of 32%. This improvement reflected our continued focus on 'thinkSAFE' – our safety programme – and targeted safety interventions.

We improved our 'Take 5' for safety process, introducing a standardised assessment form. This is now used by all and includes a 'Stop Work Authority' element. Since the roll out of this assessment there has been a 33% increase in 'Don't Walk By' reports, with a corrective action closure rate of 94%. When incidents did occur, to increase accountability and ownership of safety, sites were required to present outcomes of incident investigations with high severity potential to senior leaders. The learning outcomes were then shared business-wide.

We increased the implementation and the use of an ergonomic assessment software (Humantech), which includes online training courses.

We implemented EHS360, a Group data management platform, including mobile applications. This includes incident and 'Don't Walk By' reporting, incident investigations, action tracking, plus risk and assurance activities. This improved our data consistency, reporting and tracking of safety performance.

All of our 2023 activities were also supported by a continued focus on the 'thinkSAFE' (behavioural safety) programme, where we trained further safety ambassadors who in turn delivered workshops, quarterly topics and monthly topics.

Our plans for 2024

Over the coming year we will further embed 'Take 5' for safety as a key 'thinkSAFE' commitment. We will also drive 'Don't Walk By' reporting including action closure via the EHS360 platform.

Further focus will be given to expanding the adoption and utilisation of EHS360, where we will enhance the reporting and performance tracking functionality and add environmental and sustainability measures to give our leaders a greater picture.

Community

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.

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 Advanced Materials. 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 Viva Engage, where you will often see the generous spirit and nature of our employees – from bake sales to cultural celebrations, and charity donations to sponsorship events.

What our people got up to in 2023

Our people continued to make a positive contribution to their community, to society and to each other in 2023. We saw people taking part in big clean-ups, supporting the education of the next generation but also for those needing extra support.

Our employees donated toys and clothes and gave their time generously to fix things, giving back where they could. All this alongside personal donations to charity and sponsorship of activities.



Diversity and inclusion

At Morgan Advanced Materials we are committed to creating a diverse and inclusive culture. We are clear that it is our people who are the driving force behind our success, so, in return for their dedication, we aim to be open, engaging and make those crucial adjustments to open up our organisation to all.

Inclusion at Morgan

Marking and celebrating global awareness days which reflect our differences, as well as our similarities, gives our teams a great opportunity to learn more about each other, and fosters an inclusive work environment. We support a number of these awareness days throughout the year as a way to celebrate, educate and engage ourselves, and to highlight our desire to make a big positive difference.

Diversity at Morgan

It takes a large number of very talented people to keep Morgan Advanced Materials running and we believe that our diversity is our strength. As a global business, we speak 20 different languages and use our differing experiences and knowledge gained from our own lives to help solve complex problems for our customers.

Recognising that each of our people needs a different type of support to grow and thrive, is key to reaching our goal.

We want to enable our employees to reach their full potential, so we work together to make this happen.



What we got up to in 2023

In 2023, we continued to build upon the successful launch of our three employee resource groups (ERGs) to serve as a visible sign of our commitment to a diverse and inclusive workplace. The three ERGs are Women@Morgan, Military@Morgan and PRISM – Pride, Respect, Inclusion and Support at Morgan, supporting our LGBTQ+ community and their allies.

We distributed challenge coins to our Military@Morgan colleagues in the US ahead of Veterans Day celebrations. We opened up several new chapters of our Women@Morgan ERG including in China. The global group brought us informative talks on topics such as menopause, while the UK chapter hosted a session on the UK gender pension gap.

Everyone came together in March to highlight the amazing contribution of women at Morgan Advanced Materials as part of celebrations linked to International Women's Day.

During 2023 we also appointed our first Diversity and Inclusion Director and continued to support our managers to achieve more inclusive recruitment by expanding our 'license to recruit' training.

To support the next generation of female leaders, we also ran a pilot female mentoring programme in one of our global business units. After fantastic feedback we hope to widen the participation of this to more women across the whole Group.

Our people and communities continued

Wellbeing

At Morgan Advanced Materials we recognise the importance of our people, and we strive to support their wellbeing.

We have built up a grassroots wellbeing programme called 'Better You, Better Life', which supports our purpose of improving quality of life. In a similar way to our safety week, the programme runs activities across the Group to promote healthy choices and encourages our people to take part.



Mental health

In October each year we run our mental health awareness month, supporting our people to make better, healthier choices. We believe that good mental health is as important as good physical health and wellbeing. We therefore provide our people with resources and links to charities and organisations across the globe that can support them. We offer managers and colleagues practical tips on communicating with employees with mental health issues, and we are backing a campaign to help break down the stigma of asking for help at work.

We have an employee assistance programme in the UK and US that our people can contact, and we are looking at similar schemes in other locations, alongside trained mental health first-aiders on our sites.

What we got up to in 2023

We care about the wellbeing of our people, and continue to build upon the structured programmes and support we have in place. In 2023 we introduced new wellbeing learning journeys through our online training platform, available to all our employees. We have also focused on specific topic areas to provide additional education and support, for example on dealing with stress.

Gender pay gap reporting

Recruiting and retaining the best people from the widest possible talent pool is a priority for us, and that is why our gender diversity matters.

The UK Government introduced gender pay gap reporting regulations for companies with more than 250 employees. The phrase 'gender pay gap' refers to the difference in the average earnings of men and women within the same organisation.

In 2023, the average gender pay gap for our UK workforce was 18.9% (2022: 21.6%, 2021: 26.0%). Our full Gender Pay Gap Report is available on our website.

During 2023, Morgan Advanced Materials met the board diversity targets set out in the Financial Conduct Authority's Listing Rules: our Board composition was 43% female, and the role of Senior Independent Director was held by a woman.

WORKFORCE BY GENDER MEMBERS AS AT 31 DECEMBER 2023					
MALE			FEMALE		
BOARD	4	MALE 57% (2022: 57%)	BOARD	3	FEMALE 43% (2022: 43%)
ALL LEADERS	296	MALE 70% (2022: 71%)	ALL LEADERS	128	FEMALE 30% (2022: 29%)
EXECUTIVE COMMITTEE	6	MALE 67% (2022: 70%)	EXECUTIVE COMMITTEE	3	FEMALE 33% (2022: 30%)
ALL EMPLOYEES	5,798	MALE 67% (2022: 66%)	ALL EMPLOYEES	2,896	FEMALE 33% (2022: 34%)
SENIOR LEADERS	66	MALE 74% (2022: 74%)	SENIOR LEADERS	23	FEMALE 26% (2022: 26%)

ESG policies

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. Our policies and practices set out how our ESG approach is governed.

Health and Safety Policy

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.

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.

Morgan Code

The Morgan Code is a foundational component of our ethics and compliance programme. The Code is a set of principles supported by policies that lay out how we must conduct ourselves, in support of our people, our communities, our business partners and our shareholders.

The Code applies to all employees and, to the extent appropriate, to Morgan 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. 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. The Morgan Code is a foundational component of our ethics and compliance programme. The Code is a set of principles supported by policies that lay out how we must conduct ourselves, in support of our people, our communities, our business partners and our shareholders. The Code applies to all employees and, to the extent appropriate, to Morgan Advanced Materials' business partners including agents, joint venture partners and other third-party representatives.

Tax Policy

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. The Group is committed to complying with tax laws in the jurisdictions in which it does business. The Group works closely with tax authorities and supports initiatives to increase trust in the tax systems around the world. The Group's tax strategy applies to all Group entities.

Board and committee structure

The Board of Directors is collectively responsible for promoting the success of the Company consistent within its Articles of Association, regulatory requirements and good Corporate Governance.

The principal committees which support the Board in its functions are as follows:

- > Executive Committee
- > Audit Committee
- > Nomination Committee
- > Remuneration Committee.

Monitoring and assurance

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 such system.

Policies and control practices

Supporting the principles of the Morgan Code are a suite of Group policies, including Bribery Corruption and Facilitation Payments, Competition Law and Anti-Trust, Trade Controls, and Information Security.

Board Inclusion and Diversity Policy

The Board recognises the value of having a diverse range of skills, experience and thinking on which to draw. For good governance and decision-making it is vital to have a mix of people from different backgrounds who can offer diverse perspectives, industry and market experience and who can challenge effectively from an independent standpoint.

Modern Slavery Statement

The Group is committed to conducting business legally, ethically, and with integrity wherever we operate. We do not condone any form of slavery, forced or compulsory labour, or human trafficking in our operations.

Gender Pay Gap Report

Recruiting and retaining the best people from the widest possible talent pool is a priority at Morgan Advanced Materials, and that is why our gender diversity matters.

Human Rights Policy

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.

Supplier Code of Conduct

We behave ethically in our interactions with our suppliers, seeking to build long-term trusting relationships. We seek to ensure our suppliers operate in a responsible way.

The Morgan Supplier Code of Conduct defines the minimum standards that must be met by our suppliers, vendors, subcontractors and contract manufacturers.

Conflict Minerals Policy

Morgan Advanced Materials complies with all laws related to conflict minerals and does not support sourcing of conflict minerals originating from countries that are involved in or contributing to illegal armed groups, human rights violations or financial wrongdoings. Our commitment to comply with all conflict minerals laws is covered in our policy and is available on our website.

Task Force on Climate-Related Financial Disclosures (TCFD) reporting

The Task Force on Climate-Related Financial Disclosures (TCFD) was established by the Financial Stability Board in 2015, and focused on improving the reliability of climate-related risks and opportunities.

We recognise climate change as both a risk and an opportunity for our business, and we fully support the implementation of the recommendations of the TCFD. Climate change poses challenges to our supply chain and production operations, as well as to our employees and customers.

Listing Rule 9.8.6R compliance statement

Morgan Advanced Materials is reporting in line with FCA Listing Rule 9.8.6R(8) by providing climate-related financial disclosures consistent with the TCFD recommendations in this report. We consider our climate-related financial disclosures to be consistent with eight of

the recommendations, however we are adopting an 'explain' stance for the following three recommendations:

1. and 2. Strategy B and C – The impact of climate-related risks and opportunities on the organisation's businesses, strategy has been explained, however detailed financial plans to mitigate these are still being developed. Scenario analysis has been completed for most risks and opportunities. For reliance on natural gas we have only modelled the financial impact of GHG taxes. The financial impact of Heat Stress incident has not been included as we are working on methodologies to calculate this. It was considered that the potential risk in the short term would not be material and therefore scenarios were examined over the medium and long term time horizons. However we recognise the importance of scenario analysis in the development of our

strategy and will enhance the detail and accuracy in future reporting cycles.

3. Metrics and targets B – Scope 3 screening data for the reporting year has been disclosed however, given the spend-based approach taken, this should be used for guidance purposes only until the full inventory is completed for the most material categories.

Although no formal strategy to achieve compliance has yet to be developed, each of these recommendations remains a key focus for ESG compliance.

The climate-related financial disclosures made by Morgan Advanced Materials comply with the requirements of the Companies Act 2006 as amended by the Companies (Strategic Report) (Climate-related Financial Disclosure) Regulations 2022.

Summary of disclosures:

Section	Requirement	Location
Governance	a) Describe the Board's oversight of climate-related risks and opportunities.	page 44
	b) Describe management's role in assessing and managing climate-related risks and opportunities.	page 45
Strategy	a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.	pages 47 to 48
	b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning.	pages 46 to 49
	c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	page 47
Risk management	a) Describe the organisations processes for identifying and assessing climate-related risks.	page 50
	b) Describe the organisations processes for managing climate-related risks.	page 50
	c) Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisations overall risk management.	page 50
Metrics and targets	a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management processes.	page 50
	b) Disclose scope 1, 2 and if appropriate, scope 3 GHG emissions and related risks.	pages 50 to 51
	c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.	pages 51 to 52

Governance

Morgan Advanced Materials' climate-related risk and opportunities governance starts at our highest level – the Board, and cascades down through the organisation, as outlined in the table on page 45.

Our Board has oversight of our climate change, environmental and corporate responsibility matters and ensures that our executive team progresses as planned to meet our commitments and goals.

The Board Chair and Board of Directors monitor the Group's progress against climate related actions at each meeting.

The metrics reviewed at each meeting include:

- Progress towards our 2030 absolute Scope 1 and 2 CO₂e emissions target¹
- Progress towards our 2030 water withdrawal and water stress targets².

The impact of capital expenditure projects on our 2030 environment goals is assessed as part of the Board review process.

Climate change risks and opportunities are considered as part of a top-down (from the Board) and a bottom-up (from the Global Business Units (GBUs) risk management process, where it is considered as a contributory factor within several risk categories, and as a risk itself. 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. Substantive impacts are assessed and monitored through our risk assessment process.³

1. See metrics and targets section.
2. See metrics and targets section.

Morgan Advanced Materials' climate governance structure

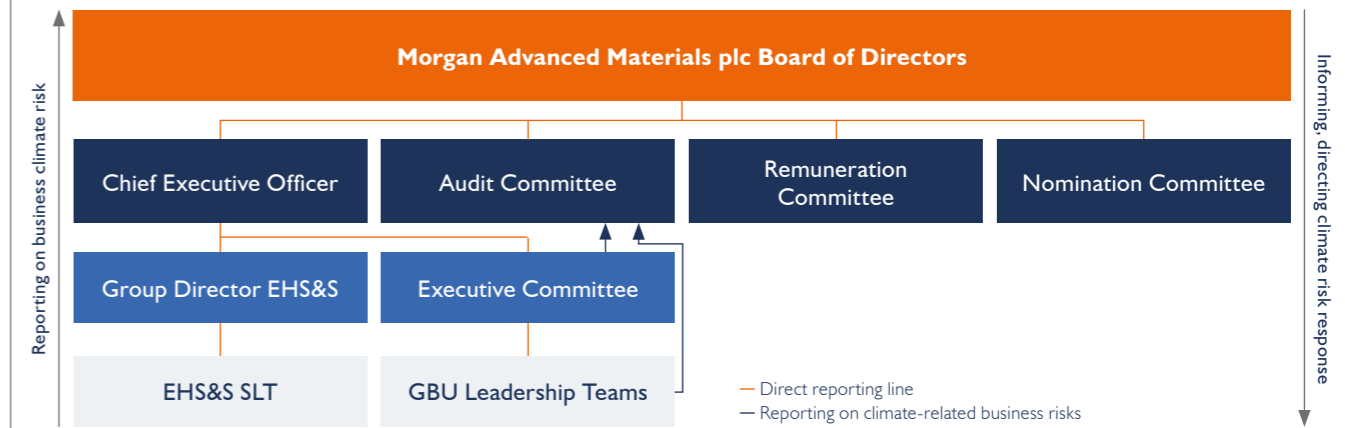


Table 1 – Board and Management oversight of climate-related risks and opportunities

Board of Directors	<ul style="list-style-type: none"> ➤ Has oversight of our climate change, environmental and corporate responsibility matters to ensure our executive team progresses as planned to meet our commitments and goals. ➤ Climate-related risks and opportunities are a scheduled Board agenda item twice per year and progress on environmental matters is reviewed four times per year, with updates on CO₂ and water progress in each meeting. ➤ The competencies of the Board can be found on page 80 of the annual report, which included skills and experience relevant to climate matters.
Chief Executive Officer	<ul style="list-style-type: none"> ➤ Has overall responsibility for climate risk management and delivery of the Sustainability strategy. ➤ Environmental performance metrics, including CO₂ emissions and water usage, are reviewed each month with the GBU presidents as part of the monthly performance review cadence.
Nomination Committee	<ul style="list-style-type: none"> ➤ Ensures the Board possesses the correct depth and balance of capabilities to support the Group's long-term position, including the expertise to assess the impact of climate change.
Audit Committee	<ul style="list-style-type: none"> ➤ Supports the Board on matters relating to financial reporting, internal control and risk management. The Committee reviews the integrity of the Group's climate-related financial reporting and the process used to develop our TCFD-aligned disclosures and assesses climate-related risks for the purpose of monitoring management's progress in addressing them.
Remuneration Committee	<ul style="list-style-type: none"> ➤ Responsible for remuneration policy, including the inclusion of sustainability-linked metrics and targets within performance-related pay. Greenhouse gas emissions targets are part of our Long-Term Incentive Plan (LTIP).⁴
Executive Committee	<ul style="list-style-type: none"> ➤ Responsible for execution and monitoring of the sustainability strategy, including environmental and corporate responsibility matters, and the processes and controls regarding climate risks at a Group level. Includes GBU presidents.
Group Director, Environment Health, Safety and Sustainability (EHS&S)	<ul style="list-style-type: none"> ➤ Reporting to the CEO, is responsible for developing further, and driving execution of, the ESG strategy. They manage and report progress on environment and sustainability matters to the executive team and to the Board of Directors. ➤ Is a key part of the Group risk review process – which reviews current and emerging risks every six months and reports these to the executive team.
EHS&S Leadership Team	<ul style="list-style-type: none"> ➤ Led by the Group Director EHS&S and comprising EHS&S leads from each of the GBUs, the team meets monthly to review strategy implementation and performance against 2030 targets.
GBU leadership teams	<ul style="list-style-type: none"> ➤ Each GBU has a leadership team and they are responsible for sharing, reviewing and managing of both principal and emerging risks including climate risks. This includes related policy, guidelines and process, and is subject to Board oversight. ➤ The GBUs develop business-specific risk registers and business continuity plans which are used in their annual strategic planning. These are presented to the Audit Committee and Executive Committees. ➤ The individual GBUs monitor their own performance against ESG targets and implement climate-related policies and projects.

3. See Risk Management page 54.
4. See Directors Remuneration Report pages 104 to 130.

Task Force on Climate-Related Financial Disclosures (TCFD) reporting continued

Strategy

Identification of risks and opportunities

In late 2020, our Executive Committee, our Group Director EHS&S, and the CEO conducted a comprehensive materiality assessment to establish our ESG priorities up to 2030. We obtained feedback from our Board and surveyed over 160 senior business leaders to determine what ESG means to our organisation. Additionally, we gathered input from internal and external stakeholders and assessed our business performance. Based on this materiality information we identified our sustainability impacts on the environment and society as well as the risks and opportunities that were material to our business and set ambitious goals for the future. During 2023, scenario analysis was conducted on the identified material risks to better understand our business strategy and resilience. Having considered the all sector and sector specific risks and opportunities in Tables AI.1 and AI.2 in the TCFD guidance, the information in the table below summarises our material risks⁷ and opportunities across the appropriate time horizons.⁸

Our products contribute to environmental sustainability by significantly improving the energy efficiency of our customers' operations. We provide products that enable solar and wind energy, as well as those that support efficient high-temperature processes such as ceramic and glass manufacturing, and industrial gas turbines.

Strategic execution priorities

1. Big positive difference
2. Delight the customer
3. Innovate to grow⁹

As part of our ongoing assessment of material risks and opportunities the previous year's disclosures have been reviewed to determine if they would continue to have a material impact on the Group.

Following this review and considering legislation timelines and requirements it was deemed that obligations for enhanced emissions reporting did not cause a material impact on the Group as any increased costs would be modest.

New product development was previously disclosed in isolation however this has now been included within the overall opportunity of expanding within our faster growing markets.

Availability of raw materials was previously included within this section. It is considered to be an operational risk due to certain single-point suppliers, and is therefore included within the Risk Management section on [page 58](#).

Changing customer behaviours leading to reduced demand for our core markets is no longer considered to be material. The flexibility and adaptability of our product portfolio enables us to support the requirements of our customers net zero transitions, giving strong resilience against any such changes in core market demand.

Scenarios chosen

Transition scenarios were chosen to explore different potential approaches that governments and the international community could take when setting carbon prices, and how this could impact the Group in different regions. These were taken from World Energy Outlook 2022 – published by the International Energy Agency. The Net Zero Emissions (NZE) scenario was chosen to understand the effect on the business of rapid implementation, and the Announced Pledges Scenario (APS) was chosen to explore the current trajectory. Likelihood scores were assessed based on anticipated speed of adoption of these measures across the international community. In undertaking this analysis we have assumed future growth in line with our financial framework.

Physical scenarios were chosen to explore best (<2°C), medium (2–4°C) and worst case (4°C) impacts from physical climate change at individual sites. These were modelled using different Intergovernmental Panel on Climate Change (IPCC) Representative Concentration Pathways (RCPs). For the physical risks, the likelihood of reaching each global temperature rise was considered. For example, it was considered to be almost certain that the world will experience a temperature rise of 1.5°C, whereas it is less likely that 4°C would be reached. This likelihood was then combined with the likelihood of an incident occurring at one of our sites to give a final result.

7. Climate-related materiality impacts are aligned with our broader risk assessment criteria, which is defined using EBITA impact as follows:

- 1 – Negligible financial impact (£0–£0.1 million) – The lowest level are those risks where the Company can absorb the financial impact, and the reputational impact is relatively non-existent or negligible.
- 2 – Low financial impact (£0.1–£1 million), with a potential to be known by the public via regulatory notices.
- 3 – Moderate financial impact (£1–£5 million), with the potential to be known by the public or to damage our Company reputation.
- 4 – High financial impact (£5–£10 million), with the potential to impact customer confidence.
- 5 – Significant financial impact (£10–£20 million) and/or reputational damage.
- 6 – Critical financial impact (>£20 million) and/or reputational damage.

Likelihood assessments are aligned with our broader risk assessment criteria, and reflects the likelihood of the scenario and incident occurrence, where the risk probability is defined as follows:

- 1 – Rare 0–5%
- 2 – Low 5–10%
- 3 – Moderate 15–25%
- 4 – High 25–50%
- 5 – Significant 50–75%
- 6 – Inevitable >75%

8. Climate-related risks and opportunities could impact the Group strategy over the short, medium and long term. These are aligned with our broader risk assessment criteria and are defined as follows:

- Short term (0–3 years). Detailed financial plans are developed, incorporating the strategic spending requirements to decarbonise our business and realise growth opportunities.
- Medium term (3–10 years). Aligns with our 2030 ESG targets. Each GBU develops transition plans within this time horizon to realise these targets.
- Long term (10–25 years). Aligns with our 2050 ESG ambitions. In this time horizon we expect to see a significant shift in technologies to allow us to decarbonise our business but realise that significant uncertainties exist and must be considered when developing long-term transition plans.

9. For more detail on our execution priorities see page 19.

Table 2 – Summary of our material risks and opportunities

Risk/opportunity & time horizon	How it impacts Morgan Advanced Materials	Link to our strategy/associated opportunity	Scenario likelihood/Impact	Comments and response	Related metrics and targets
Transition risks & opportunities					
Reliance on natural gas Medium to long term	Natural gas is widely used across the Group especially in our high-temperature furnaces.	1, 2 and 3 Reducing the carbon footprint of key products will support our customers with their net zero ambitions.	1.5°C ¹⁰ Likelihood 3 Impact 3 (medium term) <2°C ¹¹ Likelihood 4 Impact 3 (medium term)	For reliance on natural gas the financial impact of GHG taxes was modelled, however rising wholesale prices has not been modelled as we have considered this within our strategic and financial planning which mitigates any significant risk. Our reputational damage has not been assessed. The results show an increasing likelihood and impact from reliance on natural gas across both scenarios. GHG pricing instruments will likely begin to come into force closer to 2030. Based on current guidance the majority of our sites produce CO ₂ emissions at a level lower than the thresholds. In response, we will continue to leverage our core capability in materials science. A key part of our Transition Plan before 2030 is our investment in R&D for key product families to establish their decarbonisation pathway. The cross-GBU furnace working group is working to establish efficiency improvement and decarbonisation opportunities. As an example, we are signatories of the Ceramics UK Towards Net Zero initiative and are part of their Hydrogen research project. Our products help our customers to save energy. The impact from high fuel prices in recent years has been passed on to our customers and we would expect to pass on carbon costs in the same way, enabling our customers to choose the most carbon-efficient technology. Our pledge to increasingly source carbon-free energy demonstrates our commitment to decarbonisation.	Commitment to reduce scope 1 and 2 emissions by 50% by 2030 from a 2015 baseline. Commitment to source 80% carbon-free energy by 2025.
Growth in our faster growing markets Short-medium term	Increasing demand for semiconductors, healthcare, clean energy and clean transportation solutions to support the global net zero transition offers growth opportunity for the Group.	1, 2 and 3 These markets align well with both our purpose and strategy. Our products support the global transition to a more sustainable future.	Forecast 7–12% growth per year, through the cycle. These segments contribute 21% of total sales.	Increasing decarbonisation drivers will increase demand for our products. We are investing in capacity to better serve these growing markets and have dedicated market specialists to ensure we address their needs. In these markets, we have newer products with high levels of differentiation and we continue to invest in R&D to develop products which meet the needs of tomorrow.	Revenue and % growth in our faster growing markets. Investment in R&D.

10. Net Zero Emissions (NZE) scenario from World Energy Outlook 2022 – International Energy Agency.

11. Announces Pledges Scenario (APS) from World Energy Outlook 2022 – International Energy Agency.

Task Force on Climate-Related Financial Disclosures (TCFD) reporting continued

Risk/opportunity & time horizon	How it impacts Morgan Advanced Materials	Link to our strategy/associated opportunity	Scenario likelihood/Impact	Comments and response	Related metrics and targets
Physical risks & opportunities					
Heat stress Medium term	Heat stress at our manufacturing facilities could negatively affect our staff, plant and materials.	The health and safety of our employees is our top priority. Supporting them delivers on our big positive difference strategic priority.	<2°C ¹² Likelihood 3 2–4°C ¹³ Likelihood 4 >4°C ¹⁴ Likelihood 3	Extreme heat events become more likely and impactful in the worst-case scenario. Mitigations such as the strategic provision of air-conditioned rest rooms for workers, which are already widely available across our sites, are relatively straightforward to implement to protect employee health whilst minimising GHG growth. Our global manufacturing footprint and diversified supply chain means products could be temporarily manufactured at other facilities in the event of business disruption. During periods of high heat that have already occurred at some manufacturing locations, we have been able to shift manufacturing to cooler times of day. The potential impacts from heat stress are considered as part of our ongoing manufacturing strategy.	We are now monitoring heat stress incidents through our H&S reporting system. A 0.10 LTA rate. Top quartile engagement score.
Water stress Medium term	Water is used in the manufacture of our materials. Drought events where process water is limited could impact our sites.	Innovating to reduce the process water used in our manufacturing processes reduces both the cost of the water and the energy required to dry the product.	<2°C ⁷ Likelihood 3 Impact 1 2–4°C ⁸ Likelihood 4 Impact 1 >4°C ⁹ Likelihood 3 Impact 2	Drought events increase in duration in the worst-case scenario. Drought events of greater than one month were considered in our modelling. As a key part of our Transition Plan before 2030 we are investing in R&D for key product families to reduce water use and share best practice in water conservation. The water stress at a location is evaluated as part of our ongoing manufacturing strategy. The three sites affected in the <2C scenario already have mitigation plans to reduce consumption. In Aurangabad, India we have introduced a water harvesting system, in Kizad, UAE a new recirculating water tower was installed. In Gujarat, India we are evaluating the installation of a recirculating cooling tower. By reducing our consumption in these locations we mitigate the possibility of being forced to reduce operations.	30% reduction in water withdrawal by 2030 from a 2015 baseline. 30% reduction in water withdrawal at water-stressed sites by 2030 from a 2015 baseline.
Sea level rise Medium to long term	Some of our factories are in low-lying locations. Although sea level rise in isolation is not predicted to affect these locations, when combined with high tide and storm surges, flood events could damage our plants and interrupt supply of product to customers.	Our global manufacturing footprint means products could be manufactured at other facilities, supporting our customers through any interruptions.	<2°C ¹⁵ Likelihood 3 Impact 3 2–4°C Likelihood 4 Impact 3 >4°C Likelihood 3 Impact 3	The impact from sea level rise on our facilities was found to be moderate with flood damage and potential protection or relocation costs the key impact. We undertook an analysis of our exposure to sea level rise in 2022. Of our 70 manufacturing locations, four were identified as having >1% annual risk of flooding before 2050. This is a long-term risk and it is being actively considered as part of the ongoing review of our physical portfolio. One of the identified high-risk sites from the last report (Dalian, China), closed in the course of 2023.	Ongoing monitoring, metrics not developed.

12. RCP 4.5 – IPCC.
13. RCP 4.5 (High) – IPCC.
14. RCP 8.5 – IPCC.
15. Climate central coastal risk screening tool – based on IPCC RCPs.

Impact of risks and opportunities on the business strategy

The first transition risk explored was the Company's reliance on natural gas in the manufacturing process. Although only one of our sites is currently exposed to an emissions trading scheme, there is risk in the future that more of our operations will be exposed to carbon pricing instruments as well as the rising wholesale cost of natural gas. Assuming annual growth in emissions linked to business growth, both the 1.5°C and <2°C scenarios predicted a similar impact in 2030, but increasingly diverged in 2040 and 2050, with higher impact in the 2°C scenario. The impact shows the potential costs to the Company of not being proactive in planning for decarbonisation and enacting our decarbonisation roadmap.

Our customers, exposure to carbon pricing mechanisms could also be an opportunity. Our products help our customers to become more efficient, by reducing losses in their manufacturing operations or in the operation of their product. For example, our thermal management solutions are supporting our customers to maximise throughput efficiency and minimise their carbon footprints.

We have significant transition opportunity in our faster growing market segments of semiconductors, healthcare, clean energy and clean transportation. A number of projections have been compiled using external sources and internal analysis which show a through-cycle CAGR of 7–12% in the next three to five years. Given the relatively short time horizon we have not run scenario analysis on these growth rates.

Heat stress and water stress scenario analysis examined potential changes in peak temperatures and drought months at 25 of our largest sites. Sea level rise risk was assessed for sites with >1% chance of flooding before 2050. Impact scorings were based on potential temporary interruptions to manufacturing operations. Changing physical risks are being actively considered as part of the ongoing review of our physical portfolio.

Business resilience

The resilience of the Group to these climate risks has been assessed. Our global footprint, strong market positions and diverse portfolio is our strength. Our customer base is widely spread.

We largely make products where we sell them with localised supply chains. In the event of a local shock, manufacturing of product could be transferred to other sites within the GBU.

Our scenario analysis around our natural gas reliance allows us to plan for changes in operating costs and balance our global manufacturing strategy. Our financial performance over recent years has demonstrated our resilience, growing profitably every year. Even during the shock of the global pandemic in 2020 we maintained operating margins above 10%.

Transition Plan

The risks and opportunities considered by the Board have directly informed the Group's strategy to deliver on our 2030 goals and 2050 aspirations. These form the foundation of our net zero roadmap, as set out below, to ensure we achieve our targets.

Preparing for the future

The Company's short-term planning (0–3 years) focuses on climate change-related actions towards process efficiency, improving net-water consumption, and changing electricity providers to carbon-free sources to achieve our 2025 target of 80% carbon-free electricity:

- > **Conversion of lower temperature furnaces to electricity.** Building on the development work to convert low temperature processes, minimising exposure to carbon taxation
- > **Development of a scope 3 emissions strategy and targets.** In 2023 we further refined our scope 3 screening exercise in line with SBTi guidance. In 2024 we will commence work on our scope 3 inventory, starting with the most material categories. From this we will develop strategies to reduce emissions across the categories which are key to the Group
- > **Life cycle assessment on our key products.** To better support our customers in their decarbonisation journeys, we will conduct life cycle assessment on our key products, making carbon footprints available, but also identifying opportunities to reduce their impact
- > **Engineering solutions to increase efficiency and water recycling.** In particular, leveraging our furnace working group to ensure our existing assets are performing

- > **Inclusion of a shadow carbon price in Capex business cases.** This will drive visibility of the potential environmental costs of business decisions
- > **Investing in early stage R&D projects for carbon-free furnaces.** Acknowledging that the solutions are not yet deployable in many cases, we will work with academia, industry groups and suppliers to develop solutions
- > **Investing to grow capacity in key markets.** We will invest in equipment to support the fast growth in the semiconductor, clean energy and clean transportation markets, embedding and improving our market position.

Scaling up

The Company's medium-term planning (3–10 years) delivers more permanent solutions to achieve our 2030 ESG goals:

- > **Installation of pilot carbon-free furnaces.** Higher temperature processes require more technology development, and the installation of pilot furnaces for the different furnace types will support this
- > **Further conversion of lower temperature furnaces to electricity.** Converting further low temperature furnaces to electricity
- > **Working with our value chain to reduce scope 3 emissions.** Deploying our strategy to reduce our scope 3 footprint in key categories to achieve our target of 15% reduction by 2030.

Investment in key technologies

The Company's long-term approach (10–25 years) considers the achievement of long-term goals and implementing the solutions needed to decarbonise our business. Climate change-related long-term planning includes decisions on the future of power generation and supply, advancements in low carbon technology and larger investments in waste heat recovery and carbon capture:

- > **Further conversion of lower temperature furnaces to electricity.** Converting remaining low temperature furnaces that can be converted to electricity
- > **Conversion of higher temperature furnaces to electricity.** Where technologically possible, converting higher temperature furnaces to electricity

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- Working with our value chain to further reduce our scope 3 emissions. Building on our progress, we will continue to work with our value chain to decarbonise
- Conversion of remaining furnaces to carbon-free alternatives. Electrification may not be possible or viable in all cases, so parallel R&D paths will develop and deploy alternative solutions.

Risk management

The Board recognises the need to understand and assess climate-related risk and the inherent uncertainty therein. 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. Senior executives including the CEO and Executive Committee are responsible for the management of the Group's principal risks, including climate-related risk. Further details on the Company's procedures for identifying, assessing and managing risk can be found on page 54, in the Risk Management section of our Annual Report.

Our Environment, Health, Safety & Sustainability Senior Leadership Team (EHS&S SLT) meets monthly to oversee management of our most significant environmental and climate risks. This group is chaired by our Group Director EHS&S.

The senior management teams for the different GBUs are responsible for developing risk mitigation and management strategies for the risks they identified for their individual businesses. Each risk is assessed by using the indicators of relevance and their associated impact as part of their annual strategic planning. Impact on revenue, litigation outcomes, sites disrupted and applicable fines are all quantifiable indicators that could affect each sites, risk classification.

Climate change and environmental remediation are recorded as two principal risks on the Group risk register. Climate change covers transition and physical term risks listed on pages 47 to 48 in the Strategy

16. The target boundary includes biogenic land-related emissions and removals from bioenergy feedstocks.
17. The assurance statement is available on our website: morganadvancedmaterials.com/en-gb/being-responsible/sustainability-responsibility-report/

section of this report. Environmental remediation covers the risk of environmental incidents and risks to remediation activities underway in parts of the Group. These are assessed in the same way as all of the other principal risks. Climate risk is also considered as a component of other principal risks.

During 2023, the Board reviewed the preparedness of the Company to the principal risks with a significant potential impact at Group level every six months. Additionally, the Audit Committee carried out a focused risk review 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. The overall risk from climate change was assessed to have a high severity rating.

Metrics and targets

We are pleased that our 2030 targets have been scrutinised and validated by the Science Based Targets initiative (SBTi) as being aligned with the well below 2°C trajectory. Our commitments are as follows:

- Morgan Advanced Materials commits to reduce absolute scope 1 and 2 GHG emissions 50% by 2030 from a 2015 base year¹⁶
- Morgan Advanced Materials also commits to increase active annual sourcing of carbon-free electricity from 0% in 2015 to 80% in 2025 and 100% by 2030
- Morgan Advanced Materials further commits to reduce absolute scope 3 GHG emissions 15% by 2030 from a 2019 base year.

We engaged ERM CVS to obtain limited assurance in relation to selected information and data in this Report. The Assurance Report can be found on our website¹⁷. Morgan Advanced Materials outlines its organisational boundary on an operational control basis, and our scope 1 and 2 emissions are reported on this basis.

The Company has reviewed the cross-industry climate-related metrics Table A2.1 from the TCFD guidance and has developed metrics for GHG emissions. Although ESG targets are part of the Executive Management Team's LTIP (see pages 104 to 130), we do not intend to develop metrics in this area.

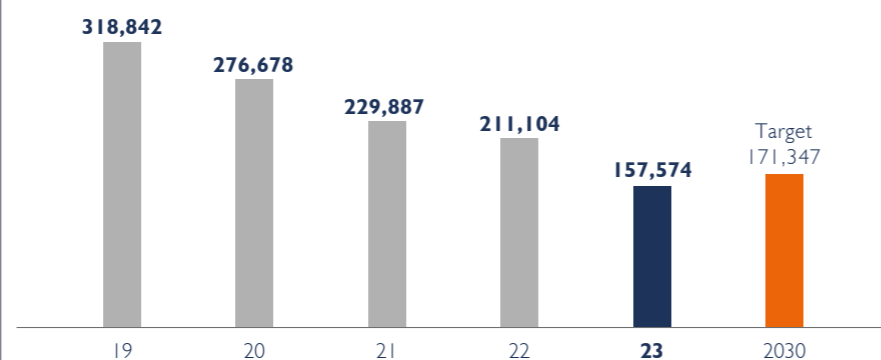
Scope 1 and 2

We monitor our scope 1 and 2 emissions to understand our natural gas consumption, and potential exposure to carbon pricing mechanisms. It also allows us to understand and track how mitigating actions such as increasing efficiency and new technologies are impacting and reducing our exposure.

Scope 1 and 2 emissions reduction performance

Morgan Advanced Materials has reduced its scope 1 and 2 emissions by 54% from a 2015 baseline. This has been achieved through the increased procurement of carbon-free energy and driving energy efficiency within our operations. Our manufacturing sites account for 99% of our scope 1 and 2 emissions so improving the efficiency of these in the short term is key to reducing our scope 1 CO₂e emissions. Although we have surpassed the target for 2030 continued focus on efficiencies and technology advancements is needed to maintain this. In the medium term our furnace working group will evaluate and pilot alternative fuel furnace technology in line with our Transition Plan.

CO₂e scope 1 and 2 emissions (metric tonnes)



Carbon-free energy procurement target

We monitor our carbon-free energy procurement as it is part of our strategy to reach our 2030 scope 1 and 2 reduction target. This in turn mitigates our exposure to carbon pricing mechanisms.

As part of our commitment to the SBTi, one of our validated targets is to increase our sourcing of renewable and carbon-free electricity from 1% in 2019 to 80% by December 2025, and we commit towards sourcing 100% renewable and carbon-free electricity by 2030.

Table 3 – carbon-free energy progress

Metric	2019	2020	2021	2022	2023	2025 Target
Carbon-free energy procurement as a % of total electricity procured	1%	6%	33%	49%	72%	80%

Our strategy is based on reducing our scope 2 emissions through the purchase of carbon-free electricity.²⁰ In 2023 we procured 72% of our electricity from green or carbon-free sources. We continue to evaluate the procurement options for renewable energy on a regional basis, including options for on-site generation. During the course of 2023, three additional solar PV systems were commissioned at our sites, with further plans for investment. In total in 2023 we generated 1.5 GWh renewable electricity on-site, an increase from 1.2 GWh in 2022.

Scope 3

We recognise assessment of our value-chain emissions is an important part of our long-term sustainability strategy. In 2022, we completed a scope 3 screening exercise²¹ across all relevant categories as part of our SBTi submission. The figures for 2023 and our 2019 baseline²² are shown below.

The screening exercise uses both spend-based and volume-based methods to estimate emissions in each of the categories. In the future we intend to review the emissions factors used for the existing data and to transition away from spend-based factors in the most material categories.

Table 4 – Scope 3 emissions screening results

Morgan Advanced Materials scope 3 GHG emissions results (tCO ₂ e)		2023	2022	2021	2020	2019
Category 1	Purchased goods and services	410,641	474,257	439,775	394,744	444,705
Category 2	Capital goods	100,351	75,768	49,794	42,816	76,684
Category 3	Fuel and energy related activities	31,567	30,497	52,118	61,163	70,647
Category 4	Upstream Transport	46,613	71,143	58,777	48,935	65,109
Category 5	Waste generated in operations	9,597	12,344	11,889	11,210	15,968
Category 6	Business travel	13,903	9,360	5,509	3,953	20,036
Category 7	Employee commuting	12,750	12,750	12,750	12,750	12,750
Category 8	Upstream leased assets	-	-	-	-	-
Category 9	Downstream transport	22,705	18,780	18,052	15,912	17,228
Category 10	Processing of sold products	26,995	30,361	28,116	28,477	30,340
Category 11	Use of sold products	53,146	49,843	43,389	39,837	43,205
Category 12	End of life of sold products	81,107	57,050	58,062	53,725	56,427
Category 13	Downstream leased assets	-	-	-	-	-
Category 14	Franchises	-	-	-	-	-
Category 15	Investments	-	-	-	-	-
Total scope 3 GHG emissions (tCO₂e)		809,375	842,153	778,231	713,522	853,099
Total scope 1 and 2 GHG emissions (tCO ₂ e)		157,574	211,104	229,887	276,678	318,842
Total GHG emissions (tCO₂e)		966,949	1,053,257	1,008,118	990,200	1,171,941

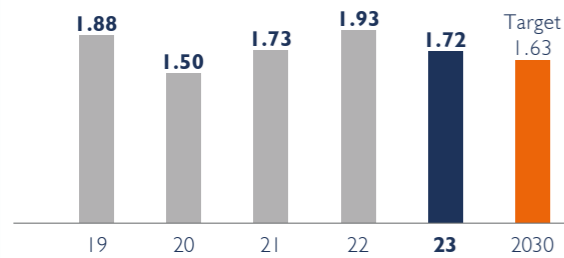
20. Carbon-free electricity includes renewable and nuclear sources.
21. Scope 3 values were estimated using volume-based data where available and spend-based where not. Emission factors used are from the GHG evaluator tool with the exceptions of categories 10, 11 and 12 which were estimated using life cycle assessment insights for key products.
22. Our 2019 results have been updated from figures published in the 2022 TCFD disclosure following an improvement in the upstream and downstream transport calculation to introduce estimates for supplier and customer transport not procured by Morgan Advanced Materials.

Task Force on Climate-Related Financial Disclosures (TCFD) reporting continued

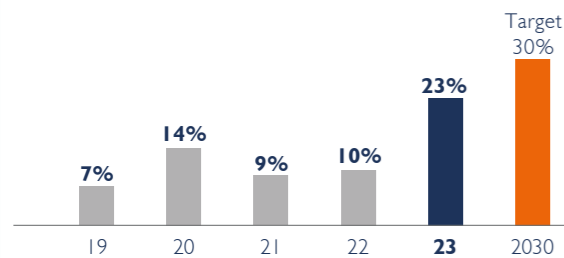
Total water withdrawal and withdrawal in water-stressed regions

Our aspiration is to use water sustainably across our business. Our 2030 target is to reduce our overall water withdrawal by 30% and reduce our water withdrawal in high-stress areas by 30% (from a 2015 baseline).²³ In line with the most recent data, we have updated our water-stressed definition to include China²⁴ and our 2015 baseline has been restated. We monitor our water withdrawal in water stressed regions to ensure that we are taking action at those sites to minimise water consumption. This mitigates against the risk of business interruptions in case of a drought event. We have reduced our total water withdrawal by 26%, and by 23% in water-stressed areas compared to this baseline. In 2023, due to the cumulative effect of a number of water saving investments, and an impactful water leak in 2022, our total water withdrawal had decreased by 11% compared to the prior year. Withdrawal in water-stressed areas is also improved, due to the impact of water reduction projects.

Total water withdrawal (million m³)



Water withdrawal in water-stressed areas* (% reduction from 2015 baseline)



* Water-stressed areas include Spain, Italy, Turkey, Mexico, India, United Arab Emirates, Argentina, Australia and the state of California, USA. Using the most recent WRI data, 2023 and prior years have been restated to include China. See page 38 for details.

Our Stourport facility in the UK has made strategic investments in water recirculation systems, particularly this one in the materials manufacturing section. In 2023 alone, their efforts have reduced site water consumption by a commendable 43%, demonstrating their commitment to minimising their environmental footprint while maximising operational effectiveness.



Revenue in faster growing markets and R&D spend

Growth in our faster growing markets of semiconductors, healthcare, clean energy and clean transportation is a transition opportunity for the Group. In 2023 we recognised sales of £237.3 million in these sectors, increasing from £217.7 million in 2022. We monitor our revenue in faster growing markets to ensure we are accessing the climate related opportunities in these markets. In addition, in 2023 we invested £32.9 million in R&D, increasing from £31.6 million in 2022. R&D investment is key to mitigating the technology transition risk, as we move away from fossil fuel powered furnaces.

Heat stress monitoring, Lost time accident rate and employee engagement

We are now monitoring heat stress incidents through our H&S reporting system. This allows us to understand the impact that heat stress is having on our employees, and allows us to take action to reduce their exposure. In 2023 we saw one LTA attributable to heat stress and a further six incidents where the employee was able to return to work. In 2023 we improved our LTA rate to 0.19²⁵ as we continue to work towards our 2030 goal of a LTA rate of 0.10. In 2023 we achieved an engagement score of 54%.²⁶

23. Water withdrawal includes water drawn from the Company's owned sources, local authority and commercial sources.

24. Morgan Advanced Materials identifies water-stressed sites using the 'Aqueduct Projected Water Stress Country Rankings' (<https://www.wri.org/data/aqueduct-projected-water-stress-country-rankings>). We determine our water-stressed sites by referring to the list of countries categorised into high (40–80% | score 3–4) and extremely high (>80% | score 4–5) water stress levels. We utilise the 2030 business-as-usual scenario for industrial water usage to classify sites in water-stressed areas. Previous reports used the 2020 database. For 2023 reporting, we have used the 2022 database and have restated historical figures accordingly. Additionally, our sites in the State of California, USA are included in our water stress figures, due to the water stress issues in the state of California. Countries classified as water-stressed are Australia, China, India, Italy, Mexico, Spain, Turkey, UAE and USA – California.

25. See page 40.

26. See page 39.

Streamlined energy and carbon report

This report summarises our energy usage, associated emissions, energy efficiency actions and energy performance under the government policy Streamlined Energy and Carbon Reporting (SECR). This is implemented by the Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018. Also, it summarises in the appendix, the methodologies utilised for all calculations related to the elements reported under energy and carbon.

Morgan Advanced Materials PLC is a UK incorporated business and is also a main-market listed company. Under SECR legislation we are mandated to include energy consumption, emissions, intensity metrics and all energy efficiency improvements implemented in our most recent financial year, for our UK operations. An operational boundary has been applied for the purposes of the reporting.

Specific examples of actions taken within the year to reduce energy consumption include:

- Investment in on-site solar energy. Our site in Swansea completed the installation of a 278kW solar array, bringing their installed capacity to over 500kW, with other installations completed at our Kailong, China plants
- Replacement of a gas furnace with an electric furnace at our Kempten site in Germany
- Use of thermographic analysis to improve the efficiency of furnaces in Kizad, UAE
- Installation of transparent roof panels to improve the quality of light at our facility in Chile.

Table 5 – Scope 1 and 2 Emissions and Streamlined Energy and Carbon Reporting

I January – 31 December 2023	Units	2023	2022	2021	2020	2015
Scope 1 energy consumption	MWh	574,531	636,583	648,833	592,325	
UK	MWh	38,316	37,988	37,358	36,277	
Global excluding UK	MWh	536,215	598,595	611,475	556,048	
Scope 1 GHG emissions²⁷	tCO ₂ e	110,563	121,989	122,817	116,552	205,570
UK	tCO ₂ e	7,374	5,657	6,880	6,686	
Global excluding UK	tCO ₂ e	103,189	116,332	115,937	109,866	
Scope 2 energy Consumption	MWh	395,366	423,955	417,835	387,177	
UK	MWh	14,198	15,205	15,083	15,673	
Global excluding UK	MWh	381,168	408,750	402,752	371,504	
Scope 2 GHG emissions (market-based)²⁸	tCO ₂ e	47,011	89,115	107,070	160,126	137,124
UK	tCO ₂ e	0	0	0	3,657	
Global excluding UK	tCO ₂ e	47,011	89,115	107,070	156,469	
GHG intensity	tCO ₂ e/£m	141	190	242	304	391
UK	tCO ₂ e/£m	169	106	179	276	
Global excluding UK	tCO ₂ e/£m	140	194	245	305	
Biogenic CO₂ emissions²⁹	tCO ₂ e	719	978	877	501	1,368

Methodology

This report (including the scope 1 and 2 consumption and CO₂e emissions data) have been developed and calculated using the GHG Protocol – A Corporate Accounting and Reporting Standard (World Business Council for Sustainable Development and World Resources Institute, 2004); Greenhouse Gas Protocol – Scope 2 Guidance (World Resources Institute, 2015); Environmental Reporting Guidelines: Including Streamlined Energy and Carbon Reporting Guidance (HM Government, 2019).

Scope 1 calculations use the UK Government GHG Conversion Factors for Company Reporting (2023 version). Scope 2 location-based calculations use emission factors from the IEA 2023 publication, Scope 2 market-based calculations follow the GHG Protocol emission factor hierarchy and apply supplier-specific factors and residual factors, where available. All consumption data was complete for the reporting period.

We are committed to a sustainable future and our approach to sustainability continues to evolve as we bring into scope more and more elements related to our operations, processes and products.

Our products are benefiting the environment by making the operations of our customers significantly more energy efficient, and over the last five years we have made steady reductions to our own CO₂e emissions and water consumption.

27. Total scope 1 emissions were calculated from the addition of emissions from fuels, refrigerants and other process emissions. Biogenic CO₂e emissions are calculated and reported separately in Table 3. Process emissions disclosed (4,617 tCO₂e, or circa 4% of scope 1 emissions in 2023) are calculated using internally derived calculations. Scope 1 emissions for 2020 to 2022 have been restated from prior years to include process emissions. The scope 1 figure excludes mobile emissions which were estimated to be circa 200 tCO₂e in 2023 but could not be evidenced for assurance purposes.

28. The scope 2 emissions figure was calculated using the market-based methodology. The location-based figure for the same period is 155,957 tCO₂e.

29. Biogenic emissions result from the combustion of biological materials. These are considered carbon neutral and therefore reported separately. Emissions were calculated using the UK Government GHG Conversions Factors for Company Reporting (2023 version).

Risk management

We have an established risk management methodology which seeks to identify, prioritise and mitigate risks, underpinned by a 'three lines of defence' model comprising 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 GBUs. 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 and emerging risks, including related policy, guidelines and processes, subject to Board oversight.

During the year, a number of actions were identified to continue to improve internal controls and the management of risk, including:

- maintaining significant focus on employee safety and wellbeing, we have: refreshed our 'Take 5' for safety process, improved the safety of our high-temperature processes and deployed a new EHS system to facilitate the reporting and management of EHS activities
- strengthening our security posture, following the cyber security incident which we experienced in January 2023, and accelerating our IT infrastructure modernisation programme
- increased focus on a robust internal financial control environment

- continued focus on the ethics agenda, including self-certification of policy compliance and mandatory quarterly training on ethics and compliance
- driving forward the Group's sustainability agenda, we have a broad-based improvement programme underway covering energy procurement, process improvements and behavioural changes in our plants.

Risk appetite

The Board has reviewed its appetite for the Group's principal risks and concluded that its appetite for these risks remains 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 these underpin the success of the Company's products and the safety of our people and contractors.

The appetite for risk in the areas of legal and regulatory compliance continues to be 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.

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. None of these emerging risks are currently deemed to be significant and they are therefore not listed amongst the Group's principal risks below. They are identified, assessed and monitored continuously to be able to respond effectively when they crystallise.

The key emerging risk areas identified were:

- Regulatory risk: manufacturing regulations – regulatory requirements for certain hazardous materials. Tax regulations – with governments globally aiming to reduce their national debts following the COVID-19 pandemic
- Social/Societal: potential recruitment challenges to replace an ageing direct workforce in some locations; longer-term changes to new end-markets, such as electric vehicles, domestic heating and decentralised generation of energy
- Business model: route to market – potential permanent change in traditional selling models requiring an accelerated shift to e-commerce. Change to permanent remote working with our employees, customers and vendors.

These emerging risks are monitored so that their potential impact can be understood and mitigated to prevent them from becoming more significant. They are also considered as an integral part of the strategic planning process, and they form part of the focused risk review of each GBU.

The following are the Group's principal risks and uncertainties and they 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.

Operational risks

	Risk description, assessment and trend from 2022	Mitigation
Technical leadership Severity: Moderate Trend: Unchanged Risk appetite: Higher	<p>The Group's strategic success depends on maintaining and developing its technical leadership in materials science over its competitors.</p> <p>Unforeseen or 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.</p> <p>The advanced technological nature of the Group requires people with highly differentiated skill sets. Any inability to recruit, retain and develop the right people would negatively impact the Group's ability to achieve its strategic goals.</p>	<p>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 Advanced Materials' expertise and research resources on further developing core technologies and identifying new opportunities and applications.</p> <p>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 CEO and CFO.</p> <p>Where Group products are designed for a specific customer, they are developed in partnership with the customer. The Group seeks to secure intellectual property protection, where appropriate via a Trade Secret Standard, 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.</p> <p>The GBU IP Strategies place emphasis on improving trade secret management activities. Group policy includes a Trade Secret Standard document.</p>
Operational execution/ organisational change Severity: Moderate Trend: Unchanged Risk appetite: Moderate	<p>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 GBU setup and to the Group's structure. 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.</p>	<p>Changes to operational processes are carefully considered by site and GBU 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.</p> <p>Organisational changes are assessed by the Chief Executive Officer, the Executive Committee and in certain cases by the Board before being implemented in line with local employment regulations.</p> <p>From 1 January 2024, Electrical Carbon and Seals and Bearings GBUs were consolidated into a new GBU: Performance Carbon, to take advantage of potential synergies. Change management capabilities have been developed to mitigate the associated integration risk.</p> <p>➔ Further detail on our strategy can be found on pages 18 to 19 and 23 to 25.</p>

Risk management continued

Operational risks

	Risk description, assessment and trend from 2022	Mitigation
Portfolio management Severity: Low Trend: Unchanged Risk appetite: Moderate	<p>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.</p>	<p>The Board performs regular reviews of the Group's portfolio.</p> <p>Following the cyber security incident in January 2023, the Group launched a restructuring and efficiency programme. This aims to simplify the Group's portfolio and align capacity with the anticipated demand across the business. This programme will continue into 2024.</p> <p>During 2023, opportunities to acquire businesses were actively reviewed on a continuing basis.</p>
Macro-economic and political environment Severity: Significant Trend: Unchanged	<p>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.</p>	<p>The Group's broad market and geographic spread helps to mitigate the effects of political and economic changes.</p> <p>Annual budgets and strategic plans, as well as monthly forecasts for our 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.</p> <p>In 2023, the macro-economic and political environment remains muted, driven by high energy costs and the various global conflicts.</p> <p>The Board continues to monitor the global issues which impact the Group, including trade restrictions and sanctions and the relationship between the US and China.</p>
Environment, health and safety (EHS) Severity: High Trend: Unchanged Risk appetite: Very low	<p>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.</p>	<p>Managing its operations safely is the Group's number one priority. The Group has a comprehensive EHS programme managed by the Group Environment, Health, Safety and Sustainability Director, with clear EHS standards and a comprehensive programme of audits to assess compliance.</p> <p>The Executive Committee approves annual priorities for EHS. These form the basis for individual sites' own EHS priorities and plans and complement the Group's 'thinkSAFE' behavioural safety programme.</p> <p>EHS performance is monitored by the Group Executive Committee and the Board. Our LTA rate was 0.19 (2022: 0.28); with the improvement reflecting the significant focus on employee safety and wellbeing. During 2023, we refreshed our 'take 5 for safety' process, improved the safety of our high-temperature processes and deployed a new EHS system to facilitate the reporting and management of EHS activities. Safety continues to receive a high level of focus throughout the organisation.</p> <p>The Group continues to manage projects to remediate legacy contamination at a number of former operational sites in conjunction with external specialists and relevant authorities.</p> <p>The Group's commitment to protecting and enhancing the environment is set out on pages 35 to 38.</p> <p>TCFD disclosures are set out on pages 44 to 53.</p> <p>Details of the Group's provisions and contingent liabilities can be found in note 24 to the consolidated financial statements.</p>

Operational risks

	Risk description, assessment and trend from 2022	Mitigation
Pandemic Severity: High Trend: Unchanged	<p>The overall risk severity remains high as the impact of a future pandemic could be significant.</p> <p>Communicable disease impacts ways of working, the supply chain and the ability of employees to travel to work in affected areas.</p> <p>The Company's priority is to take all actions and precautions necessary to ensure the safety and wellbeing of our employees.</p>	<p>In all manufacturing sites, ways of working to respond to the COVID-19 pandemic were successfully adapted – including social distancing, hygiene measures and additional PPE – to keep our people safe. Flexible working from home was also established, and further strengthened for all roles that could do so.</p> <p>These measures can be swiftly replicated in the event of another pandemic.</p>
Climate change Severity: High Trend: Unchanged	<p>Global climate change poses a number of short-term and longer-term challenges for our business. The expected changes are far-reaching and irreversible.</p>	<p>The Group actively mitigates the two transitional risks of carbon pricing and eliminating natural gas.</p> <p>The Group has completed scenario analysis for all identified risks and is in the process of developing its strategy. See further details on pages 46 to 48.</p> <p>Longer-term risks include heat stress, water scarcity, sea level rise, and supply chain disruption. Adverse and extreme weather changes are also a potential risk which is monitored by the GBUs and the respective sites.</p> <p>Science based targets have been validated by SBTi and are in line with a well below 2°C scenario.</p>
Product quality, safety and liability Severity: High Trend: Unchanged Risk appetite: Low	<p>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.</p> <p>Some of our products are used in potentially high-risk applications, for example in the aerospace, automotive, electric vehicle, medical and power industries.</p>	<p>Many of the Group's products are designed to customer specifications. Morgan Advanced Materials' quality management systems and training help ensure that all our products meet or exceed customer requirements and national/international standards.</p> <p>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. Group-wide training on the policy requirements continues.</p> <p>The Group insurance programme includes product liability insurance and is reviewed annually by the Board.</p>
IT, cyber security and data management Severity: Significant Trend: Unchanged Risk appetite: Very low	<p>Across the industry the frequency of cyber security incidents is growing, influenced by increased connectivity, an accelerated shift to cloud platforms and remote working.</p> <p>The global regulatory compliance landscape, including export regulations, continues to mature and add complexity to how we process, store and share internal and external data on a global level within the Group. Failure adds significant risk to the GBUs and the Company.</p> <p>The effective management of the Group's IT infrastructure is important in enabling our businesses to deliver customer requirements reliably. Key business system failure might impact the ability of the business to deliver on its strategic goals.</p>	<p>Following the cyber security incident experienced in January 2023, the Group's security and monitoring programme has been expedited. We continue to run training programmes on cyber risk and IT security and have strengthened the 'thinkSECURE' internal brand as an awareness programme.</p> <p>We continue to monitor the changing regulatory and compliance landscape and the impact of 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.</p> <p>The Data Governance Committee was set up during 2023, alongside a data classification project which is focused on identifying, monitoring and protecting the use of data across the Group.</p>

Risk management continued

Operational risks

	Risk description, assessment and trend from 2022	Mitigation
Supply chain/business continuity Severity: High Trend: Unchanged Risk appetite: Higher	<p>The Group has potential single-point exposure risks, which include:</p> <ul style="list-style-type: none"> Single-point supplier – a significant interruption of a key internal or external supply could impact business continuity Single-point site – a key site exposed to a strike, a natural catastrophe or a serious incident, such as fire, could impact business continuity. <p>One Group site, Hayward, is situated in the California, US earthquake zone. Certain sites of the Group's businesses are important for intercompany supply purposes.</p>	<p>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. The Business Continuity Policy supports minimum standards at the Group's most important sites for intercompany supply.</p> <p>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.</p> <p>The overall risk severity has improved based on a reduced probability resulting from the effects of the ongoing GBU activities.</p> <p>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.</p>
Treasury Severity: Moderate Trend: Unchanged Risk appetite: Low	<p>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.</p>	<p>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 our 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.</p> <p>The refinance of the Group's revolving credit facility (RCF) was completed in November 2022. No material debt maturities are due until 2026. As at 31 December 2023, £42.1 million of the Group's £230 million revolving credit facility was drawn down.</p> <p>Further detail on the Company's Treasury Policy is set out in the Group financial review, which can be found on page 68.</p>

Financial risks

	Risk description, assessment and trend from 2022	Mitigation
Pension funding Severity: Low Trend: Favourable Risk appetite: Low	<p>The Group sponsors several defined benefit pension arrangements ('the Schemes'), which are largely fully funded and with an investment strategy that aims to insulate them from fluctuating interest rates, investment values and inflation.</p> <p>The deficit in Morgan Advanced Materials' global defined benefit pension schemes calculated on the basis required for IAS 19 accounting disclosures increased from £15.6 million as at 31 December 2022 to £25.2 million at 31 December 2023, principally as a result of a reduction in the UK Schemes' surplus, measured on the accounting basis. Both UK Schemes remain over 100% funded on the valuation basis, on which future contribution requirements would be assessed.</p>	<p>Our primary means of mitigating pension funding risk is proactive management of the pension scheme assets and liabilities through an integrated pension strategy focusing on funding, investment and benefit risk.</p> <p>In the UK both Schemes are closed to the future accrual of benefits. Following the most recent Scheme valuations in March 2022, the Company agreed to make a lump sum contribution of £67 million to the Schemes, equivalent to the total contributions remaining due under the existing Recovery Plans and sufficient to fully fund the Schemes on the basis of the Trustees' prudent 'Long Term Objective'. In addition, the Schemes' interest and inflation rate exposure is now 100% hedged using only moderate levels of leverage. As a result, overall levels of risk in the Schemes have been significantly reduced and the security of member benefits greatly enhanced. No further contributions will be required from the Company at least until the next Scheme Valuations in March 2025.</p> <p>Risk for the one remaining defined benefit pension plan in the US has been reduced. 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.</p> <p>A liability management strategy for the remaining US multi-employer plan has been agreed and a proposal for withdrawal made to the Trustees.</p> <p>No significant funding obligations exist in any other individual country although German legacy defined benefit schemes are unfunded, in accordance with local practice. The recent risk review identified no significant liability increases were likely in the foreseeable future.</p>

Risk management continued

Financial risks

	Risk description, assessment and trend from 2022	Mitigation
Tax Severity: Moderate Trend: Unchanged Risk appetite: Low	<p>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.</p> <p>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.</p>	<p>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.</p> <p>The Group has published its tax strategy on its website in line with UK corporate governance requirements: morganadvancedmaterials.com/ESGPolicies.</p>

Legal and compliance risks

	Risk description, assessment and trend from 2022	Mitigation
Contract management Severity: High Trend: Unchanged Risk appetite: Low	<p>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.</p>	<p>The Group has an in-house legal function supplemented by specialist external lawyers.</p> <p>The Group's legal policy requires in-house legal review of high-value or high-liability contracts to ensure they contain appropriate protections for the Group. The policy requires Chief Executive Officer approval before a business can enter into a high-value contract exceeding £2 million and unlimited liability contracts or contracts where the liability cap exceeds £5 million.</p> <p>The Group has product liability insurance that would respond to product liability claims (up to policy limits) to the extent this is not limited contractually.</p>
Compliance Severity: High Trend: Unchanged Risk appetite: Very low	<p>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.</p> <p>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.</p>	<p>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 our commitment to high standards of ethical behaviour. The Code is supported by a range of documents and mechanisms: global Group policies, standards and guidance; training materials; the provision of an ethics 'Speak Up' hotline for employees; and systems to support effective screening of and due diligence on third parties.</p> <p>Mandatory ethics training for staff covers topics including anti-bribery and anti-corruption, anti-trust, harassment and bullying and trade controls. The Group's 'Speak Up' methods enable staff to report concerns anonymously.</p> <p>The Group has a Global Ethics and Compliance Director organising and leading the Group's activities and programmes.</p> <p>The Group also has a Global Trade Compliance Director whose role is dedicated to ensuring compliance with trade controls. In 2022, the Company introduced the 'thinkTRADE' programme including global training on export control.</p> <p>In addition to Group-level compliance specialists, the businesses have appointed compliance officers, who are responsible for supporting and monitoring local training. Morgan Advanced Materials also employs country-specific trade and export compliance specialists in higher-risk businesses and jurisdictions.</p> <p>Further details on ethics and compliance can be found on pages 33 and 43.</p>

Review of operations

Global business unit performance

The Group's results are reported as five separate global business units, which have been identified as the Group's reportable operating segments, as detailed on page 7.

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.

The strategy for each of our global business units aligns with the execution priorities of the Group.

We have put increased emphasis on faster growing markets. Our core markets are critical, providing a strong base with a diversified portfolio.

Our four Centres of Excellence drive technological differentiation, support a strong pipeline of innovation and margin expansion.

Our sustainable solutions are enabling the energy transition and our Group is resilient, benefitting from diverse end-markets and its global footprint.

Thermal Ceramics

Thermal Ceramics manufactures advanced ceramic materials, products and systems for thermal insulation in high-temperature environments. As at 31 December 2023, it comprised 21 operating sites employing approximately 2,470 people, with manufacturing sites across the world. It also has a network of sales offices allowing immediate access to and facilitating direct working with end-users.

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. Revenue for Thermal Ceramics for the year was £402.2 million, representing a decrease of 4.6% compared with £421.4 million in 2022. Reductions in Conventional energy and Industrial segments were partially offset by growth across several segments including Healthcare, Conventional transportation and Metals. FX has been a substantial driver of the decline as on an organic constant-currency* basis, year-on-year revenue decreased by 0.7%.

Thermal Ceramics operating profit was £25.3 million (2022: £44.3 million), and operating margin was 6.3% (2022: 10.5%). Operating margin has declined versus prior year owing to inefficiencies from the cyber security incident impacting the first half of the year. Full year margins show significant recovery through H2. Details of the specific adjusting items charge of £8.0 million (2022: £2.8 million) are included in note 6. Adjusted operating profit* was £34.5 million (2022: £48.7 million) with adjusted operating profit margin* of 8.6% (2022: 11.6%).

Molten Metal Systems

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.

At 31 December 2023, it comprised five operating sites employing approximately 440 people, with some sales also being made through a well-established distributor network.

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.

Revenue for Molten Metals Systems for the year was £52.2 million, a decrease of 9.7% compared with £57.8 million in 2022. Revenue decline is seen across both Industrial and Metals segments due to reduced market demand. On an organic constant-currency* basis, year-on-year revenue decreased by 8.1%.

Molten Metal Systems operating profit was £4.2 million (2022: £7.5 million), and operating profit margin was 8.0% (2022: 13.0%). Margin weakening has been caused by the drop through of volume decline as well as cyber security incident related inefficiencies in the first half. Details of the specific adjusting items charge of £1.3 million (2022: £nil) are included in note 6. Adjusted operating profit* was £5.7 million (2022: £7.8 million) with adjusted operating profit margin* of 10.9% (2022: 13.5%).

Electrical Carbon

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. The business also makes graphite and felt products used in the high-temperature processing of materials and in semiconductor processing. Electrical Carbon's main markets are semiconductors, rail, industrial drives, power generation, iron and steel, mining and wind-power.

As at 31 December 2023, Electrical Carbon comprised 16 operating sites employing approximately 1,440 people, with manufacturing sites across the world. The global spread of its operating sites is supplemented by a comprehensive network of sales offices. The business's 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, felt and graphite components.

Revenue for Electrical Carbon for the year was £201.4 million, representing an increase of 6.7% compared with £188.7 million in 2022, driven by significant growth in our Semiconductor segment. On an organic constant-currency* basis, year-on-year revenue increased by 9.7%.

Electrical Carbon operating profit was £38.7 million (2022: £39.1 million), and operating profit margin was 19.2% (2022: 20.7%). Slight margin reduction is a result of cyber security incident related inefficiencies in the first half of the year. Details of the specific adjusting items charge of £2.3 million (2022: £0.1 million credit) are included in note 6. Adjusted operating profit* was £41.5 million (2022: £39.7 million) with an adjusted operating profit margin* of 20.6% (2022: 21.0%).

Seals and Bearings

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.

As at 31 December 2023, Seals and Bearings comprised 11 operating sites employing approximately 1,410 people, with manufacturing sites across the world.

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).

Revenue for Seals and Bearings in 2023 was £145.8 million, representing a decrease of 1.8% compared with £148.5 million in 2022, with the primary driver being a decline in the Industrial segment offset by strong growth in the Healthcare and Petrochemical segments. On an organic constant-currency* basis, year-on-year revenue decreased by 1.2%. Ceramic armour sales in 2023 were £25.4 million (2022: £25.5 million).

Seals and Bearings operating profit was £3.3 million (2022: £16.6 million), and operating profit margin was 2.3% (2022: 11.2%). Details of the specific adjusting items charge of £7.4 million (2022: £1.6 million) are included in note 6. Margin deteriorated as a result of manufacturing inefficiencies from the cyber security incident. Adjusted operating profit* was £11.4 million (2022: £19.0 million), with an adjusted operating profit margin* of 7.8% (2022: 12.8%).

Technical Ceramics

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 GBU makes is used in demanding, harsh or critical environments. The GBU works in selected segments of the semiconductor, energy, healthcare, industrial, petrochemicals, security and transport markets, typically in close collaborative customer relationships.

As at 31 December 2023, Technical Ceramics comprised 17 operating sites employing approximately 2,860 people, with manufacturing sites across the world.

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.

Revenue for the Technical Ceramics in 2023 was £313.1 million, an increase of 5.9% compared with £295.7 million in 2022, driven by strong growth in Conventional transport (particularly Aerospace) and Security and defence with a combination of market growth and share wins. On an organic constant-currency* basis, year-on-year revenue increased by 6.4%.

Technical Ceramics operating profit was £40.4 million (2022: £39.2 million), and operating profit margin was 12.9% (2022: 13.3%). Details of the specific adjusting items credit of £8.0 million (2022: £1.2 million charge) are included in note 6. Margin decline due to continued system recovery from the cyber security incident and related inefficiencies. Adjusted operating profit* was £33.1 million (2022: £41.7 million), with an adjusted operating profit margin* of 10.6% (2022: 14.1%).

Group financial review

Group performance

Group revenue and operating profit

Group revenue was £1,114.7 million (2022: £1,112.1 million), an increase of 0.2% on a reported basis compared with 2022.

Group adjusted operating profit* was £120.3 million (2022: £151.0 million). Adjusted operating profit margin* was 10.8%, compared with 13.6% for 2022.

Operating profit was £91.9 million (2022: £140.8 million) and profit before tax was £77.8 million (2022: £131.6 million). Specific adjusting items in 2023 were a net pre-tax charge of £25.1 million (2022: £5.5 million), primarily relating to the cyber security incident in January 2023, impairment of non-financial assets, and the impact of Argentina's currency devaluation. Further details are included under Specific adjusting items below.

→ Read more about our five global business units on pages 62 to 63.

Specific adjusting items from continuing operations

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 results of the Group to allow the reader to obtain an understanding of the financial information and the performance of the Group excluding these items.

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 2023, specific adjusting items were £25.1 million (2022: £5.5 million) and comprised the following:

	Revenue		Adjusted operating profit ¹		Margin %	
	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m
Continuing operations						
Thermal Ceramics	402.2	421.4	34.5	48.7	8.6%	11.6%
Molten Metal Systems	52.2	57.8	5.7	7.8	10.9%	13.5%
Electrical Carbon	201.4	188.7	41.5	39.7	20.6%	21.0%
Seals and Bearings	145.8	148.5	11.4	19.0	7.8%	12.8%
Technical Ceramics	313.1	295.7	33.1	41.7	10.6%	14.1%
Segment total	1,114.7	1,112.1	126.2	156.9	11.3%	14.1%
Corporate costs			(5.9)	(5.9)		
Group adjusted operating profit¹			120.3	151.0	10.8%	13.6%
Amortisation of intangible assets			(3.3)	(4.7)		
Operating profit before specific adjusting items			117.0	146.3	10.5%	13.2%
Specific adjusting items included in operating profit ²			(25.1)	(5.5)		
Operating profit			91.9	140.8	8.2%	12.7%
Net financing costs			(14.1)	(9.2)		
Share of profit of associate (net of income tax)			–	–		
Profit before taxation			77.8	131.6		

- Definitions of these non-GAAP measures can be found in the glossary of terms on page 218, reconciliations of the statutory results to the adjusted measures can be found on pages 72 to 73.
- Details of specific adjusting items from continuing operations can be found in note 6 to the consolidated financial statements.

	2023 £m	2022 £m
Specific adjusting items from continuing operations ¹		
Costs associated with the cyber security incident	(14.7)	–
Charges in relation to the impact of Argentina's currency devaluation	(5.8)	–
Net restructuring (charge)/credit	(3.5)	0.6
Net business closure and exit costs	(1.9)	–
Impairment of non-financial assets	(7.3)	(6.5)
Reversal of impairment of non-financial assets	8.1	–
Net profit on disposal of business	–	0.4
Total specific adjusting items before income tax	(25.1)	(5.5)
Income tax credit from specific adjusting items	3.8	1.1
Total specific adjusting items after income tax	(21.3)	(4.4)

- Specific adjusting items relating to discontinued operations are disclosed in note 9 to the consolidated financial statements.

2023

Costs associated with the cyber security incident

During 2023, we incurred £14.7 million of exceptional costs and charges in relation to the cyber security incident in January 2023. These were comprised of legal and advisory costs, IT recovery and support costs and impairment charges for IT assets which were rendered unusable as a result of the incident.

Charges in relation to the impact of Argentina's currency devaluation

On 13 December 2023, Argentina devalued its currency by more than 50%. The impact of the currency devaluation (£2.6 million) has been classified as a specific adjusting item. An impairment review was also performed as at 31 December 2023 and, due to restrictions on imports limiting the ability to purchase raw materials and the subsequent effect on forecast trading, we have fully impaired the carrying value of property, plant and equipment and the value of raw materials which, in the current circumstances, we would be unable to sell. The impairment charges in relation to property, plant and equipment and inventory were £1.9 million and £1.3 million, respectively.

Net restructuring charge

The Group has taken the opportunity to right-size our global footprint and rationalise costs in order to focus resources on our faster growing markets. This restructuring programme commenced in the second half of 2023 and will continue into 2024. A charge of £6.5 million has been recognised in relation to this and comprises costs associated with staff redundancies and site closure costs.

A restructuring provision of £3.0 million held for Technical Ceramics, ceramic cores has been released following settlement of a multi-employer pension plan and the re-letting of the site.

Net business closure and exit costs

During 2023, we commenced liquidation of a Thermal Ceramics business in China. Costs associated with this were £1.9 million and included severance, decommissioning and advisory fees.

The land and buildings owned by another Thermal Ceramics business in China which was closed in 2020 were sold in December 2023. The gain associated with this sale was £2.4 million.

We disposed of a Thermal Ceramics business in France in 2015, for which we retained responsibility for remediating the impact of historical manufacturing processes on the environment. An assessment of the remaining required remediation was performed in 2023 and as a consequence of this review we have provided £2.4 million.

Impairment of non-financial assets Seals and Bearings, Europe

An impairment charge of £2.9 million was recognised after reassessing the value in use of property, plant and equipment in a business in Italy which was experiencing limited growth. This represents a partial impairment of the assets; the carrying value of the assets following this impairment was £5.3 million. The calculation of value in use was performed as at 31 December 2023, a long-term growth rate of 1.0% was used for years beyond the five-year forecast period and in calculating the terminal value, with a pre-tax discount rate of 17.3%.

An impairment charge of £0.3 million was recognised after assessing the viability of a development asset, which could not be successfully commissioned.

Seals and Bearings, Asia

An impairment charge of £1.9 million was recognised after reassessing the value in use of property, plant and equipment in a business which was experiencing limited growth and under-utilisation of key assets. This represents a partial impairment of assets; the carrying value of the assets following this impairment was £2.2 million. The calculation was performed as at 31 December 2023, using a long-term growth rate of 1.0% and a pre-tax discount rate of 13.9%.

Electrical Carbon, North America

An impairment charge of £1.5 million was recognised after assessing the viability of a development asset in North America which was not deemed to be commercially viable.

Electrical Carbon, Asia

An impairment charge of £0.7 million was recognised in relation to assets associated with a manufacturing line which, based on current projections, is expected to be under-utilised from 2025 onwards.

Reversal of impairments recognised in prior periods

In 2020, as a result of the COVID-19 pandemic, we impaired property, plant and equipment within our Technical Ceramics, ceramic cores business and Thermal Ceramics, Europe. Following our review as at 31 December 2023 of assets which continue to be used and which were impaired in previous years, we have reversed a portion of this impairment. For the ceramic cores business we reversed £5.7 million, being a full reversal, reinstating the net book value at which the assets would have been held if the impairment had not been booked in 2020, because the business and the aerospace industry have demonstrated sustained growth. For Thermal Ceramics, Europe we have recorded a partial impairment reversal of £2.4 million following sustained recovery of the industrial market segments. This reversal is based on a value in use calculation which was performed at 31 December 2023, using a long-term growth rate of 1.0% for years beyond the five-year forecast period and in calculating terminal value, with a pre-tax discount rate of 13.6%.

Review of cumulative impairment of non-financial assets

Impairment charges of £20.6 million for non-financial assets which the business continues to use have been recorded during the current and previous years (Technical Ceramics, Asia £7.7 million, Thermal Ceramics £7.2 million, Seals and Bearings, Asia £2.9 million and Seals and Bearings, Europe £2.8 million). These impaired amounts could be reversed if the related businesses were to outperform significantly against their budget. A sensitivity analysis was carried out using reasonably possible changes to the key assumptions in assessing the value in use of these non-financial assets. This did not result in a material reversal of the impaired amounts.

Group financial review continued

2022

**Impairment of non-financial assets
Seals & Bearings, Asia**

An impairment charge of £0.6 million was recognised relating to assets purchased to support a customer contract which did not materialise.

A further impairment charge of £1.0 million was recognised after reassessing the value in use of property, plant and equipment in a business in Asia which was taking longer than anticipated to generate revenues. This represented a partial impairment of the assets; the carrying value of the assets following this impairment was £5.2 million. The calculation of the value in use was performed as at December 2022. A long-term growth rate of 1.0% was used for years beyond the five-year forecast period and in calculating the terminal value. A pre-tax discount rate of 12.9% was used to determine the value in use.

Thermal Ceramics, Europe

An impairment charge of £1.2 million was recognised following a fire in December which destroyed a warehouse and inventory. The assets were subsequently written off.

An impairment charge of £1.1 million was recognised after reassessing the value in use of property, plant and equipment in a business in France which was experiencing limited growth and under-utilisation of key assets. This represented a partial impairment of the assets. The carrying value of the assets following the impairment was £0.3 million. The calculation of value in use was performed as at December 2022. A long-term growth rate of 1.0% was used for years beyond the five-year forecast period and in calculating the terminal value. A pre-tax discount rate of 13.7% was used to determine the value in use.

Thermal Ceramics, South America

An impairment charge of £0.9 million was recognised in relation to assets associated with a closed manufacturing line.

Technical Ceramics, Asia

An impairment charge of £1.7 million was recognised after reassessing the value in use of property, plant and equipment in a business in Asia which was taking longer than anticipated to generate revenues. This represented a partial impairment of the assets; the carrying value of the assets following this impairment was £3.2 million. The calculation of the value in use was performed as at December 2022.

A long-term growth rate of 1.0% was used for years beyond the five-year forecast period and in calculating the terminal value. A pre-tax discount rate of 12.9% was used to determine the value in use.

Restructuring credit

A credit of £0.6 million was recognised in the year ended 31 December 2022. This represented the release of restructuring provisions recorded in relation to the Group's 2020 restructuring programme. The remaining provision of £10.5 million as at 31 December 2022 included lease exit costs and multi-employer pension obligations for two sites which were closed in 2021. In 2022, the cash outflows relating to the pension obligations were expected to continue for up to 19 years, subject to any settlement being reached in advance of that date. Cash outflows in relation to the lease were expected to continue for four years. Refer to note 24 for further information.

Net profit on disposal of business

The Group disposed of its investment in the joint venture Sukhoy Log, based in Russia, during 2022. This disposal generated a net profit of £0.4 million. Refer to note 2 for further information.

Foreign currency impact

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

GBP to:	2023		2022	
	Closing rate	Average rate	Closing rate	Average rate
US dollar	1.27	1.24	1.21	1.24
Euro	1.15	1.15	1.13	1.17

The potential impact of changes in foreign exchange rates is given in note 21 to the consolidated financial statements on page 185.

Retranslating the 2023 full-year results at the February 2024 closing exchange rates would lead to revenue of £1,091.7 million and adjusted operating profit* of £112.7 million.

For illustrative purposes, the table below provides details of the impact on 2023 revenue and Group adjusted operating profit* if the actual reported results, calculated using 2023 average exchange rates were restated for GBP weakening by 10 cents against the US dollar in isolation and 10 cents against the Euro in isolation:

	Revenue £m	Adjusted operating profit ¹ £m
Increase in 2023 revenue/adjusted operating profit ¹ if:		
GBP weakens by 10c against the US dollar in isolation	42.8	4.9
GBP weakens by 10c against the Euro in isolation	21.5	2.5

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 218, reconciliations of the statutory results to the adjusted measures can be found on pages 72 to 73.

Amortisation of intangible assets

The Group amortisation charge was £3.3 million (2022: £4.7 million).

Finance costs

The net finance charge was £14.1 million (2022: £9.2 million) comprising net bank interest and similar charges of £11.7 million (2022: £5.4 million), net interest on IAS 19 pension obligations of £nil (2022: £1.4 million), and the interest expense on lease liabilities of £2.4 million (2022: £2.4 million) resulting from IFRS 16 Leases.

The impacts of potential changes in interest rates on profit or loss are stated in note 21 to the consolidated financial statements on page 184.

Looking forward to 2024, we anticipate that the net finance charge will be around £18–20 million, comprising: net bank interest and similar charges of £16–17 million; net interest on IAS 19 pension obligations of £0.5 million; and net interest expense on lease liabilities of £2 million.

Taxation

The Group tax charge from continuing operations, excluding specific adjusting items, was £26.0 million (2022: £37.1 million). The effective tax rate, excluding specific adjusting items, was 25.3% (2022: 27.0%). Note 8 to the consolidated financial statements, on page 165, provides additional information on the Group's tax charge.

Looking forward to 2024, we anticipate that the effective tax rate will be around 25%–27%.

On a statutory basis, the Group tax charge was £22.2 million (2022: £36.0 million), lower than the previous year due to the lower taxable profits.

Earnings per share

Basic earnings per share from continuing operations was 16.4 pence (2022: 30.6 pence) and adjusted earnings per share* was 25.0 pence (2022: 33.8 pence). Details of these calculations can be found in note 10 to the consolidated financial statements on page 168.

Final dividend

The Board is recommending a final dividend, subject to shareholder approval, of 6.7 pence per share on the Ordinary share capital of the Group, payable on 17 May 2024 to Ordinary shareholders on the register at the close of business on 26 April 2024. The ex-dividend date is 25 April 2024.

Together with the interim dividend of 5.3 pence per share paid on 17 November 2023, this final dividend, if approved by shareholders, brings the total distribution for the year to 12.0 pence per share (2022: 12.0 pence).

A total dividend of 12.0 pence per share represents a dividend cover of adjusted EPS* of 2.1 times.

The Board has committed to grow the Ordinary dividend as the economic environment and the Group's earnings improve, targeting a dividend cover of around 2.5 times over the medium term. While the results in 2023 were depressed by the impact of the cyber security incident, the balance sheet is strong and the Board is confident about the outlook for the business. Consequently, the Board is recommending a flat dividend in 2023 even though cover is lower than our target for this year.

Note 41 to the Company financial statements, on page 211, provides additional information on the Company's distributable reserves.

Cash flow

Cash generated from continuing operations was £126.3 million (2022: £59.1 million).

Free cash flow before acquisitions, disposals and dividends* was £14.6 million (2022: £(46.9) million).

Net debt* at the year end was £232.3 million (2022: £200.4 million), representing a net debt* to EBITDA* ratio of 1.5 times (2022: 1.1 times).

The Group has cash and cash equivalents* of £124.5 million and undrawn headroom on its revolving credit facility of £187.9 million.

Net debt excluding lease liabilities* was £185.2 million (2022: £148.5 million), representing a net debt* to EBITDA* ratio excluding lease liabilities of 1.2 times (2022: 0.8 times).

Commitments for property, plant and equipment and computer software for which no provision has been made are set out in note 25 to the consolidated financial statements on page 197.

	2023 £m	2022 £m
Cash generated from continuing operations	126.3	59.1
Net capital expenditure	(58.5)	(57.4)
Net interest on cash and borrowings	(11.6)	(5.4)
Tax paid	(30.3)	(31.8)
Lease payments and interests	(11.3)	(11.4)
Free cash flow before acquisitions, disposals and dividends	14.6	(46.9)
Dividends paid to external plc shareholders	(34.2)	(31.6)
Net cash flows from other investing and financing activities	(17.8)	(10.3)
Cash flows from sale of subsidiaries and associates	–	0.4
Net cash flows from discontinued operations	0.4	1.1
Exchange movement and other non-cash movements	0.3	(14.5)
Opening net debt ¹ excluding lease liabilities	(148.5)	(46.7)
Closing net debt ¹ excluding lease liabilities	(185.2)	(148.5)
Closing lease liabilities	(47.1)	(51.9)
Closing net debt¹	(232.3)	(200.4)

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 218, reconciliations of the statutory results to the adjusted measures can be found on pages 72 to 73.

Group financial review continued

Capital structure

At the year end total equity was £398.6 million (2022: £429.6 million) with closing net debt* of £232.3 million (2022: £200.4 million).

Non-current assets were £530.8 million (2022: £524.3 million) and total assets were £1,024.7 million (2022: £1,020.3 million).

Details of undiscounted contracted maturities of financial liabilities and capital management are set out in note 21 to the consolidated financial statements on [page 181](#).

Capital structure is further discussed in note 21 to the consolidated financial statements on [page 186](#) under the heading Capital management.

Pensions

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

	2023 £m	2022 £m
Operating costs:		
Current and past service cost	(2.4)	(2.7)
Administration expenses recognised outside the pension liabilities	(1.1)	(1.5)
Curtailments and settlements	-	0.2
Total operating costs	(3.5)	(4.0)
Net interest on net defined benefit liability	-	(1.4)
Total	(3.6)	(5.4)

Defined benefit pension plans

The Group pension deficit has increased by £9.6 million since last year end to £25.2 million on an IAS 19 (revised) basis:

- The UK Schemes' surplus decreased by £12.7 million to £12.5 million (2022 surplus: £25.2 million), (discount rate 2023: 4.52%; discount rate 2022: 4.81%)
- The US Schemes' deficit decreased by £3.7 million to £5.5 million (2022: £9.2 million), (discount rate 2023: 4.80%; discount rate 2022: 4.99%)
- The European Schemes' deficit increased by £0.3 million to £28.2 million (2022: £27.9 million), (discount rate 2023: 3.40%; discount rate 2022: 3.70%)
- The Rest of World Schemes' deficit increased by £0.3 million to £4.0 million (2022: £3.7 million), (discount rate 2023: 5.52%; discount rate 2022: 5.30%).

The most recent full actuarial valuations of the UK Schemes were undertaken as at 31 March 2022 and resulted in combined assessed deficits of £49.7 million on the 'Technical Provisions' basis. The Company subsequently agreed with the Trustees to make a lump sum contribution to the Schemes of £67.0 million on 29 December 2022 in lieu of the remaining contributions that would otherwise have been due under the existing recovery plans from the 31 March 2019 valuations. The sum paid also represented the value of the deficit on the more prudent 'Long Term Objective' basis on the date of that agreement, 25 October 2022. As a result, no further contributions to the Schemes are expected to be required pending the results of the next full valuations as at 31 March 2025.

Post balance sheet event

There were no reportable post balance sheet events following the balance sheet date.

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 21 to the consolidated financial statements on [page 179](#).

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 are detailed in notes 20 and 21 to the consolidated financial statements on [pages 178 and 179](#).

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 60](#).

Business simplification in 2024

As mentioned on [page 31](#), in order to focus our resources on the most attractive opportunities, we will in future manage the Group through three distinct segments, Thermal Products, Performance Carbon and Technical Ceramics. This structure is effective from 1 January 2024.

	Revenue		Adjusted operating profit ¹		Adjusted operating profit margin % ¹	
	2023 £m	2022 £m	2023 £m	2022 £m	2023 %	2022 %
Thermal Products	454.4	479.2	40.2	56.5	8.8%	11.8%
Performance Carbon	327.2	321.7	50.0	57.3	15.3%	17.8%
Technical Ceramics	333.1	311.2	36.0	43.1	10.8%	13.8%
Segment total	1,114.7	1,112.1	126.2	156.9	11.3%	14.1%
Corporate costs			(5.9)	(5.9)		
Group adjusted operating profit¹			120.3	151.0	10.8%	13.6%

The table above shows 2022 and 2023's results using the operating segments of the Group going forward.

Directors' statements

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 75. The financial position of the Group, its cash flows, liquidity position and borrowing facilities, are described in the Financial Review on pages 64 to 69. In addition, note 21 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 £230.0 million unsecured multi-currency revolving credit facility, which matures in November 2028. As at 31 December 2023, the Group had both significant available liquidity and headroom on its covenants. Total committed borrowing facilities were £496.9 million. The amount drawn under these facilities was £309.0 million, which together with net cash and cash equivalents of £123.9 million, gave a total headroom of £311.8 million. The multi-currency revolving credit facility was £42.1 million drawn. The Group had no scheduled debt maturities until 2026.

The principal borrowing facilities are subject to covenants that are measured semi-annually in June and December, being net debt to EBITDA of a maximum of 3 times and interest cover of a minimum of 4 times, based on measures defined in the facilities agreements which are adjusted from the equivalent IFRS amounts.

The Group has carefully modelled its cash flow outlook, taking account of reasonably possible changes in trading performance, exchange rates and plausible downside scenarios. This review indicated that there

was sufficient headroom and liquidity for the business to continue for the 18 month period based on the facilities available as discussed in note 21 to the financial statements. The Group was also expected to be in compliance with the required covenants discussed above. 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 46% and an increase in net debt of 40% would still allow the Group to operate within its financial covenants. The Directors do not consider either of these scenarios to be plausible given the diversity of the Group's end-markets and its broad manufacturing base.

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. As part of the ongoing risk management process, principal and emerging risks are identified and reviewed on a regular basis. In addition, the Directors have assessed the risk of climate change and do not consider that it will impact the Group's ability to operate as a going concern for the period under consideration.

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 viability assessment period remained at five years to 31 December 2028 in the line with impairment review testing and the strategic planning process. The Directors consider this an appropriate period over which to provide its viability statement based on management's reasonable expectations of the position and performance of the Company and 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 54 to 61 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 2028.

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, refinancing of borrowing facilities 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 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.

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

Scenarios modelled	Link to principal risks and uncertainties
Cyber security incident The failure of a key business system following another cyber security incident. The sensitivity analysis performed considered the impact of a two-week loss of access to the Group's main ERP system on the revenue and EBITA as well as exceptional costs to reinstate the system to the latest cyber security standards.	IT, Cyber security and data management risks
IT projects failure The failure or ineffective implementation of core systems impacting the Group's ability to deliver its strategic goals. The sensitivity analysis performed considered the impact of additional accelerated investment in IT following the cyber security incident which occurred in January 2023.	IT, Cyber security and data management Risks
Bribery and corruption The breach of national and international laws and regulations including those related to bribery and corruption, and competition/anti-trust activities. The sensitivity analysis performed considered impacts on the Group's revenue and EBITA as well as a regulatory fine or a penalty.	Compliance risk
Trade compliance breach The failure of sanctions screening programme and non-compliance with export regulations. The sensitivity analysis performed considered impacts on the Group's revenue and EBITA as well as additional legal costs.	Compliance risk

The combined impact of the above four scenarios results in a 10% reduction in Group's revenue and 43% reduction in Group's EBITA in 2024 before taking mitigating actions. In this worst-case scenario the Group remains within banking covenants.

As part of the ongoing risk management process, principal and emerging risks are identified and reviewed on a regular basis. There are a number of mitigating actions the Group takes to manage and reduce risk, further details of which can be found in the Risk Management section on pages 54 to 61.

The Group has significant financial resources including committed and uncommitted banking and debt facilities, as outlined in the going concern statement. In assessing the Group's viability, the Directors have assumed availability of debt capital markets and that the existing banking and debt facilities will remain in place or mature as intended.

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 2028.

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 section on page 158, 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. The exclusion of amortisation of intangible assets is to allow for consistent comparability internally and externally between our businesses, regardless of whether they have been grown organically or through acquisition.

	Thermal Ceramics £m	Molten Metal Systems £m	Electrical Carbon £m	Seals and Bearings £m	Technical Ceramics £m	Segment total £m	Corporate costs ¹ £m	Group £m
2023								
Operating profit	25.3	4.2	38.7	3.3	40.4	111.9	(20.0)	91.9
Add back specific adjusting items included in operating profit	8.0	1.3	2.3	7.4	(8.0)	11.0	14.1	25.1
Add back amortisation of intangible assets	1.2	0.2	0.5	0.7	0.7	3.3	–	3.3
Adjusted operating profit	34.5	5.7	41.5	11.4	33.1	126.2	(5.9)	120.3
Adjusted operating profit margin	8.6%	10.9%	20.6%	7.8%	10.6%			10.8%
2022								
Operating profit	44.3	7.5	39.1	16.6	39.2	146.7	(5.9)	140.8
Add back specific adjusting items included in operating profit	2.8	–	(0.1)	1.6	1.2	5.5	–	5.5
Add back amortisation of intangible assets	1.6	0.3	0.7	0.8	1.3	4.7	–	4.7
Adjusted operating profit	48.7	7.8	39.7	19.0	41.7	156.9	(5.9)	151.0
Adjusted operating profit margin	11.6%	13.5%	21.0%	12.8%	14.1%			13.6%

1. Corporate costs consist of central head office costs.

Organic growth

Organic growth is the growth of the business excluding the impacts of acquisitions and 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 Review of operations on pages 62 to 63.

Year-on-year movements in segment revenue

	Thermal Ceramics £m	Molten Metal Systems £m	Electrical Carbon £m	Seals and Bearings £m	Technical Ceramics £m	Segment total £m
2022 revenue	421.4	57.8	188.7	148.5	295.7	1,112.1
Impact of foreign currency movements	(16.3)	(1.0)	(5.1)	(0.9)	(1.5)	(24.8)
Impact of acquisitions, disposals and business exits	–	–	–	–	–	–
Organic constant-currency change	(2.9)	(4.6)	17.8	(1.8)	18.9	27.4
Organic constant-currency change %	(0.7)%	(8.1)%	9.7%	(1.2)%	6.4%	2.5%
2023 revenue	402.2	52.2	201.4	145.8	313.1	1,114.7

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

	Thermal Ceramics £m	Molten Metal Systems £m	Electrical Carbon £m	Seals and Bearings £m	Technical Ceramics £m	Segment total £m	Corporate costs ¹ £m	Group £m
2022 adjusted operating profit	48.7	7.8	39.7	19.0	41.7	156.9	(5.9)	151.0
Impact of foreign currency movements	(4.7)	(0.3)	(1.7)	(0.2)	0.1	(6.8)	–	(6.8)
Impact of acquisitions, disposals and business exits	–	–	–	–	–	–	–	–
Organic constant-currency change	(9.5)	(1.8)	3.5	(7.4)	(8.7)	(23.9)	–	(23.9)
Organic constant-currency change %	(21.6)%	(24.0)%	9.2%	(39.4)%	(20.8)%	(15.9)%		
2023 adjusted operating profit	34.5	5.7	41.5	11.4	33.1	126.2	(5.9)	120.3

Definitions and reconciliations of non-GAAP measures to GAAP measures continued

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 i.e. excluding capital and interest payments on leases which have been capitalised following the adoption of IFRS 16. This is used as a proxy for the charge that would have been attributable to operating leases under the now defunct IAS 17.

A reconciliation of operating profit to Group EBITDA* is as follows:

	2023 £m	2022 £m
Operating profit	91.9	140.8
Add back: specific adjusting items included in operating profit	25.1	5.5
Add back: depreciation – property, plant and equipment	31.9	30.3
Add back: depreciation – right-of-use assets	7.6	7.8
Add back: amortisation of intangible assets	3.3	4.7
Group EBITDA*	159.8	189.1
Group EBITDA* excluding IFRS 16 Leases impact	148.5	177.7

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 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:

	2023 £m	2022 £m
Cash generated from continuing operations	126.3	59.1
Net capital expenditure	(58.5)	(57.4)
Net interest on cash and borrowings	(11.6)	(5.4)
Tax paid	(30.3)	(31.8)
Lease payments and interests	(11.3)	(11.4)
Free cash flow before acquisitions, disposals and dividends	14.6	(46.9)

Net cash and cash equivalents

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

	2023 £m	2022 £m
Cash and cash equivalents	124.5	117.7
Bank overdrafts	(0.6)	(1.5)
Net cash and cash equivalents	123.9	116.2

Net debt

Net debt is defined as borrowings, bank overdrafts and lease liabilities, less cash and cash equivalents. The Group discloses net debt because it helps readers of the consolidated financial statements assess its ability to meet its financial obligations, manage debt and its capacity to invest in growth opportunities. The Group also discloses this metric excluding lease liabilities as this is the measure used in the covenants over the Group's debt facilities.

	2023 £m	2022 £m
Cash and cash equivalents	124.5	117.7
Non-current borrowings	(309.1)	(230.1)
Non-current lease liabilities	(36.6)	(41.4)
Current borrowings and bank overdrafts	(0.6)	(36.1)
Current lease liabilities	(10.5)	(10.5)
Closing net debt	(232.3)	(200.4)
Closing net debt excluding lease liabilities	(185.2)	(148.5)

Return on invested capital

The Group discloses return on invested capital (ROIC) to assess its efficiency in generating profits from the capital it has invested in its operations. The ROIC calculation has been simplified this year so that it can be calculated from published information. Prior period comparatives have been restated to follow the same methodology. ROIC is now defined as 12-month adjusted operating profit (operating profit excluding specific adjusting items and amortisation of intangible assets) divided by the 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). Third-party working capital includes inventories, trade and other receivables, and trade and other payables.

	2023 £m	2022 £m
Operating profit	91.9	140.8
Add back: specific adjusting items	25.1	5.5
Add back: amortisation of intangible assets	3.3	4.7
Group adjusted operating profit	120.3	151.0
Third-party working capital	174.7	181.7
Property, plant and equipment	293.8	283.2
Right-of-use-assets	31.6	33.6
Goodwill	177.5	181.9
Other intangible assets	4.7	7.1
Capital employed	682.3	687.5
Average capital employed	684.9	637.8
ROIC	17.6%	23.7%

Under the previous methodology (which used 12-month adjusted operating profit and 12-month average adjusted net assets), ROIC as at 31 December 2023 was 16.9% (2022: 23.0%).

Adjusted earnings per share

Adjusted earnings per share is defined as operating profit adjusted to exclude specific adjusting items and amortisation of intangible assets 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 that it provides a helpful indication of the Group's financial performance excluding material non-recurring expenses or gains and non-financial asset impairments and impairment reversals, and therefore facilitates the evaluation of the Group's performance over time.

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 the Group'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 168.

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.

Pages 184 to 186 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 75, has been approved by the Board.

On behalf of the Board

Winifred Chime
COMPANY SECRETARY

11 March 2024

Governance

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

Ian Marchant
NON-EXECUTIVE CHAIR

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Chair's letter to shareholders



Dear shareholder

On behalf of the Board, I am pleased to introduce our Governance Report for the year ended 31 December 2023. This report sets out our approach to effective corporate governance, outlines key areas of focus of the Board and the activities undertaken during the year as we continue to drive long-term value creation for all our stakeholders.

Board's focus during the year

It has been another busy year for the Board and a summary of our key activities is set out on page 81. In addition to overseeing the work to contain the impact of the cyber security incident in January 2023 and recover the systems, with meetings regularly held throughout this period, the Board also oversaw a significant capital investment programme to add growth capacity for our faster growing and core segments. Volumes have been resilient throughout the year. It would be easy to assume that this resilience was just inherent within the business, but that is not the case. It comes from good governance, clear accountabilities and reporting lines, careful planning and relentless execution.

I would like to thank the team on behalf of the Board for their resilience and the considerable efforts and dedication they demonstrated throughout this period.

We introduced a two-day strategy session this year. The session provided the Board with an opportunity to review progress made on longer-term strategic plans, consider Morgan Group's global footprint and discuss options for growth. We also invited members of the Executive Committee and the finance directors of the global business units (GBUs) to the session.

Board composition

The Board invited me to take on the role of Chair from Douglas Caster following his decision to stand down, having served nine years on the Board. Since joining the Board in February 2023 and as part of my induction, I have spent time meeting my new colleagues and major shareholders to build a full understanding of the challenges we face as well as the many opportunities we have to grow. Further information on the Chair selection process and induction can be found on [page 89](#) of the 2022 Annual Report.

During 2023, the Nomination Committee commenced the search for three new non-Executive Directors to replace existing Directors nearing the end of their nine-year tenure, as part of a phased succession programme. Two Directors will be recruited in 2024 with a third Director recruited in 2025. Further information on the process can be found on [pages 102 and 103](#).

Board evaluation

We carried out an internal review of our performance this year, following the externally facilitated review in 2021. Both reviews were facilitated by Clare Chalmers Limited. I'm pleased to confirm that the Board concluded that it, its Committees and the individual Directors had continued to operate effectively and fully discharged their responsibilities during 2023. The results of this review are set out on [page 88](#).

Stakeholder engagement

Our stakeholder relationships are also vital in building resilience and safeguarding value, and the Board will continue to focus on these relationships. Our strong relationships with our colleagues and our customers helped to contain the impact of the cyber security incident and the move towards recovery.

But in addition to fostering good stakeholder relationships, resilience also comes from good business-as-usual governance safeguards. During the year, the Board continued to prioritise health and safety, risk and ethics.

The non-Executive Directors participated directly in employee listening sessions and carried out a full programme of activities during the year. The insights from these sessions add an important perspective to Board discussions and decisions. This ensures employee voices are heard and considered as the Board makes decisions that influence the future of Morgan Advanced Materials. Further detail on the listening sessions are included on [pages 86 to 87](#).

Focus for 2024

Given the Board changes detailed above, one of the key priorities for the Board in 2024 will be ensuring that the new non-Executive Directors are successfully onboarded and there is a smooth transition with the outgoing Directors.

The Board will also continue to oversee the delivery of Morgan Advanced Materials' strategy and in particular the delivery of the capital investment programme, organisation changes and strategic priorities identified for each of the key Group functions and GBUs during the strategy session.

Ian Marchant
NON-EXECUTIVE CHAIR

Board of Directors



1. Ian Marchant

Non-executive Chair

Appointed: Chair Designate and non-Executive Director in February 2023. Non-executive Chair and Nomination Committee Chair in June 2023.

Skills and contribution:

Ian is a highly strategic and successful leader with more than 35 years of wide-ranging experience at major businesses, bringing a strong track record of value creation and listed board experience. He brings significant expertise in governance, finance, regulation, renewable energy and climate change mitigation to our Board.

Career and experience:

Ian served as Chief Executive of SSE plc from October 2002 to June 2013; prior to this he was the Finance Director of SSE and Southern Electric plc. He is a seasoned non-Executive Director and chair, having served as Chair of Thames Water Utilities Ltd and John Wood Group plc and on the Board of Aggreko plc.

External appointments:

Chair of Logan Energy Ltd and non-Executive Director of Fred Olsen UK Ltd.

Committees

(N) (R)

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. As CEO, he leads the Executive Committee and is responsible for our overall performance. The Group's Environment, Health, Safety and Sustainability (EHSS) team also reports directly to Pete, enabling him to keep the Board apprised of the establishment of goals, management of risks and opportunities, reporting and related governance procedures in that area.

Career and experience:

Pete joined Morgan Advanced Materials in August 2015 as Chief Executive Officer. Before joining Morgan, 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.

External appointments:

Non-Executive Director, Hill & Smith plc.

3. Richard Armitage

Chief Financial Officer

Appointed: May 2022.

Skills and contribution:

Richard has broad experience including financial management, investor relations, capital markets, M&A, and commercial management, gained through roles in a number of listed and privately owned chemicals and consumer goods companies.

Career and experience:

Richard joined Morgan Advanced Materials in May 2022 as Chief Financial Officer. Before this, Richard was Chief Financial Officer at Victrex Group plc between 2018 and 2022. During this time, he was responsible for Finance, IT, Legal and Corporate Development, as well as the development of the Group's Chinese businesses. Prior to Victrex, Richard was CFO at Samworth Brothers from 2014 to 2018 and CFO of McBride plc from 2009 to 2014.

External appointments:

Senior Independent Director, Chair of the Audit Committee and interim Chair of the Remuneration Committee at NWF Group plc.

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, technology and marketing businesses gained in a variety of senior executive positions. Jane brings a valuable perspective from her current executive role in the marketing sector.

Career and experience:

Jane has been Chief Financial Officer of Inside Ideas Group Limited since July 2020. Prior to this, Jane held Chief Financial Officer positions in Arqiva Group Limited, KCOM Group plc and Phoenix IT Group plc, where she was also Chief Operating Officer. She has also held Chief Financial Officer positions at Infinis plc, Wilson Bowden plc and Pressac plc. 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 is a Chartered Accountant.

External appointments:

Group Director and Group Chief Financial 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 January 2019.

Skills and contribution:

Helen has significant experience of driving business performance, forging long-term relationships and building businesses in new markets, with a background encompassing corporate governance and customer relations. Helen is a member of the Executive Committee at Wates Group, a construction sector pioneer in creating social value, with strong ESG credentials.

Career and experience:

Helen is Executive Managing Director of Wates Residential, having started with the company in 2006 and undertaken a variety of roles including Group Strategy Director, Managing Director of Wates Retail Limited and Managing Director of Wates Smartspace Limited. Prior to Wates, Helen gained knowledge and experience in global businesses including ICI.

External 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 our key markets.

Career and experience:

Laurence was Chief Executive of independent power producer Eoxis UK Limited from 2010 to 2013. Prior to this, she spent 11 years at BP in a variety of roles including Chief Executive of Castrol Industrial Lubricants and Services. Laurence also held senior positions in Amoco Chemical Inc, M&M Mars Inc. and Banque Nationale de Paris.

External appointments:

Chair of Voltalia S.A. and Globeleq Ltd. Member of the supervisory board and Chair of the Audit Committee 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 continued to serve on the board of Saurer as non-Executive Director until August 2021. Prior to this, 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 including Division CEO of Leica Geosystems AG, President and CEO of SATS Ltd, and CEO Textile Division of OC Oerlikon AG.

External appointments:

Non-Executive Director of Elementis plc.

Committees

(A) (N) (R)

Committees

(C) Committee Chair

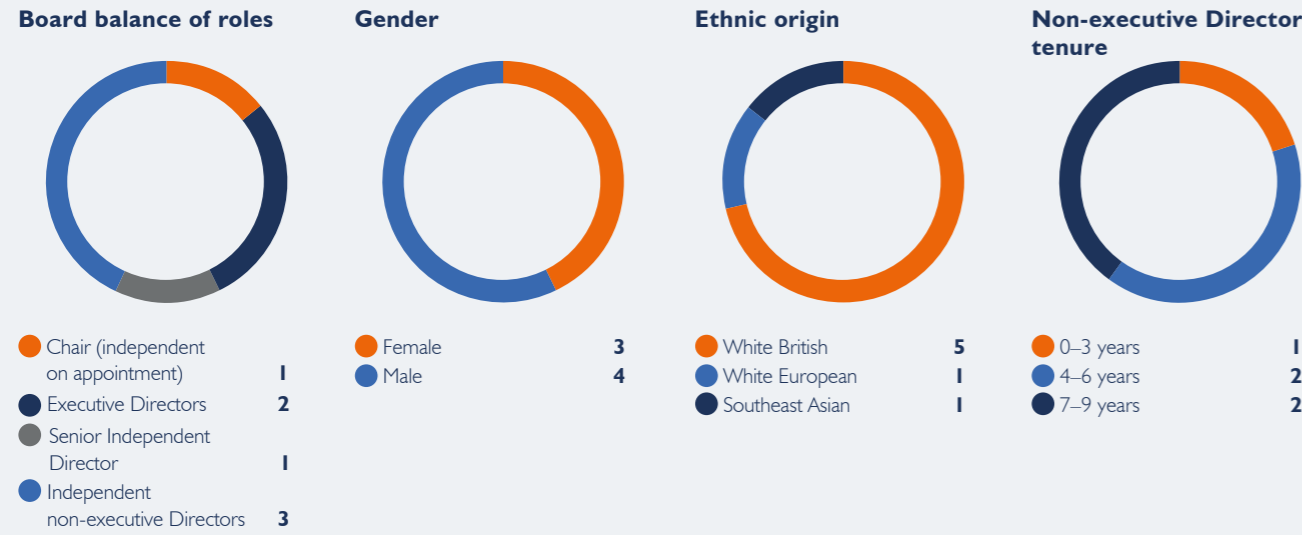
(A) Audit

(N) Nomination

(R) Remuneration

Governance at a glance

Board composition



Desired/required skills, experience, attributes

	Ian	Laurence	Helen	Jane	Clement	Pete	Richard
Leadership and business operations	●	●	●	●	●	●	●
Strategy development	●	●	●	●	●	●	●
Commercial	●	●	●	●	●	●	●
Accounting and finance	●	●		●			●
Audit, risk management and assurance	●	●	●	●	●	●	●
Remuneration/people	●	●	●	●	●	●	
Corporate governance	●	●	●	●	●	●	●
Engineering and industrial sector	●	●		●	●	●	●
Technology/innovation/R&D	●	●			●	●	
International business		●	●	●	●	●	●
M&A/portfolio management	●	●	●	●	●	●	●
Safety/environmental/sustainability	●	●	●		●	●	
Significant change/large transformation	●	●	●		●	●	

Director attendance at meetings of the Board and its Committees

Director	Board ⁴	Audit Committee	Nomination Committee	Remuneration Committee
Ian Marchant ²	9/9	4/4 ¹	2/2	4/4
Douglas Caster ³	4/4	2/2 ¹	1/1	2/2
Pete Raby	9/9	5/5 ¹	2/2 ¹	4/4 ¹
Richard Armitage	9/9	5/5 ¹	-	-
Jane Aikman	9/9	5/5	2/2	4/4
Helen Bunch ⁵	8/9	5/5	2/2	4/4
Laurence Mulliez	9/9	5/5	2/2	4/4
Clement Woon	9/9	5/5	2/2	4/4

1. Attended by invitation.
 2. Ian Marchant joined the Board on 1 February 2023.
 3. Douglas Caster resigned from the Board on 29 June 2023.
 4. In addition to the scheduled Board meetings mentioned in the table above, the Board also held calls to oversee the response to the cyber security incident.
 5. Helen Bunch was unable to join an additional Board meeting arranged at short notice because of a pre-existing hospital appointment.

Key Board activity

Set out in the table below are highlights of the matters the Board considered in 2023. Not all of the matters the Board considered are listed, therefore this should not be considered an exhaustive list of activities.

Activity	Link to strategic priorities	Link to stakeholders	Link to principal risks
Strategy			
GBU strategy reviews	1,2,3	I,C,S,E,Co	1, 2,3,4 5,6,9
IT strategy	2,3	I,E,C,S	1, 8,9,7
M&A strategy	3	I,C,S	1,4,3,9
Group portfolio strategy	3	I,C,S, E	3
ESG strategy	1, 2	I,C,S,E,P,Co	5, 6
Defence strategy	3	I,E	3
Capital allocation	3	I,C,S,E,Co	1,3,5,6,8
Geographical markets – outlook and implications	3	I, C,S,E	3, 4
Operational and commercial			
Updates on the cyber security incident, recovery planning and IT security	1,2,3	E,C,S,I	8, 9, 14
Approval of capital expenditure	2,3	C,S	1, 2, 3,5,6, 9
ERP project update	2,3	E,S,C	2, 3,7,8, 9
'Voice of the customer' survey results	1,2	C	1, 2, 7
Financial and risk management			
Approval of 2024 Budget	1, 3	I, E,S	4, 10, 11
Approval of 2022 annual results and 2023 interim results and dividends	3	I,E,P	2, 3, 9
Brokers updates and investor feedback	1,3	I	3
Approval of new debt facility	1,2,3	I, E	10
Insurance renewal	1	E,S,C	7, 9, 13
Treasury update	3	I, C, S,E, P	10
Principal risks review	1,2,3	I, C,S,E,C, P	
People			
2022 'Your Voice' survey results	1	E	1,2
Pension update	1	E, P	11
Talent, leadership, capability and succession update	1	E	1
Governance			
AGM	1	I	14
Modern slavery & supplier engagement	1	S	14
Board performance evaluation	1	I,E	14
Monitoring and assessment of culture	1	E	14
Corporate Governance Code compliance	1	I,C,S,E,P,Co	14

Standing agenda items

Chief Executive Officer's report	Covering topics such as: > safety and environmental progress and performance > strategy > business, markets and customers > acquisitions and divestments > investor relations > information systems and technology > key project and GBU updates > people updates > updates on the cyber security incident and the Group's response.
Chief Financial Officer's report	Covering topics such as: > Group and GBU financial performance > investor engagement and feedback > capital allocation > refinancing > pensions.
Company Secretary's report	Covering topics such as: > governance and regulatory matters > litigation update > share register analysis.
Non-Executive Directors only session	The non-Executive Directors meet without management present.
Key to stakeholders	Key to principal risks
I Investors	1 Technical leadership
C Customers	2 Operational execution/organisational change
S Suppliers	3 Portfolio management
E Employees	4 Macro-economic and political environment
P Pensioners and pension trustees	5 Environment, health & safety
Co Communities	6 Climate change
Key to strategic priorities	7 Product quality, safety and liability
1 Big positive difference	8 IT, cyber security and data management
2 Delight the customer	9 Supply chain/business continuity
3 Innovate to grow	10 Treasury
	11 Pension funding
	12 Tax
	13 Contract management
	14 Compliance
	15 Pandemic

Strategic oversight by the Board

Setting strategy

The Board reviews and agrees the strategy for the Group and reviews aspects of strategy at Board meetings during the year. The Board considers a wide range of matters when setting Group strategy including, but not limited to:

- > market overview
- > trends, including megatrends and those affecting customer behaviour
- > competitor environment
- > investor sentiment and shareholder returns
- > GBU strategies
- > environmental, social and governance (ESG) and sustainability matters
- > finance
- > capital allocation
- > people and talent.

How governance contributes to the delivery of strategy

Details of how opportunities and risks to the future success of the business have been considered and addressed can be found in the Strategic Report on [pages 2 to 75](#). Details of the sustainability of the Company's business model can be found in the Strategic Report on [pages 12 to 13](#). Details of Morgan's governance framework which underpins the delivery of strategy can be found on [page 89](#). An overview of Morgan's strategy can be found in the Strategic Report on [pages 18 to 19](#) and [23 to 25](#).

The Board monitors progress against the strategic execution priorities underpinning delivery of the Group strategy:

- > Big positive difference
- > Delight the customer
- > Innovate to grow.

Board strategy review – September 2023

Purpose	To review and shape the Group and GBU strategy, evaluating market and competitor shifts, business competitiveness and manufacturing strategy. To agree growth opportunities and investments and assess key risks, and to agree capital allocation and implementation priorities and milestones.
Attendees	<ul style="list-style-type: none"> > The Board > Executive Committee > GBU finance Directors for GBU strategy reviews
Discussion themes	<ul style="list-style-type: none"> > progress against the strategic plan in each GBU and identification of further opportunities > progress against the 2030 environment and sustainability goals > update to the IT strategy, motivated by the shift in technology requirements and need for acceleration of execution > financial strategy incorporating the balance of capital allocation and the ways to increase shareholder value > investor priorities and views surrounding Morgan Advanced Materials strategy and ambitions > the role of Morgan Advanced Materials' people, the embedded organisational culture, skills and capabilities.
Outcomes	<ul style="list-style-type: none"> > approval of capital and resource allocation > approval of the strategic priorities for each GBU and the Group, and agreement on the optimal growth. Approval of the strategic priorities for key Group functions > setting an ongoing programme of strategic questions and topics for consideration throughout 2024 > identification of key actions and milestones for subsequent Board review.

Strategic execution priorities

1.

Big positive difference

Progressing 2030 goals Protect the environment

- > 50% reduction in scope 1 and scope 2 CO₂e emissions¹
- > 30% reduction in water use in high and extremely high-stress areas
- > 30% reduction in total water usage.

Provide a safe, fair and inclusive workplace

- > 0.10 lost-time accident rate
- > 40% of our leadership population will be female
- > Top-quartile engagement score.

What did the Board consider and approve?

Monitored progress against 2030 goals, ensuring clear and continued linkage to sustainable outcomes.

- > Reports from the EHSS Director on the progress towards 'zero harm', training being deployed to all employees focusing on our safety culture, investment in safety improvements and progress against our commitments to reduce waste, manage our water consumption, and reduce our emissions.
- > Succession plans for the Executive Committee members and senior management.
- > The results of the 2022 employee engagement survey, 'Your Voice'.
- > Updates on workforce planning, focusing on critical talent and targeted programmes for diversity, pipelines, training and development.

What were the material stakeholder considerations?

- > **Full stakeholder benefit.**
The ability of the Group's 2030 goals to deliver value for shareholders, stakeholders and society by driving towards net zero at pace, and in a socially just way.
- > **Embedded in culture.**
Employees and GBUs continue to embrace the long-term vision and make progress against our 2030 goals.
- > **Clear tracking of progress.**
Shareholders engaged on the Group's 2030 goals, citing the importance of quantifiable criteria and meaningful linkage including when considering remuneration metrics.

2.

Delight the customer

Investment in product and service offerings

Shape our product and service offerings further based on customer needs, with the overall objective of making our business more customer-centric.

What did the Board consider and approve?

Opportunities to better align our product and service offerings to meet the needs of our customers.

- > A report on the 'voice of the customer' survey carried out across all of the GBUs to understand customer views from across the Group and inform the Delight the Customer strategies. The report identified the key strengths and areas for improvement from the customer perspective and allowed the GBUs to identify key priorities.
- > Capital investments to tailor our product, service and support offerings more closely to customer needs, based on customer feedback gathered during 2023 which enabled us to understand our customer segments in more detail.

What were the material stakeholder considerations?

- > **Addressing customer needs.**
The outputs and performance levels to deliver on stated customer priorities, including customer service, maintaining focus on safety, quality, delivery, inventory and productivity.

The more we understand our customers, their businesses, markets and technical challenges, the more effective we can be at providing them with a solution

3.

Innovate to grow

Sustainable solutions to support the energy transition

Develop a diversified portfolio of sustainable solutions including:

- > **Aerospace:** Leading material for high efficiency engines
- > **Clean energy:** Increasing lifetime and performance of solar, wind and energy storage
- > **Clean transportation:** Superior materials for longer lifetimes
- > **Healthcare:** Best-in-class materials and miniaturisation technology
- > **Semiconductors:** Higher performance materials for the most demanding process steps
- > **Industrial:** Higher efficiency solutions for industrial customers.

What did the Board consider and approve?

Opportunities to support the growth of the Group's portfolio of sustainable solutions and to maintain a sustained pipeline of development opportunities.

- > Capital investments in our core markets to provide our customers with products and solutions that make them more sustainable.
- > Capital investments to increase our exposure to our three faster growing markets that reflect global trends: semiconductors, healthcare, clean energy and clean transportation.

What were the material stakeholder considerations?

- > **Strategic proposition.**
To ensure an acceptable investment case, the opportunities and risks of each investment are assessed across a range of criteria, including: fit with strategy, geographic and market economics, policy and societal context, revenue certainty and future return profile.
- > **Risk and portfolio diversification.**
Diversification across geographies and technologies creates optionality, mitigates development risk and exploits existing in-house capabilities.

Focusing on culture

Our culture is underpinned by our purpose: to use advanced materials to make the world more sustainable, and to improve the quality of life. We work together to deliver our strategy and reliably solve problems in an ethical, safe and sustainable way. As a business with a global footprint, we strive to work collaboratively, value our differences and treat each other fairly to deliver a positive outcome for our stakeholders. Our Directors lead by example and promote the desired culture.

How the Board measures and assesses culture

The Board is responsible for monitoring and assessing our culture. The Chair ensures that the Board is operating appropriately and sets the Board's culture which in turn forms the culture of the Company. The Chief Executive, supported by members of the Executive Committee, is responsible for ensuring the right culture and behaviours are embedded throughout the business and its operations and in all our dealings with our stakeholders.

The Board measures the culture of the Group using internal and external metrics which also enable it to identify further actions to ensure our culture remains appropriate. The Board considers the following:

> **Safety** – an area of paramount importance to our people, customers and partners. The CEO updates the Board on safety progress and performance in every Board meeting. The Board receives an update from the Director of Environment, Health, Safety and Sustainability at Board meetings through the year which contains safety statistics, both leading and lagging indicators, progress on safety initiatives and against the plan of work for the year, and details of serious incidents and root cause analysis. Safety performance is also part of presentations to the Board by the Presidents of the GBUs, proposals for capital expenditure, key risks and other ad hoc presentations to the Board. This enables the Board to gauge 'tone at the top'.

> **Employee retention** – we conduct an annual employee engagement survey – 'Your Voice'. The survey was conducted in November 2022 and 2023 to provide feedback to senior management and the Board on employee satisfaction. Group-wide and site-specific actions are identified and implemented to address the issues raised. This provides the Board with rich insight into culture, areas of strong performance and areas of improvement across the Group.

➔ Further information on the actions taken as a result of the 2022 'Your Voice' survey during 2023 can be found on [page 85](#)

> **Whistleblowing** – We have an independent 'Speak Up' service through EQS to enable employees, customers, suppliers and other third parties to report any concerns or wrongdoing anonymously without any fear of retaliation. The whistleblowing service and related internal procedures are structured to ensure that all reports are reviewed and investigated independently from the area of the business to which they relate. All reports are copied to and reviewed by the global ethics and compliance function. This helps to ensure transparency and enables any trends to be identified and addressed. Comprehensive information on the whistleblowing reports made is provided to the Audit Committee at each meeting and to the Ethics and Compliance Steering Committee, which comprises the members of the Executive Committee, Ethics and Compliance Director, Head of Internal Audit and Group Company Secretary. The updates to the Audit Committee include details of incident reports received in the period between meetings as well as details of ongoing investigations. The summary of reports to the 'Speak Up' hotline presented to the Audit Committee provided an insight into the frequency and type of issues being raised by employees and whether safety or ethics was a particular concern.

> **Workforce engagement** – the non-Executive Directors heard first-hand from employees during the employee listening sessions held during 2023. The non-Executive Directors asked open questions and listened to the feedback from employees. Coupled with the Board site visits and presentations to the Board by those below the Executive Committee, this helps the Board to gauge the culture of the organisation.

➔ Further information on workforce engagement can be found on [pages 86 to 87](#)

> **Alignment of remuneration and culture** – the Remuneration committee sets remuneration for the Executive Directors and Executive Committee members, and oversees remuneration for senior leaders and the wider organisation, with incentives designed to support delivery of the strategy and the establishment of the appropriate culture. The Board, through some listening sessions, discusses Executive Director remuneration with employees as a further input to the impact on culture.

➔ Further information on the remuneration policy can be on [pages 108 to 116](#)

Your Voice



Culture in action

'Your Voice' survey

Our annual employee engagement survey, 'Your Voice', provides employees with the opportunity to give feedback on what is working well and what we could be doing differently to make Morgan Advanced Materials a great place to work. The results of the survey provide feedback that can be acted upon by management to improve the experience of working at Morgan Advanced Materials and provide the Board with a Group-wide snapshot of how employees rate our culture and employee engagement.

During 2023, we worked to improve engagement based on the 'Your Voice' survey conducted at the end of 2022. Survey results were presented to the Board at its February 2023 meeting and key Group-wide actions for improvement were discussed.

Next steps and action plans were established. Initiatives taken in response to the survey, details of which can be found below, were communicated to colleagues throughout the year.

'Your Voice' showed that employees recognise the priority that we give to health and safety, that our strategy and purpose were clear and that we work hard to exceed the expectations of our customers with innovative products and solutions. The majority of employees felt that they have a good work-life balance.

Our people said	What we did
Recruitment We need to do more to attract people to Morgan Advanced Materials.	<ul style="list-style-type: none"> > We developed a modern, appealing and inclusive employer brand that features real employees.
Retention We need to do more to retain people to deliver our strategy.	<ul style="list-style-type: none"> > We carried out a comprehensive review of why people are leaving Morgan Advanced Materials and improved our hiring processes, so people have a better understanding of us and our expectations before they join. > We expanded our employee resource groups, publicised their activities, opened further chapters and offered more events (that our people can be involved with). > We introduced childcare concierge services in the US (through WeeCare) and Germany (through PME Familienservice).
Performance management Our performance management system is too complicated.	<ul style="list-style-type: none"> > In 2024 we will be launching a refreshed performance management system that stresses the importance of coaching and development.
Reward and recognition Get reward and recognition right everywhere.	<ul style="list-style-type: none"> > We are rolling out a Morgan Advanced Materials discount scheme, country by country. We already have four countries on board. > We will be introducing a real-time recognition programme as part of our refreshed performance management system. > We awarded all employees an additional day of vacation as a 'thank you' for their support during the cyber security incident.

Listening to employees

The Board is at the forefront of the journey to Morgan Advanced Materials making a 'big positive difference' and is keen to understand the views of all employees and the impact its decisions have on them. For this reason, the Board took the decision that all non-Executive Directors should have the opportunity to engage with the workforce, rather than limit this important role to a designated non-Executive Director. Furthermore, given the global nature of the business, having all of the non-Executive Directors participate increases the Board's reach.

The non-Executive Directors participated directly in employee engagement initiatives and carried out a full programme of activities during the year (see page 87 for further details).

The insights from these engagements add an important perspective to Board discussions and decisions. This ensures employee voices are heard and considered as the Board makes decisions that influence the future of Morgan Advanced Materials.

The outputs from the discussions are fed back to the leadership team for further discussion with the Chief Executive Officer and Group HR Director and reported back to the next Board meeting, to create a greater awareness of the views of employees among the whole Board. Follow-up discussions were held with site managers/function leads to convey key themes, foster a positive culture and, where there were specific matters raised, to ensure those matters were considered and appropriately addressed.

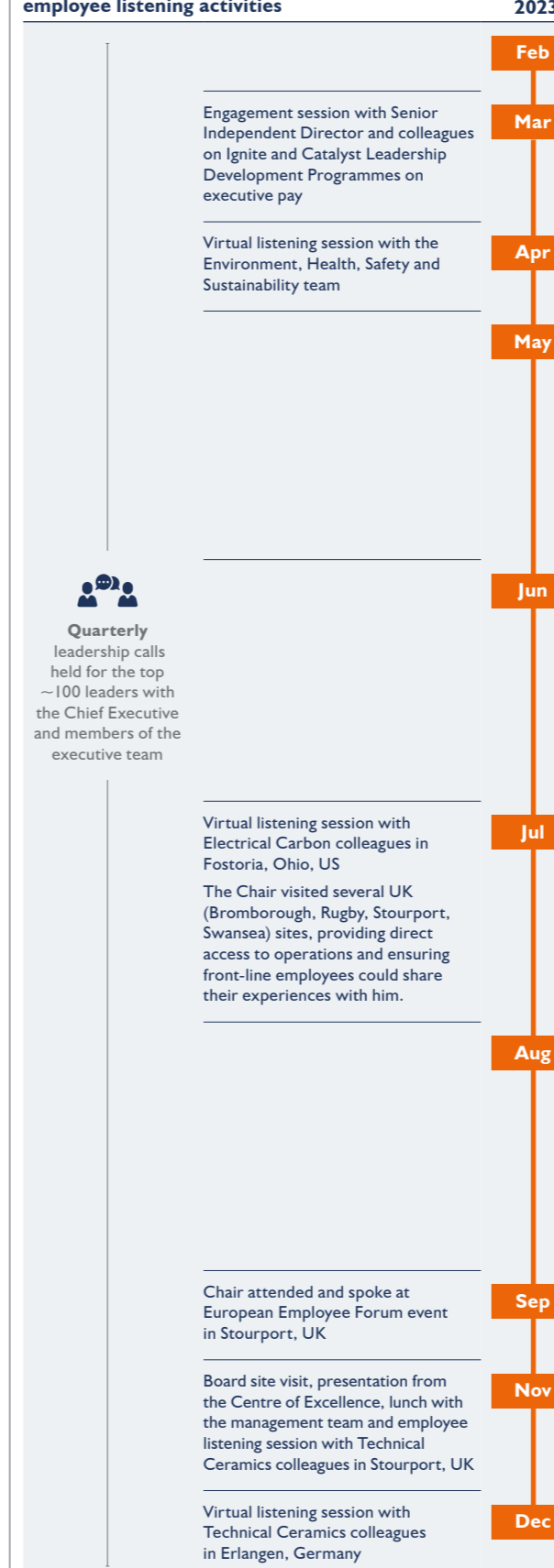
While each event varies in structure, generally the non-Executive Directors have a tour or receive an overview of the site followed by an informal session with the site teams without managers present. No specific topics for discussion are provided in advance, though site teams are advised that the Directors would like to hear from them about their experience of working at the Group, whether they have any challenges, concerns or ideas for improvement, and the things that they consider we do well. Coupled with meetings with employees in their place of work during Board visits to Group facilities and during other events, the Board is satisfied that this provides a range of effective methods with which to engage with employees, despite not being one of the methods set out in the Code. The Board will continue to keep the effectiveness of this method under review.

Actions taken in response to feedback received from employee listening sessions

Positive feedback	Improvement areas	Actions taken
<p>Safety</p> <p>The feedback was that workforce safety is a key priority and a particular focus for our leaders. Employees are focused on improving safety. Investments were being made to improve safety, as required.</p> <p>Feedback was positive on the Group's handling of COVID-19 pandemic. Although there were still sporadic flares of Covid infections in certain regions, a flexible policy is in place and management and employees are responding proactively to emerging situations.</p>	<p>While colleagues welcomed the focus on safety, it was considered by some that there had been too many initiatives.</p> <p>Some colleagues considered that newer employees, employed post COVID-19, were less sensitive to the risks.</p>	<p>Fewer projects were rolled out during the year, with the focus on simplifying and embedding the initiatives in place, including the induction of new joiners.</p> <p>The Chief Executive reinstated reviews of each lost time accidents (LTAs) with site leaders who experienced serious LTAs or near misses.</p>
<p>Reward and recognition</p> <p>Colleagues welcomed receiving information on the role of the Remuneration Committee in setting executive pay, the procedure for determining executive remuneration and how executive remuneration aligns with wider Company pay policy.</p> <p>Adjustments made by Group to pay/pay structures were well received, recognising that this helped to attract talent.</p> <p>Receiving information on the process used to review blue- and white-collar pay rates was also welcomed.</p>	<p>Performance management was seen by some colleagues as a pay process rather than for recognition/development. There was more focus on filling in the performance management system than the conversation on performance.</p> <p>The need to regularly review the pay benchmarking data, particularly in regions affected by high inflation, was recognised.</p>	<p>The performance management system for the 2024 reviews will be simplified to encourage more focus on the conversation.</p> <p>Pay data continues to be regularly reviewed and adjusted, as necessary.</p>
<p>Cyber security incident</p> <p>Colleagues were very positive about the communication throughout the incident. They welcomed the focus on health and wellbeing of employees. They considered that colleagues were going above and beyond and pulling together.</p>	<p>Lessons learnt should be developed to capture and share knowledge about what has worked well and what could have been done differently during the incident.</p>	<p>Lessons learnt exercises were carried out during the year. The recommendations from these exercises are being implemented.</p> <p>Employees were given an extra day of leave to thank them for their efforts.</p>

Engagement with employees and other stakeholders

Non-Executive Directors and employee listening activities



Engagement with other stakeholders

The Board met with the independent trustee of the UK pension scheme at its meeting in February.

Following publication of the FY22 results, one-to-one meetings were held with institutional investors and potential investors. The Board reviewed the feedback from investors and potential investors to gauge investor sentiment and establish whether their expectations have been met. Meetings were held with banks to present FY22 results. The Chair met with major investors following his appointment to the Board in order to understand their views on governance and performance against the strategy. He provided feedback on those meetings to the Board.

The 2023 Annual General Meeting was held in London. Shareholders put questions to the Board in person. Shareholders not attending were able to submit their questions ahead of the meeting. The Board encouraged shareholders to appoint the Chair of the AGM as their proxy and provide voting instructions in advance of the meeting in accordance with the instructions set out in the Notice of AGM. At the meeting, all resolutions were passed, with more than 96% of the votes cast in favour. Investors roadshows were held in the UK and in the USA.

Ad hoc meetings were held with brokers and institutional investors throughout the year, including attendance at investment conferences.

Investors and bankers visited the Technical Ceramics site in Rugby, UK.

Following publication of the HY23 results, meetings were held with institutional shareholders and potential investors. The Board reviewed the feedback from investors to gauge investor sentiment and establish whether their expectations have been met. Meetings were held with banks to present HY23 results. The Chair met with major investors following his appointment to the Board in order to understand their views on governance and performance against the strategy. He provided feedback on those meetings to the Board.

Following publication of the Q3 trading update, meetings were held with institutional shareholders and potential investors.

Assessing Board performance

An internal review of the Board's performance was undertaken in 2023, following the externally facilitated review in 2021. These reviews were facilitated by Clare Chalmers Limited, which has no other relationship with the Company or the individual Directors and is independent. An external review will be carried out in 2024.

The evaluation of the Board and its Committees was undertaken via the completion of tailored questionnaires prepared by Clare Chalmers Limited, in consultation with the Chair and Group Company Secretary and taking into account the recommendations from the 2022 Board performance review. The views of Directors were consolidated into formal reports which were discussed by the Chair with individual Directors and then in a plenary session by the Board and the relevant Committees. A questionnaire was also sent to the Group Company Secretary to obtain her perspectives on the effectiveness of the Board and its Committees. The Chair held one-to-one meetings with individual Directors to evaluate their performance. Led by the Senior Independent Director, the non-Executive Directors met without the Chair present to appraise the Chair's performance.

The Board concluded that it, its Committees and the individual Directors had continued to operate effectively and fully discharged their responsibilities during 2023.

Highlighted strengths

- > The engagement, commitment and visibility of the new Chair was noted. He had brought a clear drive and focus on the purpose and output from discussions.
- > Input of management to the Board, noting management were open, balanced and transparent, responded well to feedback and that the different roles of the Board and Management were clear, with the line between them respected.
- > The strategic discussions, process and outputs were enhanced in the year, with more time allocated. The Board Strategy Review (see page 82), with the whole management team present, had worked well.
- > The Committees all received high scores across all questions. The feedback on the Nomination and Remuneration Committees noted the need to ensure they have appropriate coverage at the Senior Management level of individual succession plans, performance objectives and remuneration.

Recommended areas for development and actions going forward

- > Further discussions of risk and risk appetite would take place in 2024, in light of the worsening macro-economic environment, the advancement of technology and increasing regulation.
- > The quality of HR data available to the Board would continue to be developed.
- > While the employee listening sessions continued to be considered to be really valuable, individual NEDs would visit more of the sites for themselves, where possible.
- > More information would be provided to the Board on the various activities underpinning the Delight the customer execution priority and on Morgan Advanced Materials' social and community impact.

Recommendations from the 2022 Board performance review

Actions taken during 2023

More in-person meetings and Board dinners to be held	Six in-person Board meetings were held in 2023 including a two-day strategy review. Three Board dinners (including a Strategy Review dinner with senior leadership) and one non-Executive Directors' dinner were held in 2023.
Further discussions around risk and risk appetite to be held around risks not fully captured or recognised in the risk register	The principal and emerging risks were reviewed in December 2023, at which the Board members were able to discuss risks and concerns not fully captured or recognised on the risk register. The Group risks were also reviewed at the meeting in July 2023. The changes proposed to the risk management function will further enhance the discussion of risks.
Non-Executive Directors' engagement with shareholders	Feedback was provided to the Board by the executive Directors following investor meetings and results roadshows. The brokers presented to the Board in June and September 2023, providing insights on investor matters.
More understanding of the perspectives of the customers and suppliers	The results of the 'voice of the customer' survey were presented to the Board in February 2023. Insights into the views of suppliers were given as in the Chief Executive Officer's Report, where relevant.
More structure around one-to-one individual feedback to Directors	Ian Marchant met with each of the Directors throughout the year.

UK Corporate Governance Code 2018 compliance statement

The Corporate Governance Report, which includes the principal Committee Reports and Directors' Report, explains how the Board has applied the principles and complied with the provisions of the UK Corporate Governance Code 2018 ('the Code'), which is available at www.frc.org.uk.

The Board has applied the principles and complied with the provisions of the Code throughout the year ended 31 December 2023.

Application of Code principles

The table below sets out how the Board has applied the Code principles during 2023.

Board leadership and company purpose

A. The role of the Board	The Board is responsible for Morgan Advanced Materials' system of corporate governance. As such, Directors are committed to developing and maintaining high standards of governance that reflect evolving good practice. The Board provides strategic and entrepreneurial leadership within a framework of strong governance, effective controls and an open and transparent culture. This enables opportunities and risks to be assessed and managed appropriately. The Board also sets our strategic aims and risk appetite, makes sure that we have the financial and human resources in place to meet our objectives, and monitors our compliance and performance against targets. Lastly, the Board ensures that we engage effectively with all our stakeholders and consider their views in setting our strategic priorities. The Section 172 statement detailing how the Board has engaged with the Group's stakeholders and approached decisions made during the year can be found in the Strategic Report on pages 30 to 32.		
	Governance framework		
	Board		
	Audit Committee Helps the Board to monitor decisions and processes designed to ensure the integrity of financial reporting, the independence and effectiveness of the external auditor, and robust systems of internal control and risk management. ➔ See page 93	Nomination Committee Helps the Board determine its composition, and that of its Committees. They are regularly reviewed and refreshed, so they are able to operate effectively and have the right mixture of skills, experience and background. ➔ See page 100	Remuneration Committee Helps the Board ensure that remuneration policy and practices reward employees and executives fairly and responsibly, with a clear link to corporate and individual performance. ➔ See page 104
	Executive Committee ➔ Drives Group and global business unit strategic implementation ➔ Delivers operational, financial and non-financial performance ➔ Reviews health, safety and environmental performance, drives improvement and embeds the safety culture ➔ Approves Group policies and reviews their implementation and effectiveness ➔ Leads on assessment and control of risk ➔ Oversees prioritisation and allocation of resources	Disclosure Committee ➔ Assists and informs the Board concerning the identification of inside information ➔ Recommends how and when the Company should disclose such information ➔ Ensures any such information is managed and disclosed in accordance with all applicable legal and regulatory requirements	General Purpose Committee ➔ Approves opening of/changes to bank accounts ➔ Approves arrangements with financial institutions ➔ Approves guarantees and indemnities ➔ Approves substantive intra-Group loans ➔ Approves intra-Group dividends and capital restructuring ➔ Approves awards under the Company's share schemes (after Remuneration Committee approval) and any Employee Benefit Trust-related loans

UK Corporate Governance Code 2018 compliance statement continued

Board leadership and company purpose continued

<p>A. The role of the Board continued</p>	<p>There is a formal schedule of matters reserved for the Board that sets out the structure under which the Board manages its responsibilities, providing guidance on how it discharges its authority and manages the Board's activities. The schedule of matters reserved is reviewed and approved by the Board on an annual basis. Our governance framework means we have a robust decision-making process and a clear framework within which decisions can be made and strategy can be delivered. Our delegated authority framework ensures that decisions are taken by the right people at the right level with accountability up to the Board, and enables an appropriate level of debate, challenge and support in the decision-making process.</p> <p>The Board met nine times in 2023. All Directors continue to act in what they consider to be in the best interests of the Company, consistent with their statutory duties. Further details of 2023 Board meetings, including information on the Board's assessment of strategic and operational matters, are set out on page 81, attendance information on page 80, and skills, experience and biographical information on pages 78 to 80.</p> <p>A description of Morgan Advanced Materials' business model is set out on pages 12 to 13. An assessment of the principal risks facing the Group is included on pages 54 to 61.</p> <p>Potential conflicts of interest are reviewed annually and powers of authorisation are exercised in accordance with the Companies Act and the Company's Articles of Association. During the year, if any Director has unresolved concerns about the operation of the Board or the management of the Company, these would be recorded in the minutes of the meeting.</p>
<p>B. The Company's purpose, values and strategy</p>	<p>Our purpose is to use advanced materials to make the world more sustainable, and to improve the quality of life. The Board believes that a healthy culture, which drives the right behaviours, protects and generates value, and helps employees engage with the Morgan Code, will lead to the successful delivery of our strategy. It is responsible for defining our values and setting clear standards from the top. Our Chair leads the way by ensuring the Board operates correctly and with a clear culture of its own which can be promoted to our wider operations and dealings with all stakeholders. Our Chief Executive Officer, with the help of the Executive Committee, is responsible for the culture within our wider operations. The Board receives regular reports that allow it to assess our culture to ensure it continues to support our strategy and purpose. For more information, see page 84.</p>
<p>C. Resources and controls</p>	<p>The Board approves the Group's annual budget ensuring that sufficient resources are available to achieve objectives. The Board retains ultimate responsibility for risk management and internal controls, with detailed oversight carried out by the Audit Committee.</p> <p>The Board sets the Group's risk appetite. This sets out the principal risks facing the Group and the nature and extent of risk the Board is willing for the Group to take in order to achieve the Group's strategic objectives. For more information, see pages 54 to 61.</p>
<p>D. Shareholders and stakeholders</p>	<p>The Board acknowledges the importance of forming and retaining sound relationships with all stakeholder groups. Accordingly, the Board reviewed and discussed the Group's key stakeholders along with the engagement mechanisms in place to ensure that they support effective, two-way communication. These are kept under periodic review to ensure ongoing effectiveness.</p> <p>The Board engaged actively throughout 2023 with shareholders and other stakeholders. A full programme of formal and informal events, institutional investor meetings and presentations is held throughout the year. This programme of shareholder engagement aims to ensure that the performance, strategies and objectives of the Group are clearly communicated to the investment community and provides a forum for institutional shareholders to address any issues. Morgan Advanced Materials engages proactively with the investment community and sell-side and buy-side analysts and accommodates requests for meetings and calls with senior management from existing and potential institutional investors. The programme is led by the executive Directors. The Chair met with major investors following his appointment to the Board in order to understand their views on governance and performance against the strategy. The Board is regularly kept informed of investor feedback, stockbroker updates and detailed analyst reports. For more information, see pages 81 and 87.</p> <p>The Board receives regular management information and considers the impact of decisions on relevant stakeholders, as described further in the Section 172 statement on pages 30 to 32. Across the Group, there is an active programme of engagement with our key stakeholders including our colleagues. For more information, see page 87.</p>
<p>E. Workforce policies and practices</p>	<p>The Board has overarching responsibility for the Group's workforce policies and practices and delegates day-to-day responsibility to the Chief Executive Officer and Group HR Director to ensure that they are consistent with the Company's values and support its long-term success.</p> <p>Employees are able to report matters of concern confidentially through our 'Speak Up' hotline. The Audit Committee routinely reviews reports generated from the disclosures and ensures that arrangements are in place for investigation and follow-up action as appropriate.</p>

Division of responsibilities

<p>F. Role of the Chair</p>	<p>Ian Marchant leads the Board in an open and transparent manner, encouraging debate and challenge. He plays a pivotal role in fostering the effectiveness of the Board and the individual Directors both in and outside the boardroom. He joined the Board on 1 February 2023 and succeeded Douglas Caster as the Chair on 29 June 2023. He was considered to be independent upon his appointment as Chair.</p> <p>The Chair works with the Group Company Secretary to ensure that sufficient time is available to discuss agenda items for each Board meeting and to ensure that papers are of a high standard and circulated in a timely manner.</p>
<p>G. Balance of the Board</p>	<p>The Board comprises the Chief Executive Officer, Chief Financial Officer, Chair and four independent non-Executive Directors. For more information, see page 80.</p> <p>The roles of the Chair and Chief Executive are separate, with distinct accountabilities set out in their role profiles. The Chief Executive Officer is responsible for the day-to-day leadership and management of the business, in line with the strategic framework, risk appetite and annual and long-term objectives approved by the Board. The Chief Executive Officer cascades his authority through a delegated authority framework which is approved by the Board annually.</p> <p>The Board undertakes an annual review of the independence of each non-Executive Director and in 2023 continued to consider each non-Executive Director to be independent.</p>
<p>H. Non-Executive Directors</p>	<p>The non-Executive Directors provide an independent view on the running of our business, governance and boardroom best practice. They oversee and constructively challenge management in its implementation of strategy within the Group's system of governance and the risk appetite set by the Board.</p> <p>The expected time commitment of the Chair and non-Executive Directors is agreed and set out in writing in a Letter of Appointment. Prior to his or her appointment as a Director, the Board considers whether each non-Executive Director has sufficient time to devote to their role at Morgan Advanced Materials. This is reassessed by the Nomination Committee annually and in light of any changes to a non-Executive Director's external commitments during the year. The Committee is satisfied that their other duties and time commitments do not conflict with those as Directors. The Board considered Ian Marchant's other external commitments, and was comfortable that he had sufficient time to devote to his role before agreeing his appointment as a non-Executive Director and Chair Designate.</p> <p>Laurence Mulliez was appointed as Senior Independent Director in December 2017. She is available to liaise with shareholders who have concerns that they feel have not been addressed through the normal channels of the Chair, Chief Executive Officer and Chief Financial Officer. She also leads the annual performance review of the Chair (see page 88), and as necessary, provides advice and judgement to the Chair, and serves as an intermediary for other Directors. After each Board meeting, the non-Executive Directors and the Chair meet without executive Directors being present.</p>
<p>I. The Company Secretary</p>	<p>As Group Company Secretary, Winifred Chime is responsible to the Chair for ensuring that all Board and Board Committee meetings are properly conducted, that the Directors receive appropriate information prior to meetings to enable them to make an effective contribution, and that governance requirements are considered and implemented. The appointment and removal of the Group Company Secretary is a matter for the Board.</p>

Composition, succession and evaluation

<p>J. Board appointments</p>	<p>The Nomination Committee and, where appropriate, the full Board, regularly review the composition of the Board and the status of succession to both senior executive management and Board-level positions. Directors have regular contact with, and access to, succession candidates for senior executive management positions.</p> <p>The process for the appointment of Ian Marchant as Chair is set out in a case study on page 89 of the 2022 Annual Report. The Nomination Committee has commenced the search for three new non-Executive Directors. The Company engaged the independent executive search agency Korn Ferry to assist with the search. For further information on the search process, see pages 102 to 103.</p> <p>All Directors retire at each AGM and may offer themselves for re-election by shareholders. Accordingly, all the Directors will retire at the AGM in May 2024 and offer themselves for re-election. The Notice of AGM will give details of those Directors seeking re-election, including their experience, and contribution that each Director brings to the Board and its Committees. The terms of appointment for non-Executive Directors and service contracts for Executive Directors are available for inspection at the Company's registered office and will be available at the AGM.</p>
<p>K. Skills, experience and knowledge of the Board</p>	<p>The Nomination Committee regularly reviews the balance, composition and structure of the Board, including reviewing the skills of each non-Executive Director against a skills matrix. This identifies the key skills, knowledge and experience relevant to the markets in which we operate and for the effective operation of the Board and leadership of the Group. The Directors' skills matrix was revised during the year. For more information, see page 80.</p> <p>The Nomination Committee keeps the length of service of each Board member under review, and recommends the reappointment of the non-Executive Directors and any extensions to their term. It ensures that Board recruitment is commenced in a timely manner to regularly refresh the membership of the Board.</p> <p>The Chair and Group Company Secretary ensure that new Directors receive a full induction and that all Directors continually update their skills and have the requisite knowledge and familiarity with the Group to fulfil their role. The individual training and development needs of each Director are considered by the Chair on an annual basis. The Board receives detailed technical updates on corporate governance and other regulatory changes, presentations from external specialists or internal managers, training via online platforms, and site visits to ensure its skills, knowledge and experience are kept up to date. During the year, cyber security sessions were held covering the threat landscape, cyber awareness and defence, and actions to support Morgan Advanced Materials' security posture.</p>

UK Corporate Governance Code 2018 compliance statement continued

Composition, succession and evaluation continued

L. Annual evaluation	The Board undertakes either an internal or external annual Board effectiveness evaluation. The last external evaluation was carried out in 2021, so in 2023 an internal evaluation of the Board and its Committees was conducted. Performance evaluations of Directors, including the Chair, are also carried out on an annual basis. A summary of the 2023 evaluation is set out on page 88.
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Audit, risk and internal control

M. Audit functions	The Audit Committee comprises four independent non-Executive Directors and the Board delegates a number of responsibilities to the Audit Committee, including oversight of the Group's financial reporting processes and internal control, and the work undertaken by the external and internal auditors. The Committee also supports the Board's consideration of the Company's viability statement and its ability to operate as a going concern. The Audit Committee Chair provides regular updates to the Board on key matters discussed by the Committee. For more information, see page 93.
N. Fair, balanced and understandable assessment	The Strategic Report, located on pages 2 to 75, sets out the performance of the Company, the business model, strategy, and the risks and uncertainties relating to the Company's future prospects. When taken as a whole, the Directors consider the Annual Report is fair, balanced and understandable and provides information necessary for shareholders to assess the Company's performance, business model and strategy. The process which supports the Board's confirmation that the presentation of results is fair, balanced and understandable is set out in the Audit Committee Report on page 95.
O. Risk management	The Board determines the nature and extent of the principal risks the organisation is willing to take to achieve its strategic objectives. A robust assessment of the principal and emerging risks facing the Group was carried out during the year, including those risks that would threaten the Group's business model, future performance, solvency or liquidity and reputation (see pages 55 to 61 for further details of the principal risks). The Board and Audit Committee monitor the Group's risk management and internal controls systems and conduct an annual review of their effectiveness. Throughout the year, the Board has directly, and through delegated authority to the Executive Committee and the Audit Committee, overseen and reviewed all material controls, including financial, operational and compliance controls. See pages 55 to 61 and 97 to 98.

Remuneration

P. Remuneration policies and practices	The Company aims to reward employees fairly and its Remuneration Policy is designed to promote the long-term success of the Company while aligning the interests of both the Directors and shareholders. An updated remuneration policy was approved by shareholders at the 2022 Annual General Meeting. The Directors' Remuneration Policy is set out on pages 108 to 116.
Q. Policy on executive remuneration	The Remuneration Committee, on behalf of the Board, sets the remuneration of the Chair, the executive Directors and Executive Committee members. It also reviews the remuneration of certain senior management. In setting remuneration, the Remuneration Committee seeks to ensure it is aligned with the Group's remuneration principles which are applicable to all colleagues. No Director is involved in determining their own remuneration outcome. See pages 129 for more information on the work of the Remuneration Committee.
R. Remuneration outcomes	When determining remuneration outcomes, the Remuneration Committee takes account of wider circumstances relevant to that decision, including Group and individual performance. The Remuneration Committee has the discretion to amend the final vesting level of incentives if it does not believe that it reflects underlying performance. The Remuneration Committee may also apply malus and clawback in certain circumstances.

Report of the Audit Committee



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 78 to 80.

- > The Chair 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 with 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 Chief Financial Officer, the Group Financial Controller, the external auditor, the Head of Internal Audit and the Director of Ethics and Compliance as necessary.

The terms of reference of the Committee are available on the Company's website, morganadvancedmaterials.com.

Dear shareholder

I am pleased to present the Audit Committee's report for 2023. This report provides insight into key areas considered by the Audit Committee during the year in discharging its responsibilities in relation to financial reporting, risk management, internal control, the internal audit function, and interaction with Deloitte LLP (the Group's external auditor).

During 2023, while the Committee's primary focus centred on the accuracy of the Group's financial reporting, the Committee also oversaw the work to contain the impact of the cyber security incident that occurred in January 2023, was in regular communication with management throughout this period and met with the third-party advisors supporting the restoration of our networks and systems. Details of the incident can be found on page 20 and further information on the matters considered by the Committee can be found on page 96.

The Committee applied additional focus to audit and recovery planning following the incident, to ensure the integrity and completeness of the accounting records. The Committee also focused on assessing the risk management and internal control framework, together with the additional work carried out to support the long-term viability statement. Regardless of the incident and the challenging macro-economic environment, Morgan Advanced Materials' business model remains resilient, but, during these challenging times, we continue to support and closely monitor the financial results of the Group.

The Committee continues to monitor the external ESG reporting and, more specifically, climate-related reporting, in order to assess the appropriateness of the climate-related disclosures and evaluate if the Task Force on Climate-related Financial Disclosures (TCFD) recommendations have been addressed appropriately.

We advised the Board that the 2023 Annual Report and Accounts is fair, balanced and understandable and provides the necessary information for our shareholders to assess the Group's position, performance, business model and strategy. The process of review is described in greater detail on page 95.

Deloitte completed their fourth full audit of the Group. During the year, the Committee reviewed and agreed the independence and effectiveness of the audit process, in establishing positive relationships and providing a good level of service to the Group, while seeking continual improvements in the audit of Morgan Advanced Materials.

We monitored the reports raised through the ethics hotline and ensured that executive management has responded to these quickly and appropriately. The Committee reviewed 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. This information has been used by the Board as part of its assessment of Morgan Advanced Materials' culture.

Throughout the year, the Committee also ensured that separate meetings with Deloitte, the Head of Internal Audit and the Director of Ethics and Compliance took place without management present in order to provide an open forum for any issues to be raised.

The Committee's performance was reviewed as part of the internal 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, while contributing effectively to the Group's overall governance framework.

Jane Aikman
COMMITTEE CHAIR

Report of the Audit Committee continued

Key activities in 2023

Financial reporting	<ul style="list-style-type: none"> ➤ Reviewed and discussed reports from the Chief Financial Officer on the financial statements, considered impact of the cyber security incident on audit and annual report process, considered management's significant accounting judgements and the policies being applied, and assessed the findings of the statutory audit in respect of the integrity of the financial reporting of full- and half-year results. ➤ Following the cyber security incident, met with the third-party advisors supporting the restoration of our systems and providing assurance as to the integrity and robustness of the response. ➤ Reviewed the 2023 Annual Report and Accounts and provided a recommendation to the Board that, as a whole, it complied with the UK Corporate Governance Code principle to be 'fair, balanced and understandable and provide the information necessary for shareholders to assess the Company's position, performance, business model and strategy'.
Internal controls and risk management	<ul style="list-style-type: none"> ➤ Reviewed the effectiveness of the Group's risk management and internal control systems in light of the cyber security incident, and integration of the components of the risk framework into Board and Committee reporting, prior to making a recommendation to the Board. The Committee also reviewed reports from the presidents and finance directors of each of the global business units on their key risks, how these risks are managed and an assessment of the control environment, on an annual basis. ➤ Reviewed the adequacy of the manual processes and controls put in place during the cyber security incident, the storage and reconciliation process for manual records and the orderly restart or implementation of ERP systems. ➤ Monitored fraud reporting and incidents of whistleblowing, including a review of the adequacy of the Group's whistleblowing processes and procedures, prior to reporting to the Board on this activity. ➤ Oversight of the Group's ethics and compliance programme and monitored progress in compliance with the Morgan Code across the Group. ➤ Oversight and monitoring of the Group's key taxation issues and tax strategy.
Internal audit	<ul style="list-style-type: none"> ➤ Considered internal audit reports presented to the Committee and satisfied itself that management had resolved or was in the process of resolving any outstanding issues or actions. ➤ Reviewed and approved the adjusted internal audit plan for 2023 which incorporated enhanced reviews for sites impacted by the cyber security incident. ➤ Reviewed and approved the internal audit plan and approach for 2024. ➤ Reviewed the quality and effectiveness of internal audit function.
External audit	<ul style="list-style-type: none"> ➤ Oversaw the 2023 statutory audit, including the key audit risks and level of materiality applied by Deloitte, audit reports from Deloitte on the financial statements and the areas of particular focus for the 2023 audit. ➤ Assessed the effectiveness of Deloitte and made a recommendation to the Board on the reappointment of Deloitte as the external auditor. ➤ Agreed the statutory audit fee for the 2023 audit. ➤ Reviewed and approved the non-audit services, and related fees, provided by Deloitte for 2023.

Financial reporting

Fair, balanced and understandable reporting

At the request of the Board, the Committee has considered whether, in its opinion, this Annual Report and Accounts, taken as a whole, is 'fair, balanced and understandable' and whether it provides the 'information necessary for shareholders to assess the Company's position, performance, business model and strategy'.

The following process was followed by the Committee in making its assessment:

- 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
- considered the additional steps taken to ensure integrity and completeness of the accounting records in light of the cyber security incident
- 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 advisors 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
- 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 Board approved the Committee's recommendation that the 'fair, balanced and understandable' statement could be made, which can be found in the Directors' Responsibility Statement on page 134 of this Annual Report.

Significant issues

The significant areas of judgement considered by the Committee in relation to the 2023 consolidated financial statements, and how these were addressed, were as follows:

Significant issues and judgements**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 alternative performance measures, 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 (including the costs associated with the cyber security incident) 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.

How the Committee addressed these issues

The Committee reviewed the key assumptions underpinning the accounting for specific adjusting items for the half- and full-year results, including receiving presentations from Deloitte LLP on this matter.

Inventory valuation

For 17 of our sites, local management used a manual process to calculate the inventory provision at 31 December 2023 due to system limitations following the cyber security incident in early 2023.

The manual process followed was consistent across these sites and in line with Group policy. The methodology used replicated the provision calculation that would have been automated within our ERP systems.

How the Committee addressed these issues

The Committee reviewed the inventory valuation process and overall balance sheet prudence. They also received the views of Deloitte LLP on these matters.

Report of the Audit Committee continued

Significant issues and judgements

Impairment of non-financial assets (excluding goodwill)

The Group monitors the performance of individual assets and cash-generating units at each balance sheet date to determine whether there is any indication of impairment. An impairment loss is recognised in the income statement where the carrying amount of an asset exceeds its recoverable amount.

An impairment charge for the year of £7.3 million was recorded in relation to the impairment of non-financial assets in Seals and Bearings (Europe and Asia) and Electrical Carbon (North America and Asia). In addition to these charges, reversals of impairments recognised in prior periods were recorded, totalling £8.1 million. The reversals were for our Technical Ceramics, ceramic cores business in North America and a Thermal Ceramics business in Germany. Additional disclosure is included in note 6 to the consolidated financial statements.

How the Committee addressed these issues

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

Impact of the cyber security incident

On 8 January 2023, we experienced a cyber security incident. Our teams worked quickly to limit the damage by temporarily shutting down our network. Following a detailed investigation, access to systems was restored in an orderly fashion. Despite the rapid action, there was considerable damage to our networks and systems. In parts of the business (representing around 27% of our revenues) ERP systems could not be restored and we implemented a new ERP solution. We have accelerated our IT modernisation programme in response to this incident. This includes the acceleration of our Group-wide ERP programme, enhancing our security and monitoring processes and continued awareness training for our employees.

How the Committee addressed these issues

The Committee considered the following including documentation to support key conclusions on the impact of the incident:

- › engagement with in-house IT team and external advisors to assess the cause, timing and impact of the incident
- › management assessment of whether there is any known or suspected fraud associated with the incident
- › engagement with in-house legal and legal advisors regarding possible regulatory or customer-related exposures
- › update on fraud risk and control environment risk
- › update on business risk factors
- › management assessment of going concern and long-term viability, including updated view on future trading performance
- › steps taken to ensure integrity and completeness of the accounting records, in order to be satisfied that the financial statements give a true and fair value of the assets, liabilities, financial position and profit of the Group
- › steps taken to ensure integrity and effectiveness of the Group's internal financial controls and internal control and risk management systems
- › clear and transparent disclosure of this event in the Annual Report
- › assessment of fair, balanced and understandable nature of the half-year results and the Annual Report in light of the incident.

Internal control and risk management

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 systems of risk management and 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 systems of risk management and internal control and did so again for the year under review. These systems are consistent with the FRC's guidance on internal control requirements contained within the Code. The review conducted in February 2024 comprised:

- › a review of the relevant Principles and Provisions in the Code
- › a review of the Company's governance structures
- › a review of the sources of assurance and the Company's three lines of defence model, including policies, annual self-certification process, reports from specialist functions such as the ethics and compliance, tax, treasury and legal functions, and internal audit reports
- › a review of all material controls, including financial, operational and compliance controls, and risk management systems, including the improvements achieved in 2023 and identification of further areas for improvement. In considering areas for improvement, we note that management has plans in place to factor in Deloitte's controls observations in relation to data migration (for our future ERP implementations) and review of the value in use models (during the non-financial asset impairment review process).
- › 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 Committee also evaluated whether the cyber security incident in January 2023 impacted its conclusions on the control environment for the 2023 year end. The adequacy of the manual processes and controls which were put in place during the cyber security incident were reviewed, together with storage and reconciliation process for manual records and the orderly restart or implementation of ERP systems. Having reviewed the internal controls assessment, the results of the investigation and subsequent responses to the incident, the Committee assessed that the controls in place during 2023 were adequate and that the incident did not impact the 2023 financial records.

The Directors consider that the Group's systems of risk management and internal 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 systems are designed to mitigate and manage risk, rather than eliminate it, and to address key business and financial risks. The majority of internal financial controls are manual; this is driven by a diverse IT landscape and the Group's

geographical breadth; as such, there is a heavy reliance on central review controls. The Directors are satisfied that an appropriate amount of time and consideration is dedicated to the review and challenge of results, judgements and estimates – both by the GBUs and the Group leadership team.

The main features of the Group's systems of risk management and 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 (for example, 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 GBUs on their 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 advisors and giving rise to disciplinary action against employees for breaches of Group policies.

The GBU 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.

Report of the Audit Committee continued

Internal control and risk management continued

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 disposals 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 systems and 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. GBU management teams also meet regularly to review performance. Executive Committee members also visit sites on a regular basis.

Internal audit

Internal audit

The Group's internal audit function provides objective assurance of the adequacy and effectiveness of risk management and internal control systems. It also may recommend improvements. While the Head of Internal Audit reports administratively to the Chief Financial Officer, appointment to, or removal from, this role requires the consent of the Audit Committee Chair. The Head of Internal Audit is accountable to the Chair of the Audit Committee, attends all regular Committee meetings and meets separately with Committee members without executive management at every meeting.

Each year's internal audit plan is approved by the Audit Committee. The plan is focused on higher-risk areas and any specific areas or processes chosen by the Committee. It is also aligned with any risks identified by the external auditor and Ethics and Compliance team. The internal audit plan was adapted to include additional reviews of recovery actions for sites most impacted by the cyber security incident. The Committee is given regular updates on progress, including any material findings, and can refine the plans as needed. The Committee 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.

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 global business units 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 54 to 61, supports the Directors' statements on going concern and viability on pages 70 to 71.

Risk factors

The Group's businesses are affected by a number of factors, many of which are influenced by macro-economic trends beyond Morgan Advanced Materials' control; nevertheless, 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 risk factors are further discussed in the Risk Management section on pages 54 to 61.

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.

In 2023, the Committee reviewed the effectiveness of the 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, and an external review is recommended for 2024. We are satisfied that the quality, experience and expertise of the internal audit function are appropriate for the business and that the function was objective and performed its role effectively. The function was agile in its response to the cyber security incident and adapted the plan to support the recovery from the incident. We also monitored management's response to internal audits during the year. We are satisfied that improvements are being implemented promptly in response to the findings, and believe that management supports the effective working of the function.

External auditor

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 FRC's 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 Chair 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 2023.

In 2023, the proportion of the auditor's fees for non-audit work relative to the audit fee was 0.7% (or £38,000), (2022: 0.0%).

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 2024. The Committee conducted a full review following the 2023 year end to gather feedback and look for continuous improvement opportunities. The Committee considered all aspects of the auditor's performance, based on a review of the effectiveness of the external audit process, which was conducted through a questionnaire taking into consideration relevant professional and regulatory requirements. The questionnaire was completed by each GBU finance director and nine Group functional teams. In addition to the questionnaire, the following external auditor areas were reviewed:

- independence confirmation
- audit methodology, use of component auditors and audit scope and coverage
- assessment of materiality and areas of audit focus, consideration of appropriate audit procedures, professional scepticism, appropriate management challenge, clarity and candour in reporting
- the FRC's AQR findings for Deloitte for the 2022–23 cycle of reviews and Deloitte's proposed actions to address these findings as a firm.

The Committee concluded that the external audit process in respect of the financial statements for the year ended 31 December 2023 was effective. The Committee confirmed Deloitte's independence before recommending its reappointment for approval by shareholders at the Annual General Meeting (AGM) on 9 May 2024.

External audit rotation

Deloitte LLP was appointed by shareholders as the Group's statutory auditor in 2020 following a formal tender process. For 2023, Deloitte continued to provide external audit services to the Group. Jane Makrakis was the lead partner for Deloitte on the audit. The Audit Committee considers annually the need to tender the audit for audit quality or independence reasons. There are no contractual obligations in place that restrict the Group's choice of statutory auditor. The external audit contract will be put out to tender at least every 10 years. The Committee considers that it would be appropriate to conduct an external audit tender by no later than 2030. The Company has complied with the provisions of the Competition and Markets Authority's Order on statutory audit services and the Audit Committees and the External Audit: Minimum Standard.

Report of the Nomination Committee



Committee members

Douglas Caster
(Chair until 29 June 2023)
Ian Marchant (from 1 February 2023;
Chair from 29 June 2023)
Jane Aikman
Helen Bunch
Laurence Mulliez
Clement Woon

The Nomination Committee seeks to ensure that the Board has the requisite mixture of skills, knowledge and expertise to provide robust oversight, and to identify and respond effectively to current and future opportunities and challenges.

- > The Committee is composed solely of non-Executive Directors and is chaired by the Chair of the Board. Biographies of the Committee members can be found on pages 78 to 79
- > The Group Company Secretary is secretary to the Committee and attends all the meetings
- > The Chief Executive and Group HR Director attend all scheduled meetings by invitation

Dear shareholder

On behalf of the Nomination Committee, I present our report for 2023. The Committee met twice during 2023 and members' attendance is set out in the table on page 80.

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 2023, the Committee commenced the search for three new non-Executive Directors, to replace existing Directors reaching the end of their nine-year tenure. Further information on the process can be found on pages 102 and 103.

The Committee also assessed whether the objectives of the Board's Diversity and Inclusion Policy, including how it supports Morgan Advanced Materials' strategy, had been implemented and what progress has been achieved. During the year, the Board reviewed succession planning and talent strategy for the Executive Committee and its direct reports, with a particular lens on our aim to foster diversity within the leadership population and increase the female leadership population to 40% by 2030 (includes the Executive Committee excluding Chief Executive Officer and Chief Financial Officer plus 2nd to 4th tier).

The Committee remains conscious that to execute on our strategy, building our talent pool with individuals whose skill sets and thinking can deliver the strategy and shape our culture is critical to the Group's long-term success.

The Committee's performance was reviewed as part of the internal 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, while contributing effectively to the Group's overall governance framework.

Ian Marchant
COMMITTEE CHAIR

Key responsibilities

The Nomination Committee supports the Board in ensuring that the Board and its Committees are appropriately staffed and operate effectively. The Committee identifies qualified individuals to join the Board, recommends any changes to the Board and Committee composition and monitors an annual process to assess Board effectiveness.

This involves:

- > overseeing and facilitating annual reviews of the Chair, the Board, its Committees and individual Directors, including externally facilitated reviews
- > evaluating and overseeing the balance of skills, knowledge and experience on the Board and its Committees
- > monitoring the independence of Directors
- > overseeing Board succession plans and leading the process to identify suitable candidates to fill vacancies, nominating such candidates for approval by the Board and ensuring that appointments are made on merit and against objective criteria
- > overseeing the induction of new Directors
- > overseeing succession plans for the executive Directors and senior management.

The terms of reference of the Committee are available on the Company's website, [morganadvancedmaterials.com](https://www.morganadvancedmaterials.com).

Key activities in 2023

Board and Committee composition	<ul style="list-style-type: none"> > Commenced the global search for the independent non-Executive Directors > Considered potential Board candidates > Reviewed the independence of all Directors, making recommendations to the Board > Reviewed the structure, size and composition of the Board and its Committees, ensuring that they remain appropriate > Reviewed the Board's Diversity and Inclusion Policy, and assessed progress against its objectives
Succession planning	<ul style="list-style-type: none"> > Reviewed and endorsed succession plans for the Board and its Committees > Reviewed updated succession plans for the Chief Executive Officer > Continued to provide input to the succession plans for the Executive Committee (excluding the Chief Executive Officer) and the Group's diversity and inclusion programme > Discussed the percentage target for senior management positions that will be occupied by ethnic minority executives in December 2027 > Reviewed and endorsed updates to the Board's skills matrix
Board effectiveness reviews	<ul style="list-style-type: none"> > Oversaw the implementation of recommendations arising from the 2022 external evaluation of the Board and Committees' performance > Carried out the 2023 internal evaluation of the Board and Committees' performance
Corporate governance	<ul style="list-style-type: none"> > Monitored the fulfilment of the requirements, principles and expectations of the Code > Reviewed Directors' declarations on potential conflicts of interest > Considered whether each Director continued to be able to allocate sufficient time to discharge their responsibilities effectively > Considered the annual re-election of Directors at the 2024 AGM > Reviewed the Committee's terms of reference

Diversity and inclusion

The Board's Diversity and Inclusion Policy, which also applies to the Remuneration Committee, Audit Committee and Nomination Committee, reflects the Board's belief in the benefits of diversity and that more diverse companies attract and maintain the best talent and achieve stronger overall performance.

The Board considers a broad definition of diversity when setting policies and appointing Directors, including gender, ethnicity, sexual orientation, disability, nationality, educational and professional experience, socio-economic background, personality type, culture and perspective.

Statement on compliance against regulatory targets on gender and ethnicity

The Committee has worked hard to ensure that the Board is suitably diverse according to these criteria. The Board reviews its effectiveness in meeting diversity goals each year as part of the annual Board evaluation process.

The Board confirms that as at 31 December 2023 (being the reference date selected by the Board for the purposes of this disclosure), the Company complied with the regulatory targets set out in LR 9.8.6 R(9)(a).

Accordingly, there was 43% female representation on the Board, one of whom is the Senior Independent Director, and the Board currently has one Director of Southeast Asian origin. Both the Audit Committee Chair and the Remuneration Committee Chair are female. Our intention is to at least maintain that level of diversity, in order that the Board's composition can more closely reflect the Group's workforce and society more generally. It is however acknowledged that in periods of Board change, there may be times when this balance is not maintained. The percentage of women on the Group's Executive Committee is 33%. At 31 December 2023, 31% (2022: 29%) 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 its wider commitment to promoting diversity. The Company submitted data to both the FTSE Women Leaders Review and the Parker Review during 2023.

Report of the Nomination Committee continued

Board and Executive Committee diversity as at 31 December 2023

	Number of Board members	Percentage of the Board	Number of senior positions on the Board (CEO, CFO, Chair and SID)	Number in executive management	Percentage in executive management
Men	4	57	3	6	67
Women	3	43	1	3	33
Not specified/Prefer not to say	-	-	-	-	-
White British or other White (including minority-white groups)	6	90	4	8	89
Mixed/Multiple ethnic groups	-	-	-	-	-
Asian/Asian British	1	10	-	1	11
Black/African/Caribbean/Black British	-	-	-	-	-
Other ethnic group, including Arab	-	-	-	-	-
Not specified/Prefer not to say	-	-	-	-	-

This disclosure, and the calculation as to whether targets have been met, is based on data collected from the individuals on joining Morgan Advanced Materials.

Diversity and inclusion policy

The Board has agreed objectives for achieving gender, ethnic and cultural diversity on the Board and its Committees. With the planned refreshment of the Board into future years, the policy will inform and steer the Committee in identifying candidates and set the tone for the wider Group's diversity aspirations, in particular in the context of developing its leadership population.

To promote diversity and inclusion the Board will:

- > consider all aspects of diversity when reviewing the composition and effectiveness of the Board and its Committees
- > only engage with executive search firms which are accredited under the Enhanced Code of Conduct for Executive Search Firms, or which have a proven track record in sourcing diverse candidates, when seeking to make new appointments
- > 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
- > review senior executive succession planning annually and monitor the development of a diverse pipeline of future senior leaders, reflecting the composition of Morgan Advanced Materials' workforce
- > set the tone and provide visible support for the Group's diversity and inclusion objectives, including the fostering of an inclusive culture, role-modelling and promoting inclusive leadership
- > review and challenge the goals and progress of executive management in improving inclusion and diversity.

Succession

An integral part of the work of the Nomination Committee is to establish and maintain a stable leadership framework and to proactively manage changes and their impacts on the future leadership needs of the Company, both in terms of executive and non-executive leadership. Ensuring the correct leaders are in place enables the organisation to compete effectively in the marketplace and therefore to meet its various obligations to its stakeholders. The Committee has managed succession programmes for both the Board and senior management which have ensured that the necessary skills, expertise and experience are present in the leadership of the organisation.

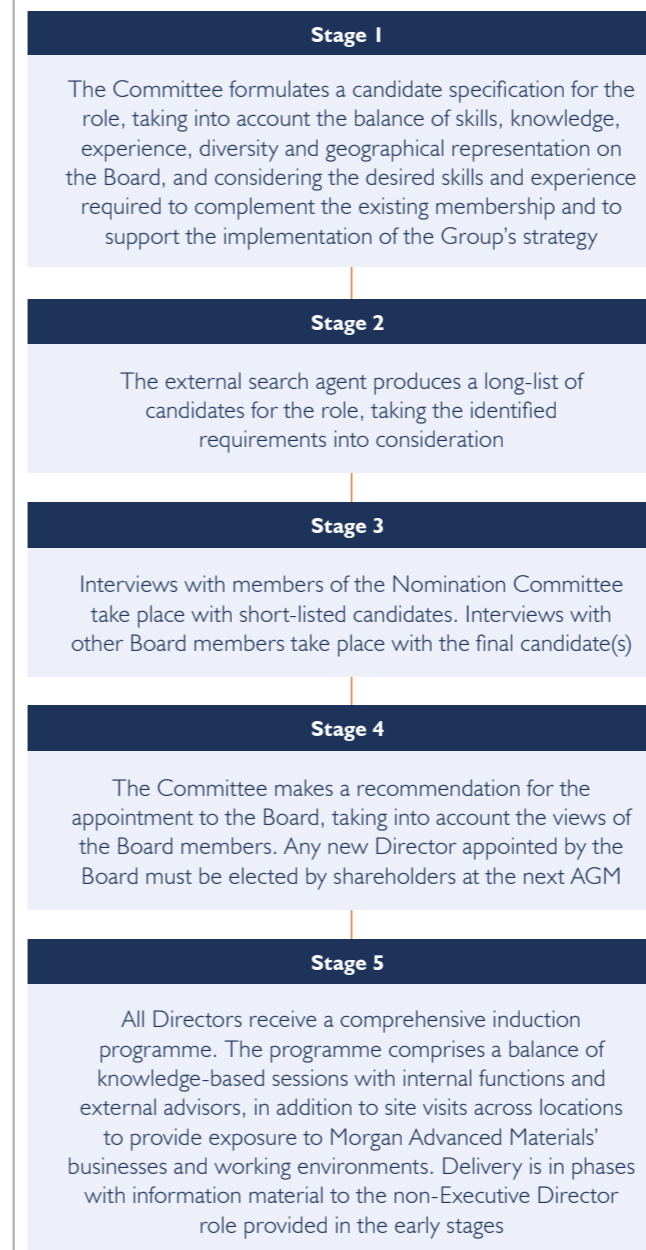
Board succession

The Committee regularly reviews the skills and expertise that are present on the Board and compares these to the expertise that it believes is required given the strategy, business priorities and culture of the organisation. The Board's succession plan is reviewed formally at least once per year and addresses Board size, Committee structure and composition, skills on the Board, Board and Committee members' tenure, independence of Directors, diversity (including gender), Board roles, Board policies and individual succession plans for all Board and Committee positions.

During 2023, the Committee discussed succession planning at each of its meetings. The Committee considered both the Board skills matrix and the Board's Diversity and Inclusion Policy in the context of succession planning as tools to help identify potential composition needs for the future, and to ensure that plans are proactive and not just reactive in nature. Ian Marchant was appointed as an independent non-Executive Director and Chair designate on 1 February 2023. Further information on his appointment, including details of the external search consultancy engaged in connection with his appointment and their independence, can be found on page 89 of 2022 Annual Report.

We continue to manage a phased succession programme for non-Executive Directors. Two Directors will be recruited in 2024 and with a third Director recruited in 2025. Korn Ferry, an external search consultancy, was selected to lead the search for the Directors, following a tender process. Korn Ferry has no other connection with the Company or individual Directors.

The usual process for selection of a non-Executive Director is described below:



Senior management succession

Succession for senior leadership roles, and strategy to support talent development by building capability for the future, is overseen by the Committee with support from Group HR. The internal pipeline of candidates for immediate and medium- to longer-term movement into key leadership and functional roles is reviewed annually.

During the year, updates were provided on the Board and Executive Committee succession options, which included a review of timing of readiness, and consideration of new talent and succession capability that had been recruited into Morgan Advanced Materials. The Committee also received updates on the targeted development activity that is taking place across the population.

The Committee monitors the impact of the diversity and inclusion strategy on appointments that are made and their progress within the Company, including at the level of those who report to the Executive Committee, to develop a pipeline of female and diverse talent that will serve to widen the pool of candidates for Board and leadership positions in the future. The Nomination Committee will continue to work with the Chief Executive Officer and Group HR Director on senior management succession and development in 2024.

Remuneration report



Committee members

Helen Bunch (Chair)
Jane Aikman
Douglas Caster (until 29 June 2023)
Ian Marchant (from 1 February 2023)
Laurence Mulliez
Clement Woon

I am pleased to present the Remuneration Report for the year ended 31 December 2023.

The cost of living remains a challenge in many countries and during the year we have carefully kept our direct labour remuneration packages in each location under review. Where appropriate we have implemented additional salary increases during 2023 to support our colleagues – with a particular focus on lower-paid employees. We have also maintained our focus on the safety measures that protect our employees while they work. Our 'thinkSAFE' programme and the Morgan Code of Conduct are now well embedded into the organisation, and we have continued to roll out leadership development programmes to give our leaders the skills necessary for them – and by extension the Group – to succeed.

As described elsewhere in this Annual Report, Morgan Advanced Materials was significantly impacted by the cyber security incident in January 2023. This affected our revenues, profitability and cash flow, predominantly during the first half of the year.

I would like to echo the thanks of my Board colleagues to our employees for the commitment and extraordinary effort demonstrated across all parts of our business to help us recover as quickly as possible from this incident, while continuing to deliver for our customers. Morgan Advanced Materials (in line with the wider industry) also continues to be impacted by high inflation in raw materials, energy and freight. Despite these challenges our business is well placed for success, delivering 2.5% organic revenue* growth for the 2023 financial year and accelerating investment in the wider business to support longer-term growth.

2023 Committee activity

As a Committee, we remain focused on ensuring that executive remuneration is fit for purpose and aligned with the interests of key stakeholders (our employees and shareholders in particular), and that our governance practices and processes adhere to the provisions of the UK Corporate Governance Code.

During the year, the Committee met four times. Its activities included determination of incentive outcomes, approving remuneration packages for the Company's Chair and Executive Directors, and reviewing the implementation of the Group's Remuneration Policy that was approved by 96.4% of shareholders at the 2022 AGM. This review concluded that the current framework continues to support Group strategy and culture, as well as providing strong alignment of Executive Director and stakeholder interests. As a result, no changes are proposed to our approach to implementing the policy in 2024.

Further details regarding the activities of the Committee can be found in the Remuneration governance section at the end of this Report on page 129.

2023 remuneration outcomes

Following a thorough review of performance in 2023, the Committee determined that payouts of 42.9% of the 2023 annual bonus opportunity for the Chief Executive Officer (CEO) and 43.9% for the Chief Financial Officer (CFO) were appropriate. Further details are set out on page 117 to 119.

As committed to in last year's report, the Committee also reviewed the value at vesting (in October 2023) of the 2020 LTIP award. We concluded that the embedded gain in the value of the awards vesting reflected the underlying performance of the Group rather than a windfall due to a wider stock market rebound since the time of grant. This was in part due to the decision to delay making 2020 LTIP awards until later in 2020, following a partial recovery in the share price from the initial market downturn at the time of the pandemic's onset.

The Committee also determined that the 2021 LTIP award will partially vest, resulting in a 14.8% achievement of the maximum, based on performance against the targets set at the time of grant. The Committee will again review the value of the 2021 LTIP award at vesting, to ensure that any gain reflects the Group's performance rather than a windfall due to general stock market rises since the time of grant; however, the Committee considers the risk of windfall gain unlikely given Morgan Advanced Materials' relatively strong share price position at the time of grant.

In all cases and in keeping with its usual approach, the Committee reviewed these outcomes in the context of the Group's underlying performance. The Committee concluded from this review that, in the round, a below-target bonus outturn and modest vesting under the 2021 LTIP balances appropriately Morgan Advanced Materials' underlying performance over the relevant time horizon, the stakeholder impact of the cyber security incident and the Executive Directors' significant contribution to the recovery from that in 2023. As a result, the Committee determined that no discretion needed to be applied in respect of 2023 remuneration outcomes.

Implementation of Policy in 2024

In keeping with our usual approach, salary increases have been determined by the Committee in the context of the continued performance of the Group in 2023, labour market conditions, and the average salary increase awarded to the wider workforce.

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, and remains consistent with the approach taken for the entire professional population. However, the Committee also continued to factor into its decision-making this year the prevailing inflationary environment and its ongoing and asymmetric cost-of-living impact on different organisational levels of the Group.

In this context, the Committee determined to award salary increases of 4% for both the CEO and CFO (compared to the average increase for the wider UK workforce of 4%, and 5% for colleagues with similar performance ratings). The Committee also approved a 4% increase to the Chairman's fee, and the Chairman and Executive Directors approved a similar 4% increase to the non-Executive Directors' base fee for 2024.

As disclosed later in this Report, an increase to the additional Committee Chair and Senior Independent Director fees was also approved, to more closely align to market rates, and to better reflect the responsibilities and time commitment of these roles.

The Committee also reviewed the structure of the annual bonus and LTIP plans to ensure that the framework remains appropriately aligned with our strategic aims and culture, motivates and rewards management for delivering sustainable performance, and supports retention.

No changes are proposed to the performance linkage of the annual bonus for 2024 as measures remain aligned to Morgan Advanced Materials' key objectives, including ESG measures being covered in the Executive Directors' personal objectives and therefore reflected in the personal performance element of the bonus.

For the LTIP, it is proposed to maintain ESG targets at 5% to 15% carbon reduction over the three-year performance period, reflecting our stated longer-term ambition to reduce carbon emissions by 50% by 2030 (from a 2015 baseline). The EPS performance range for the 2024 LTIP will be set at 9% to 16% per annum over the three-year performance period. The higher range for this year reflects the lower earnings starting point in 2023 as a result of the cyber security incident. 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 (Total Shareholder Return) benchmarks and relative TSR performance range (median-upper quartile). It is proposed to maintain the ROIC* range for that element of the Executive Directors' 2024 LTIP at 17% to 20%, to reflect our latest expectations for performance over the three-year performance period.

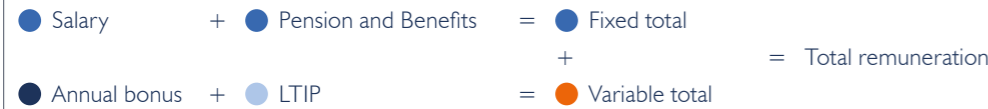
For the annual bonus, the performance ranges for EBITA and year-end working capital have been set to reflect the Group's budget as well as the continued economic volatility externally (and the potential impact this may have on performance outcomes). Annual bonus targets are considered to be commercially sensitive at this time but will ordinarily be disclosed in next year's Remuneration Report.

This report is consistent with the current reporting regulations for Executive remuneration and, as in prior years, includes a Remuneration 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 at a glance

Components of remuneration



Key features of how our executive remuneration policy will be implemented in 2024

Fixed components

Base salary		Policy
Pete Raby (CEO)	£645,000	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.
Richard Armitage (CFO)	£459,680	

Pension and other benefits

Pension	Benefits (estimated values)	Policy
Pete Raby (CEO)	8% of salary Pete Raby (CEO) £14,584	Pension contributions (and/or cash in lieu thereof) for Executive Directors are aligned with the level of contributions available to the UK workforce. Other benefits can include company car/car allowance, health insurance and, where appropriate, relocation allowances and other expenses.
Richard Armitage (CFO)	8% of salary Richard Armitage (CFO) £13,320	

Variable components, annual bonuses

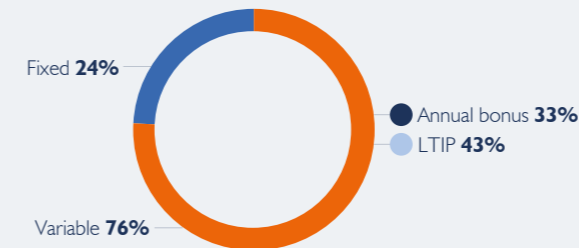
Maximum opportunities for 2024 (no change)	Performance measures weighting	Policy
Pete Raby (CEO)	Adjusted operating profit* 40%	Maximum award opportunity: 150% of base salary Performance measures are set by the Committee at the start of the year and are weighted to reflect a balance of financial and 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.
Richard Armitage (CFO)	Year-end working capital 40% Strategic personal objectives 20%	

LTIP

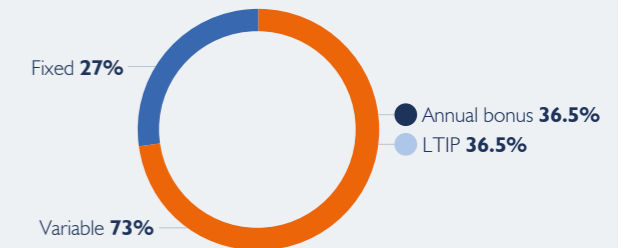
Maximum opportunities for 2024	Performance measures weighting	Policy
Pete Raby (CEO)	TSR vs FTSE All-Share Industrials Index 15%	Maximum award opportunity: 200% of base salary. The award levels and performance conditions on which vesting depend are reviewed prior to the start of each award cycle to ensure 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.
Richard Armitage (CFO)	TSR vs peer group 15%	
	EPS growth 27.5%	
	Group ROIC* 27.5%	
	ESG (carbon reduction) 15%	

Pay at risk

Pete Raby (CEO)

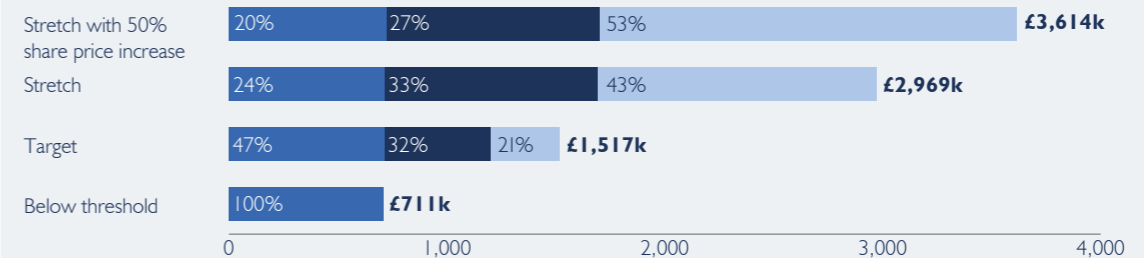


Richard Armitage (CFO)

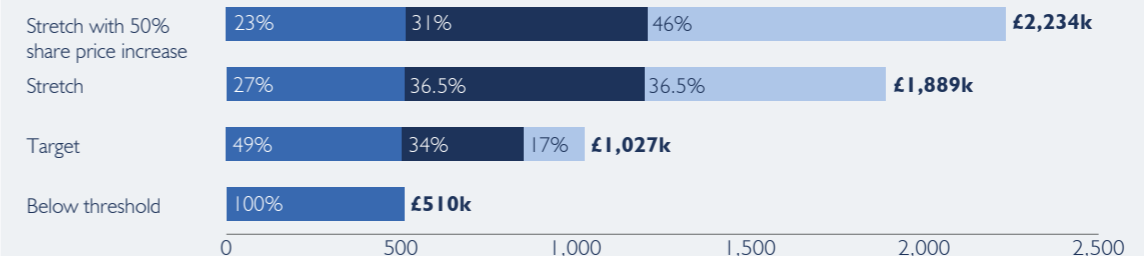


Pay scenarios

Pete Raby (CEO)



Richard Armitage (CFO)



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

The assumptions made in compiling the above charts can be found on page 113.

Shareholding requirements

Pete Raby (CEO) 200% of salary (current shareholding 291.2%)

Richard Armitage (CFO) 200% of salary (current shareholding 82.6%)

Remuneration report continued

This report covers the period 1 January 2023 to 31 December 2023 and provides details of how the Remuneration Committee has operated and implemented the Remuneration Policy, approved by shareholders at the 2022 AGM, during the year under review. The proposed implementation of this Policy for the 2024 financial year is summarised on pages 105 to 107.

I. Policy report

Key principles of the Remuneration Policy

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

The 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 Company's AGM on 5 May 2022, and which is effective for a period of up to three years from that date. The only updates to the Policy report published in the 2021 Annual Report are: (i) page numbers; (ii) the section on performance measure selection (which has been updated to relate to 2024 incentive cycles); (iii) the pay scenario charts (which have been updated to reflect the implementation of Policy for the 2024 financial year); and (iv) the opportunity section under 'Pension' (to drop references to legacy arrangements in place prior to 31 December 2022).

The Committee has developed the Remuneration Policy to be consistent with the six factors outlined in Provision 40 of the Code, as set out below:

Clarity: Our Policy is clear, and disclosures on our decision-making (in relation to policy and its implementation) are transparent. The Committee also engages regularly with shareholders and employees to facilitate a greater understanding on a range of subjects, including remuneration.

Simplicity: The Policy and the Committee's approach to implementation is simple and well understood. The performance measures used in the incentive plans are well aligned to the Group's strategy.

Risk: The Committee has ensured that remuneration arrangements do not encourage or reward excessive risk taking by setting targets to be stretching and achievable, with discretion to adjust formulaic bonus and LTIP outcomes.

Predictability: The range of outcomes under our Policy are quantifiable, clearly linked to defined performance outcomes and capped.

Proportionality: The link of the performance measures to strategy and the setting of targets ensures outcomes are proportionate to performance, and importantly do not reward poor performance.

Culture: The Policy is consistent with the Group's culture, driving behaviours that promote the long-term sustainable success of the Group for the benefit of all stakeholders.

Purpose and link to strategy	Operation	Opportunity	Performance metrics
Fixed pay			
Base salary Provides the fixed element of the remuneration package. Set at competitive levels against the market.	Base salaries are generally reviewed each January, with reference to an individual's performance (and that of the Group as a whole), their experience and the range of salary increases applying across the Group. The Committee also considers salary levels at companies of similar sector, size and complexity when determining increases.	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. 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.	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.
Pension Provides post-retirement benefits for participants in a cost-efficient manner.	Defined contribution scheme (and/or a cash allowance in lieu thereof).	Contributions (or cash in lieu thereof) are – and, for any new appointments, will be – aligned with the level of contribution available to the UK workforce at that time.	Not applicable.
Benefits Designed to be competitive in the market in which the individual is employed.	Can include company car/car allowance, health insurance and, where appropriate, relocation allowances and other expenses.	Benefits values vary by role and are reviewed periodically relative to the market. It is not anticipated that the cost of benefits provided will change materially year-on-year over the period for which this Policy will apply. The Committee retains the discretion to approve a higher cost in exceptional circumstances (eg relocation expenses, expatriate allowances etc) or in circumstances where factors outside the Group's control have changed materially (eg market increases in insurance costs). Benefits in respect of the year under review are disclosed in the Annual Report on Remuneration.	Not applicable.

Remuneration report continued

Purpose and link to strategy	Operation	Opportunity	Performance metrics
Variable pay			
Annual bonus	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.	Up to 150% of salary.	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.
Provides a direct link between annual performance and reward.	At the end of the year, the Remuneration Committee determines the extent to which these have been achieved.	The payout for threshold performance may vary year-on-year but will not exceed 25% of the maximum opportunity.	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.
Incentivises the achievement of specific goals over the short term that are also aligned to the long-term business strategy.	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.		Further details are set out in the Annual Report on Remuneration on pages 116 to 130.
Deferred bonus supports retention and provides additional alignment with the interests of shareholders.	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.		
	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.		

Purpose and link to strategy	Operation	Opportunity	Performance metrics
Long-Term Incentive Plan (LTIP)	The Remuneration Committee has the authority each year to grant an award under the LTIP.	Under the Policy, the LTIP provides for a conditional award of shares up to an annual limit of 200% of salary.	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, ROIC* and ESG measures.
Aligns the interests of executives and shareholders with sustained long-term value creation.	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 are subject to a post-vesting holding period of two years.	25% of an award vests for achievement of the threshold level of performance.	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.
Incentivises participants to manage the business for the long term and deliver the Company's strategy.	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.		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.
	Dividends may accrue on vested shares during the holding period.		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 116 to 130.
Sharesave	An HMRC-approved scheme where employees may save up to a monthly savings limit out of their own pay towards options granted at up to a 20% discount. Options may not be exercised for three years.	Up to the savings limit as determined by HMRC from time to time, across all Sharesave schemes in which an individual has enrolled.	None.
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.			

Malus and Clawback Policy

Malus and clawback will apply to the annual bonus and LTIP (as set out above) in cases of error in determining performance, corporate failure, 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 and clawback over the vesting period 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 (ie before 5 May 2022), 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.

Remuneration report continued

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, upward 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 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 2024 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 83 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 our 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 our business, the markets in which we operate 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 2024 LTIP cycle, ROIC* will continue to be calculated as follows:

$$\frac{\text{Group headline operating profit* (pre-specific adjusting items)}}{\text{12-month average (third-party working capital + total fixed assets + total intangible fixed assets)}}$$

The ESG measure is based on the percentage reduction in CO₂ emissions, with targets aligned to Morgan Advanced Materials' overall strategic goals.

Share ownership guidelines

In order to encourage alignment with shareholders, Executive Directors are required 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 of 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. If it becomes apparent to the Committee that the guideline is unlikely to be met within the timeframe, 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 Group's relatively short business cycle ensures the Board has good visibility within a 12-month period of the quality of decision-making and, in addition, unvested awards for good leavers subsist to the normal vesting date (albeit pro-rated for time), ensuring incentive outcomes remain linked to the Group's performance beyond the date of cessation. 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 126.

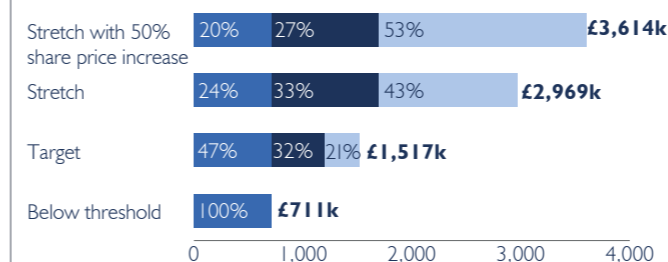
External appointments

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 page 121.

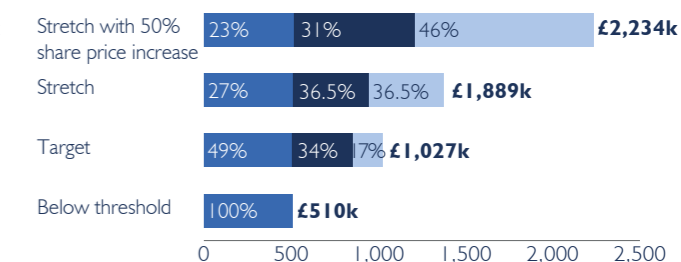
Pay for performance: scenario analysis

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 2024 packages approved for Executive Directors.

Pete Raby (CEO)



Richard Armitage (CFO)



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

The potential reward opportunities illustrated above are within the 2022 Policy applied to the annual base salary in effect at 1 January 2024. For the annual bonus, the amounts illustrated are those potentially receivable in respect of performance for 2024 (before mandatory deferral into shares). The LTIP is based on the face value of awards to be granted in 2024 (200% of salary for the CEO and 150% for the CFO). 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 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%.	
Stretch	Maximum annual bonus.	Performance warrants full vesting (100% of the award).	Latest disclosed base salary, pension and benefits.
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
Richard Armitage	CFO	30 May 2022	16 September 2021	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.

Remuneration report continued

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 legal fees incurred by the Executive Director in connection with the termination of employment, where the Company wishes to enter into a settlement agreement and the individual must seek independent legal advice.

On termination of an Executive Director's service contract, the Remuneration Committee will consider the departing Director's duty to mitigate his or her loss when determining the timing of any payment in lieu of notice. 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 (ie not pro-rated for time).	At the normal vesting date, unless the Committee decides that awards should vest earlier (eg in the event of death).
Change of control	Awards will normally vest in full (ie not pro-rated for time). Awards may alternatively be exchanged for equivalent replacement awards, where appropriate.	On change of control.
All other reasons	Awards normally lapse.	Not applicable.
LTIP awards		
Injury, disability, death, redundancy, retirement, or other such event as the Committee determines	Awards will normally be pro-rated for time and will vest based on performance over the original performance period (unless the Committee decides to measure performance to the date of cessation).	At the normal vesting date, unless the Committee decides that awards should vest earlier (eg in the event of death).
Change of control	LTIP awards will be pro-rated for time and will vest subject to performance over the performance period to the change of control. 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 200% 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	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.	Annual fees are applied in line with the outcome of each periodic review.	None.
To attract and retain high-calibre non-Executive Directors.	Currently paid 100% in cash.		

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 re-election
Douglas Caster	Chairman (until 29 June 2023)	14 February 2014	15 January 2014 ¹	n/a
Ian Marchant	Chairman (from 29 June 2023)	1 February 2023 ²	17 January 2023	29 June 2023
Helen Bunch	Non-Executive Director	24 February 2016	19 January 2016	29 June 2023
Laurence Mulliez	Senior Independent Director	6 May 2016	4 April 2016	29 June 2023
Jane Aikman	Non-Executive Director	31 July 2017	27 April 2017	29 June 2023
Clement Woon	Non-Executive Director	10 May 2019	7 May 2019	29 June 2023

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

2. Ian Marchant was appointed non-Executive Director on 1 February 2023, prior to succeeding Douglas Caster as Chairman on 29 June 2023.

Remuneration report continued

Consideration of stakeholder views

The Executive Management team 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. When making decisions on executive remuneration, the Committee considers the pay and employment conditions across the Group.

Engagement with employees on remuneration is currently achieved through non-Executive Director employee listening sessions where employees have the opportunity to raise issues. The non-Executive Directors held several employee listening sessions in 2023, to ensure that the Board understands the views of employees and the impact its decisions have on them. They engaged with the employees on a broad range of topics, including reward and benefits. Details of these employee sessions can be found on pages 86 to 87. In addition, we undertook an annual engagement survey, 'Your Voice', in order to better understand the views of a wider range of employees. The engagement survey includes a range of specific questions on the Company's pay practices and presents an opportunity for the workforce to share feedback and ask its own questions about employee or executive reward. Through the feedback from the engagement survey, supplemented with the learnings from the employee listening sessions, the views of Morgan Advanced Materials employees are represented at Remuneration Committee meetings. This enables the Remuneration Committee to take into account those views when considering executive remuneration and the pay and employment conditions throughout the wider workforce.

Laurence Mulliez, our Senior Independent Director and a member of the Remuneration Committee, met with employees on the Ignite and Catalyst leadership programmes in March 2023 to discuss reward and executive remuneration matters. It was a useful session; the employees were reassured to hear about the Board's rigour around fairness for the consideration of reward for the Executive Directors in line with that of the wider workforce. In the UK, engagement is further facilitated by the Sharesave programme, which enables UK employees to become shareholders and provides them with the same voting rights as other shareholders in relation to resolutions for approval at the AGM (and which include executive remuneration matters). Prior to the annual salary review, the Committee is provided with pay increase data that individual business units 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 the Stakeholders section on pages 26 to 29.

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, when shaping and implementing Morgan Advanced Materials' 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.

During 2023, the Board received twice-yearly updates from the Group Pensions Director on matters concerning the global defined benefit pension schemes and met with the Chair of trustees of the Group pension trusts in February 2023 to ensure the views of the trustees on key pension matters are understood and taken into consideration.

2. Annual report on remuneration

The following section provides details of how the Remuneration Policy was implemented during 2023 and will be implemented in 2024.

Single total figure of remuneration for Executive Directors (audited)

The table below sets out a single figure for the total remuneration received by each Executive Director for the year ended 31 December 2023 and the prior year.

	Pete Raby		Richard Armitage ¹	
	2023	2022	2023	2022
1. Salary	£620,000	£596,000	£442,000	£249,551
2. Pension	£49,600	£104,000	£35,360	£19,964
3. Benefits	£14,031	£13,637	£13,320	£8,378
Fixed pay subtotal	£683,631	£713,637	£490,680	£277,893
4. Bonus	£399,193	£246,708	£291,216	£102,623
5. LTIP	£102,093	£589,693	n/a	n/a
6. Other	–	£1,800	–	£444,800
Variable pay subtotal	£501,286	£838,201	£291,216	£547,423
Total	£1,184,917	£1,551,838	£781,896	£825,316

1. Richard Armitage joined the Board on 30 May 2022. His remuneration for 2022 reflects the period 30 May to 31 December 2022.

The figures have been calculated as follows:

1. Base salary: amount earned for the year
2. Pension: the figure is a cash allowance in lieu of pension (8% of base salary, aligned with the level of contributions available to the UK workforce).

3. Benefits: the taxable value of benefits received in the year. Includes private medical insurance and a company car (or car allowance)
4. Bonus: the total bonus earned on performance during the year (before any mandatory deferral into shares). In accordance with the Remuneration Policy, 67% of the amount shown above will be paid in cash, with the remaining 33% deferred into shares which will be released after three years subject to continued employment
5. LTIP: the estimated value on 31 December 2023 of 2021 LTIP shares vesting in 2024, subject to performance over the three-year period ended 31 December 2023. Richard Armitage, who joined Morgan Advanced Materials in 2022, did not participate in this LTIP cycle. Figures are based on the average share price for the three months to 31 December 2023 of 249.16p. The figure for 2022 has been trued up from that disclosed in last year's Remuneration Report (£696,494) to reflect the share price on the vesting date (5 October 2023) of 239.52p (362,377 shares × 67.94% × 239.52p = £589,693). The impact of share price movement on the vesting value of Pete Raby's 2021 LTIP award is as follows:

	Pete Raby	Richard Armitage
Value of awards vesting using share price at award (315.3p) (276,486 shares × 14.82% × 315.3p)	£129,194	n/a
Value of awards vesting using 3-month average share price at 31 December 2023 (249.16p) (276,486 shares × 14.82% × 249.16p)	£102,093	n/a
Impact of share price movements on vesting values	-£27,101	n/a

6. Other: 2022 values for Pete Raby and Richard Armitage comprise the value (£1,800) 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). For Richard Armitage, in addition to Sharesave options, 2022 'other' value includes a one-time award of restricted shares with a face value on grant of £443,000, granted in 2022 following his appointment to offset forfeited bonus from his prior employer. This award vested to Richard Armitage at the end of May 2023, on the first anniversary of grant.

Incentive outcomes for the year ended 31 December 2023

Annual bonus in respect of 2023 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 2023, the bonus targets for the Executive Directors were split between adjusted operating profit* before restructuring (weighted 40%), year-end working capital* (weighted 40%) and individual strategic personal objectives (weighted 20%). The targets were set to incentivise the Executive Directors to deliver stretching profit and cash performance for the Group. Performance in line with target results in a payout of 50% of maximum.

The table that follows sets out retrospectively the assessment of performance relative to the 2023 bonus targets for the Executive Directors. Actual bonus payments are shown in the single total figure of remuneration table on page 116. In accordance with the Remuneration Policy, 67% of the amount reported will be paid in cash, with the remaining 33% deferred into shares which will be released after three years subject to continued employment.

Performance measure	% of maximum bonus element	Performance range		Actual performance outcome	% payout of element	% salary earned	
		Threshold (0% payout)	Maximum (100% payout)				
Adjusted operating profit* ¹	40%	119.3m	137.0m	124.4m	60.3%	36.2%	
Year-end working capital* ¹	40%	183.2m	162.4m	182.8m	2.0%	1.2%	
Personal objectives							
Pete Raby	20%	Please see narrative below for further details on objectives and performance against these			90%	27%	
Richard Armitage	20%				95%	28.5%	
		% of salary earned					
		Maximum bonus (% salary)	Adjusted operating profit* working capital* ¹	Year-end working capital* ¹	Personal objectives	Total outcome	Total payable
Overall outcome							
Pete Raby		150%	36.2%	1.2%	27%	64.4%	£399,193
Richard Armitage		150%	36.2%	1.2%	28.5%	65.9%	£291,216

1. For the financial measures in the 2023 bonus, the payout curve included an additional on-target performance level at which the payout was calibrated to be 50% of each element. On-target adjusted operating profit* was £121.2m and on-target year-end working capital* was £172.8m. For both elements, there was a straight-line payout between threshold and on-target, and between on-target and maximum. All figures were calculated using 2023 budgeted exchange rates.

For 2023, personal objectives were set for each Executive Director to focus on Morgan Advanced Materials' key execution priorities (Big positive difference, Innovate to grow and Delight the customer), improving Morgan Advanced Materials' operational performance, and recovery from the cyber security incident at the start of the year.

Remuneration report continued

Collective goals for 2023 (which applied to each Executive Director) included:

- (1) Continue to develop and embed the safety culture of the business (actively engaging our employees, completing the deployment of the new safety system, reducing the Group LTA rate below 0.25 by year end, and driving 'Don't Walk By' reporting to 200 – a 5% improvement over 2022)
- (2) Drive diversity by increasing the percentage of women in leadership to 32% – an increase of 3% from year end 2022
- (3) Drive employee engagement, increasing the outcome of the 'Your Voice' survey by 3%
- (4) Ensure Morgan Advanced Materials recovers from the cyber security incident at the earliest opportunity with non-compromised ERP systems online by end of March, provision of data and systems to support the completion of the audit, implementation of new ERP solutions for unrecoverable sites by end of July
- (5) Work with the GBUs to develop plans to reduce structural costs by £20 million per year by 2025 through plant consolidation, automation, shared services and other restructuring; and
- (6) Develop and execute an IR campaign to refresh investor understanding of the equity story following the capital markets event – developing a target list of US, UK and European investors and completing two sets of US roadshows and site visits.

In addition to the above, the following individual objectives were set for Pete Raby:

- (1) Develop plans to accelerate the organic growth rate of the Group, enhancing plans for faster growing segments to achieve 10% volume growth CAGR from 2022–2025, and for the core to achieve 5%+ volume growth CAGR from 2022–2025; and
- (2) Develop plans to enhance the customer focus of the Group, improving the customer experience and increasing innovation to meet their needs, developing common 'voice of the customer' and needs-based segmentation tools and deploying across the GBUs, completing VoC activities in each GBU and developing and executing plans to address the priority improvement areas identified, and developing plans to conduct needs-based segmentation pilot activities in each GBU.

In addition to the collective goals identified above, Richard Armitage's individual objectives for 2023 were to:

- (1) Continue to strengthen the M&A pipeline leading the GBUs to complete segment acquisition strategies based on bottom-up market research and analysis, targeting a qualified pipeline of 20 prospects by year end, and having a transaction ready to execute by the second half of the year; and
- (2) Improve cash management across the Group, strengthening the Group-wide cash management process, strengthening capital investment disciplines to improve prioritisation and returns, and developing and maintaining monthly Group-level cash forecasting.

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.

Reflecting the Committee's assessment of each of these objectives individually, the personal performance element has been assessed at 90% of the maximum to reflect Pete Raby's delivery against the objectives set and the Leadership Behaviours demonstrated in doing so. In particular, the Committee noted:

- > the significant progress on accelerating the implementation of a new ERP solution (work on which was already underway prior to the cyber security incident) while still delivering for our customers;
- > continued improvements in Morgan Advanced Materials' safety processes and systems, and additional training for all of our people, resulting in an improvement to our LTA rate over the prior year; and
- > continued good progress towards our sustainability goals, with absolute CO₂ emissions reducing throughout the year, and further process and infrastructure improvements being completed to drive water efficiency.

The Company also continues to prioritise its focus on diversity, for example through employee resource groups Military@Morgan, PRISM and Women@Morgan. The completion of a pulse employee engagement survey in December resulted in an engagement score 1% down on the equivalent population in the prior year, however actions continue to be driven locally and globally to improve the experience of our people.

Notwithstanding the need to focus on the recovery of the cyber security incident, the overall outcome of this element reflected that some of the objectives set had not been met (such as employee engagement, as described above). The Committee also evaluated the wider context of Morgan Advanced Materials' overall performance in the year, notably Pete's key role in leading the recovery from the incident. In determining the payout under the personal element, the Committee considered the incentive outcomes in the round (and which reflect the financial impact of the incident) but also the context of our continued delivery of organic revenue growth, and operating margins within the target range in the second half of the year, which underpinned an underlying performance outturn in line with the expectations communicated to the market in February 2023 in what continued to be a tough operating environment.

In addition to the valued contributions by Richard Armitage to the extent to which the collective goals identified above were achieved, the Committee noted Richard's significant role in driving ROIC and leverage to within our target range (and operating margins in the range in the second half of the year) despite the impact of the cyber security incident. In light of his excellent contribution to, and leadership role in, ensuring that the Group delivered a performance outcome for the full year ahead of the expectations we set in February 2023, and the extent to which the objectives set for Richard prior to the start of the year were assessed to be met, the personal performance element of Richard's bonus has been assessed at 95% of the maximum.

Performance against the objectives above is referred to further in the Chairman's statement and elsewhere within the Annual Report. 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. This year, as well as reviewing the assessed outcomes against the Group's underlying performance over the relevant time horizon, the Committee also reflected the specific context of the stakeholder impact of the cyber security incident and the Executive Directors' significant contribution to the recovery from that in 2023. The Committee concluded from this review that, in the round, a below-target bonus outturn (together with the modest vesting outcome under the 2021 LTIP reported below) balances appropriately these important perspectives for remuneration decision-making. As a result, the Committee determined that no discretion needed to be applied in respect of the 2023 bonus outcome.

2020 Deferred Bonus Plan vesting

In 2020, 33% of the annual bonus earned by the incumbent Executive Directors at the time (for performance in the 2019 financial year) was deferred into shares under the Deferred Bonus Plan (DBP), in line with the Group'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 Pete Raby's DBP awards which vested in 2023 are set out in the table below. Richard Armitage, who joined Morgan Advanced Materials in 2022, did not participate in this DBP cycle:

Director	Date of grant	Number of DBP shares granted	Number of dividend reinvestment shares	Total number of DBP shares vested	Market value at grant £	Market value at vesting £	Date of vesting
Pete Raby	20 May 2020	116,438	8,312	124,750	1.9724	2.895	22 May 2023

2021 LTIP award vesting

Awards granted to Executive Directors in 2021 were subject to relative TSR performance, EPS growth and Group ROIC* over a three-year period ended 31 December 2023.

The EPS target (applying to one-third of each award) required three-year EPS growth of 15% per annum for 25% of that element to vest, rising to full vesting for EPS growth of 22% per annum or higher. Over the period Morgan Advanced Materials plc's actual EPS growth was 10.9% per annum, 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 0.9%, which was at the 37th percentile versus the FTSE All-Share Industrials Index and at the 20th percentile versus the tailored comparator group. Accordingly, the TSR element of the award will not vest.

The Group ROIC* target (applying to the remaining one-third of each award) required three-year Group ROIC* of 17% for 25% of that element to vest, rising to full vesting for Group ROIC* of 20% or higher. Morgan Advanced Materials plc's Group ROIC* was 17.78%, and accordingly this results in a 14.82% vesting for the ROIC* element of the award.

This combined performance resulted in a partial vesting of the 2021 awards, equivalent to 14.82% of maximum. The vesting outcome is considered by the Committee to appropriately reflect business performance. Executive Directors' 2021 LTIP awards were granted when Morgan Advanced Materials' share price was 315.3 pence, reducing the risk of windfall gains from short-term stock market volatility since the time of grant. The Committee is therefore comfortable that a windfall has not arisen.

Details of Pete Raby's awards are set out in the table below. Richard Armitage, who joined Morgan Advanced Materials in 2022, did not participate in this LTIP cycle.

Director	Maximum potential LTIP award	Maximum potential LTIP-CSOP ¹ award	Estimated LTIP award vesting	Estimated LTIP-CSOP ¹ award vesting	LTIP-CSOP ¹ award exercising	Date of vesting
Pete Raby	276,486	–	40,975	–	–	22 March 2024

1. CSOP refers to the Company Share Option Plan – further information is included in the Details of plans section later on in this report.

For the purposes of the 2021 LTIP award (and consistent with the approach taken in previous years), the financial results were adjusted to neutralise the effects of closed businesses during the relevant period and specific adjusting items, to ensure performance is measured on a basis consistent with that on which targets were set.

Share dilution

The Company manages dilution rates within the standard guidelines of 10% of issued Ordinary share capital in respect of all-employee schemes and 5% in respect of discretionary schemes. Only market purchased shares, held in the Company's Employee Benefit Trust (EBT), have been used for the purpose of satisfying awards under these schemes that have vested since 2012. It is the Company's intention to use market purchased shares to satisfy awards vesting in 2024. Further information regarding the EBT can be found on pages 133, 177, 203 and 211.

Remuneration report continued

2022 recruitment award vesting

As noted in last year's report, Richard Armitage was granted a one-time award of restricted shares to offset bonus forfeited from his previous employer. Details of Richard Armitage's award, which vested in 2023, are set out in the table below.

Director	Date of grant	Number of shares granted	Number of shares vested	Market value at grant £	Market value at vesting £	Date of vesting
Richard Armitage	30 May 2022	144,252	144,252	3.071	2.882	30 May 2023

Pension (audited)

In 2023, Pete Raby and Richard Armitage each received a cash allowance in lieu of pension of 8% of base salary, which is in line with the pension contribution available to the wider UK workforce.

Non-Executive Director fees (audited)

The table below sets out the fees received by each non-Executive Director in respect of the year ended 31 December 2023 and the prior year.

Douglas Caster (until 29 June)		Helen Bunch		Laurence Mulliez		Jane Aikman		Clement Woon		Ian Marchant (From 1 February)	
2023 ¹	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023 ²	2022
£100,273	£202,100	£62,820	£61,220	£62,820	£61,220	£62,820	£61,220	£54,820	£53,220	£128,649	n/a

1. Douglas Caster's 2023 fee reflects an annualised fee of £202,100, pro-rated until his retirement on 29 June 2023.

2. Ian Marchant's 2023 fee reflects an annualised fee of £54,820 from 1 February 2023 to 28 June 2023, and an annualised fee of £210,000 on becoming Chairman on 29 June 2023. As disclosed in last year's report, Ian Marchant also receives an £18,000 annual contribution towards the cost of administrative support. The contribution paid to him in 2023 was pro-rated to £13,500 as he joined the Board part way through the year.

Non-Executive Directors do not receive any other fixed or variable pay, or benefits, in addition to their fee. Figures shown are inclusive of additional fees of £8,000 payable to Laurence Mulliez as Senior Independent Director and to Helen Bunch and Jane Aikman as Committee Chairs.

Scheme interests awarded in 2023

2023 LTIP awards

In 2023, Pete Raby and Richard Armitage were granted awards under the LTIP as shown in the table below. The performance period for the 2023 LTIP awards is 1 January 2023 to 31 December 2025. 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	Value of awards at grant		
		£	As % of 2023 salary	Date of vesting
Pete Raby	412,782	1,240,000	200%	10 May 2026
Richard Armitage	220,705	663,000	150%	10 May 2026

1. Calculated using the award price of £3.004, being the average share price for the five dealing days prior to the award date (10 May 2023).

The Committee discusses and reviews the performance criteria for new three-year LTIP awards before they are granted. For the awards granted in 2023, the Committee considered the balance of measures in light of the Group's business plan and shareholder feedback and decided to maintain the current weightings of the four performance criteria, with the TSR element continuing to be split into two parts. One-half of this element will vest based on Morgan Advanced Materials' TSR performance relative to the constituents of the FTSE All-Share Industrials Index and one-half will vest based on Morgan Advanced Materials' TSR performance relative to a tailored comparator group of 15 industry comparators.

The table below sets out the targets attaching to the 2023 LTIP awards:

TSR vs FTSE All-Share Industrials Index	TSR			EPS growth	Group ROIC*	ESG (carbon reduction)		
	% of award that vests	performance vs peer group	% of award that vests			% of award that vests	% of award that vests	% of award that vests
Upper quartile	15%	Upper quartile	15%	11% pa	20%	27.5%	15%	15%
Median	3.75%	Median	3.75%	4% pa	17%	6.88%	5%	3.75%
Below median	Nil	Below median	Nil	<4% pa	<17%	Nil	<5%	Nil

For Executive Directors, a two-year holding period applies to any shares that vest in relation to the 2023 LTIP. Dividends accrue over this holding period and will be paid on any shares that vest.

2023 Deferred Bonus Plan awards

In 2023, 33% of the total annual bonus earned by Pete Raby and Richard Armitage (for performance in the 2022 financial year) was deferred into shares under the DBP, in line with Morgan Advanced Materials' Remuneration Policy. 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	27,375	82,236	10 May 2026
Richard Armitage	11,387	34,208	10 May 2026

1. Calculated using the award price of £3.004, being the average share price for the five dealing days prior to the award date (10 May 2023).

Exit payments made in year (audited)

No exit payments were made to Executive Directors during the 2023 financial year.

Payments to past Directors (audited)

As set out in last year's report, Peter Turner stepped down from the Board on 30 May 2022 and retired from the Group on 30 June 2022. All payments made to Peter in relation to the 2022 financial year were disclosed fully in last year's Remuneration Report. Peter was treated as a 'good leaver' in respect of outstanding LTIP awards. Vesting of previously-granted awards during the 2023 financial year were as follows: 93,569 shares (inclusive of dividend) granted under the 2020 DBP on 20 May 2023, 143,941 shares and 7,237 CSOP options under the 2020 LTIP cycle on 5 October 2023 (equivalent to 67.94% of maximum). In addition, he retains interests granted under the DBP in 2021 and 2022 and under the LTIP granted in 2021, details of which will be disclosed on vesting in future reports.

External appointments

Details of external appointments held by Executive Directors and the fees retained in 2023 are provided in the table below:

Executive Director	Company	Role	Date of appointment	Fees paid & retained
Pete Raby	Hill & Smith PLC	Non-Executive Director	2 December 2019	£55,455
Richard Armitage	NWF Group PLC	Senior Independent Director and Chair of the Audit Committee	5 July 2020	£43,958

Implementation of Remuneration Policy for 2024

Base salary

In line with the Remuneration Policy, Executive Directors' salaries were reviewed by the Committee and increased for 2024 at the rates set out in the table below. As in previous years, the Group maintained the formal link between performance and pay within the senior leadership population in 2023; specifically, taking into account individual and Group performance, as well as salary relative to the relevant market. The increases awarded to Pete Raby and Richard Armitage were calibrated in line with this. The Committee considered the strong performance in their roles, as well as the market positioning of their salaries, in determining to award increases. However, the increases awarded to our Executive Directors in 2024, while in line with the average increases awarded to the wider workforce (4% in the UK), were lower than the increases for other colleagues who received similar performance ratings (5% in the UK), reflecting the greater pressure from the cost-of-living crisis on take-home pay for our lower-paid colleagues, and the higher incentive leverage of Executive Director remuneration. The table below shows the base salaries in 2023, and those that took effect from 1 January 2024:

Executive Director	Base salary at:		
	1 January 2024	1 January 2023	Increase
Pete Raby	£645,000	£620,000	4%
Richard Armitage	£459,680	£442,000	4%

The rationale for any future increases will continue to be disclosed in the relevant Annual Report on Remuneration.

Pension

Pete Raby and Richard Armitage will continue to receive a cash allowance in lieu of pension in 2024. These are aligned to the pension contribution levels available to the wider workforce (8% of salary, based on our UK population).

Remuneration report continued

Annual bonus in respect of 2024 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 2023, and are as follows:

Adjusted operating profit* – 40%

Year-end working capital* – 40%

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.

2024 LTIP awards

In March 2024, Pete Raby and Richard Armitage will be granted awards under the 2024 LTIP with face values of 200% and 150% of their 2024 base salaries, respectively. Formulaic vesting outcomes will continue to be evaluated by the Committee 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 2024 and will end on 31 December 2026. 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 Advanced Materials' 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 has been set at 9% to 16% per annum to take into account the reduced 2023 base level resulting from the impact of the 2023 cyber security incident
- > The ROIC* range will remain unchanged at 17% to 20%
- > The ESG measure (carbon reduction) will have a performance range of 5% to 15% carbon reduction (scope 1 and 2 emissions) over the three-year performance period, to support the Group's overall sustainability goals and its stated 2030 target to reduce scope 1 and 2 CO₂ emissions by 50%
- > The Committee believes these ranges appropriately support the Group's strategy for sustainable long-term growth over the next three years while continuing to represent suitably demanding targets
- > For all four 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 2024 LTIP cycle, Executive Directors will be required to hold any vested 2024 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 2023. Increases are based on salary market movement and are in line with the average increases awarded to the wider workforce (4% in the UK). The additional Committee Chair and Senior Independent Director fees have also been increased to more closely align to market rates. The table below shows the fees in 2023, and those that were agreed for 2024:

Role	2024 fee pa	2023 fee pa
Chairman ¹	£218,400	£210,000
Non-Executive Director ¹	£57,013	£54,820
Committee Chair (additional fee)	£10,000	£8,000
Senior Independent Director (additional fee)	£10,000	£8,000

1. Ian Marchant was paid the non-Executive Director fee from 1 February 2023 until he succeeded Douglas Caster as Chairman, at which point his fee comprised of the Chairman's annual fee of £210,000 plus an £18,000 contribution towards the cost of administrative support.

Percentage change in Directors' remuneration

The table below shows, for each individual who was an Executive or non-Executive Director during 2023, the annual percentage change in their remuneration over the past four years compared to the average percentage change in remuneration for other employees of Morgan Advanced Materials plc over the same period, in accordance with the guidelines. Note that individuals who were Directors during the period under review, but not at any point during 2023, have not been included. The percentage changes in their remuneration for prior years (and in which they were a Director) are disclosed in relevant previous Annual Reports.

	2023 % change in salary or fees	2022 % change in salary or fees	2021 % change in salary or fees ²	2020 % change in salary or fees ³	2023 % change in benefits ⁴ (excluding pension)	2022 % change in benefits ⁴ (excluding pension)	2021 % change in benefits ⁴ (excluding pension)	2020 % change in benefits ⁴ (excluding pension)	2023 % change in annual bonus ⁹	2022 % change in annual bonus	2021 % change in annual bonus ⁷	2020 % change in annual bonus
Executive Directors												
Pete Raby	4.0%	2.6%	32.3% (2.5%)	-19.4%	2.9%	-0.1%	-0.5%	1.9%	61.8%	-70.8%	1029.3%	-89.1%
Richard Armitage	4.0% ¹	n/a	n/a	n/a	2.8% ¹	n/a	n/a	n/a	65.5% ¹	n/a	n/a	n/a
Non-Executive Directors⁵												
Ian Marchant	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Douglas Caster ⁸	0%	2.5%	31.6% (2.0%)	-20.9%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Helen Bunch	2.6%	2.2%	26.3% (1.7%)	-18.1%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Laurence Mulliez	2.6%	2.2%	26.3% (1.7%)	-18.1%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Jane Aikman	2.6%	2.2%	26.3% (1.7%)	-18.1%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Clement Woon	3.0%	2.5%	31.6% (2.0%)	-20.9%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Average per employee	6.7%	3.4%	3.6% (2.6%)	3.0%	2.6%	-1.2%	0.9%	-5.8% ⁶	-2.73%	-44.1%	53.6%	-2.1%

1. Richard Armitage joined the Board on 30 May 2022. The percentages above are based on annualised figures for 2022 remuneration.
2. Figures in brackets reflect percentage increase from original 2020 salary/fee prior to reductions implemented in response to the pandemic.
3. Percentages reflect the temporary Board salary/fee reductions implemented in response to the pandemic. All figures are based on full-time equivalent comparisons.
4. Benefits figures include private medical insurance and car allowance. Decreases in benefits reflects a reduction in private medical premium in certain years.
5. Non-Executive Directors do not receive any additional benefits or bonus payments.
6. Decrease reflects change in type of medical cover required by individual employees.
7. The personal performance element of the 2020 bonus was cancelled for Executive Directors (as a result of the pandemic), contributing to the higher percentage increase in 2021 bonus for Executive Directors compared to other employees.
8. Douglas Caster voluntarily waived the increase in his fee for 2023.
9. Employee average bonus based on an estimate of 2023 bonus paid in 2024 (final bonus award data was not available at the time of publication). The percentage change in 2023 bonus for the Executive Directors differs from that for other employees, based on their differing bonus structures. 2023 percentage financial bonus outcomes for Executive Directors remain lower than those for other employees.

CEO pay ratio

Year	Method	25th percentile pay ratio	Median (50th percentile) pay ratio	75th percentile pay ratio
2023	Option B	53:1	41:1	26:1
2023 (excluding variable)	Option B	31:1	24:1	15:1
2022¹	Option B	61:1	37:1	31:1
2022 (excluding variable)	Option B	32:1	22:1	16:1
2021	Option B	91:1	59:1	48:1
2021 (excluding variable)	Option B	32:1	24:1	17:1
2020	Option B	35:1	25:1	20:1
2020 (excluding variable)	Option B	25:1	20:1	14:1
2019	Option B	74:1	62:1	41:1
2019 (excluding variable)	Option B	34:1	27:1	19:1

1. Ratios trued up from those disclosed in last year's Remuneration Report to reflect final value of LTIP vesting for CEO.

Remuneration report continued

Details of the salary and total pay and benefits figures for each of the individuals identified in the table is set out below:

Year	Salary				Total pay and benefits			
	CEO	25th percentile	Median (50th percentile)	75th percentile	CEO	25th percentile	Median (50th percentile)	75th percentile
2023	£620,000	£21,164	£21,164	£39,605	£1,184,917	£22,345	£28,591	£45,426
2022	£596,000	£21,414	£23,225	£41,202	£1,551,838	£25,451	£42,005	£49,371
2021	£581,175	£17,379	£29,129	£37,989	£2,041,667	£22,533	£34,725	£42,442
2020	£439,425	£21,000	£23,960	£36,900	£791,238	£22,464	£31,550	£38,723
2019	£545,000	£17,599	£24,300	£30,610	£1,618,605	£21,958	£25,927	£39,926

In line with the CEO pay ratio regulations, the table above shows for 2023 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.

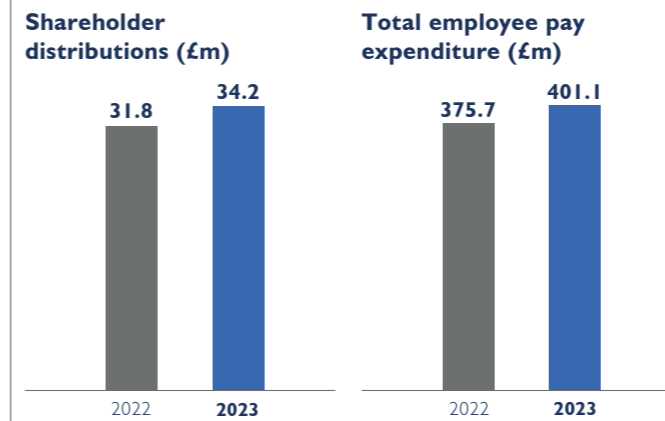
Of the three reporting options available to companies, Morgan Advanced Materials has applied Option B, where the most recent gender pay gap reporting data (as at 5 April 2023) has been used to identify the 25th, 50th and 75th percentile employees. The 25th, 50th and 75th percentile pay ratios are based 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 Advanced Materials 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 share awards and benefits including car allowance and private medical insurance. Total remuneration figures used in the calculation for 25th, 50th and 75th percentile employees include annual bonus relating to 2023 performance, in order to be consistent with the methodology used for the CEO's total remuneration figure.

The 2023 median CEO pay ratio is slightly higher than the 2022 median, and the 2023 25th and 75th percentile pay ratios are lower than those reported in 2022. Both 2022 and 2023 CEO pay ratios are lower than those reported in 2021 as a consequence of the impact of inflationary headwinds and the 2023 cyber security incident on business results (and therefore on levels of variable pay), especially with variable pay representing a greater proportion of the CEO's package compared to the wider workforce. The 2022 and 2023 ratios are not however as low as in 2020 where, as disclosed in the 2020 Remuneration Report, ratios were significantly lower 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 variable pay outcomes).

Notwithstanding the year-on-year change in pay ratio, 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 significantly 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 (eg share awards) the majority of the wider workforce would not typically be eligible for (reflecting competitive external market practice). The range of levels and types of roles found in a manufacturing environment such as at Morgan Advanced Materials may also 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 Advanced Materials' data to companies in similar industries.

Relative importance of spend on pay

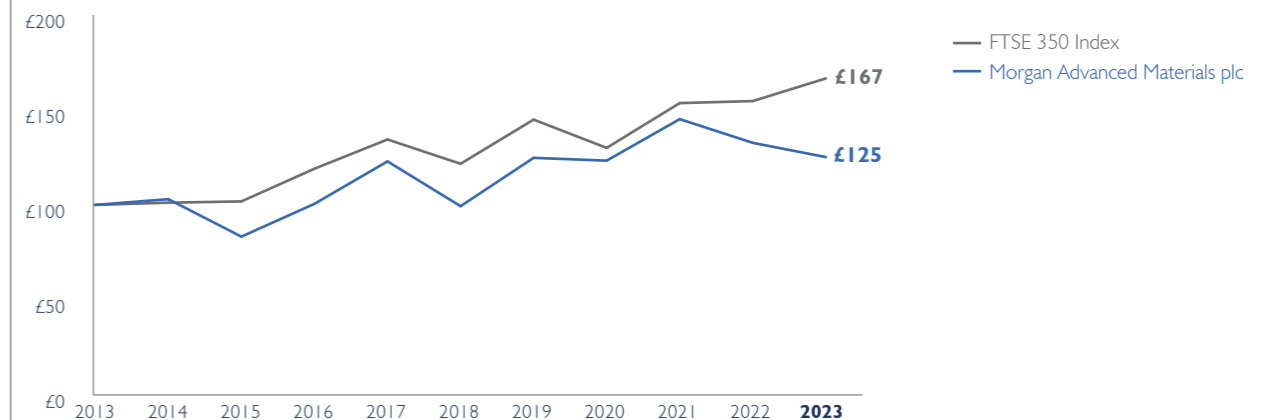
The graphs below show shareholder distributions (ie dividends and share buybacks) and total employee pay expenditure for the financial years ended 31 December 2022 and 31 December 2023.



Shareholder distributions increased by 7.5% during 2023 to £34.2 million (2022: £31.8 million). Total employee pay across the Group has increased by 6.8% to £401.1 million (2022: £375.7 million).

Comparison of Company performance

The graph below shows the value, at 31 December 2023, of £100 invested in Morgan Advanced Materials plc's shares on 31 December 2013 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 "STFR" over the 10-year period to 31 December 2023.

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
CEO	M Robertshaw					P Raby				
CEO single figure	£1,001,448	£788,252	£787,492	£1,210,856	£1,479,738	£1,618,605	£791,238	£2,041,667	£1,551,838	£1,184,917
Annual bonus (% of maximum)	65%	50%	29.5% ¹	71.3%	67.4%	84.3%	9%	97%	27.6%	42.9%
BDSMP vesting (% of maximum)	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
LTIP vesting (% of maximum)	0%	n/a	n/a	15.4%	42.9%	61.3%	21.8%	52.17%	67.94%	14.82%

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 continued

Executive Directors' interests in shares and shareholding guidelines (audited)

The table below shows the shareholding of each Executive Director against their respective shareholding guideline as at 31 December 2023.

	Shareholding guideline (% 2023 salary)	Shares owned outright		Shares subject to performance ¹	Performance-tested but unvested shares ²	Shares subject to DBP deferral ³	Shares subject to post-vesting holding ⁴	Options granted but subject to continued employment ⁵	Current shareholding (% of 2023 salary) ⁶	Guideline met
		As at 1 January 2023	As at 31 December 2023							
Pete Raby	200%	446,786	653,991	827,102	40,975	66,325	130,078	4,285	291.2%	Yes
Richard Armitage	200%	40,000	136,215	428,292	–	6,035	–	4,285	82.6%	Building

1. 2022 and 2023 LTIP awards.

2. The expected number of shares due to vest under the 2021 LTIP.

3. Estimated number of shares, net of tax (47%), deferred under the DBP.

4. Shares vested (net of tax) but subject to two-year post-vesting holding period.

5. Options granted under the Sharesave scheme.

6. Based on an Executive Director's annualised 2023 salary and the average share price for the three months to 31 December 2023 of 249.16 pence, comprising shares owned outright and shares subject to deferral.

As at 11 March 2024, the Executive Directors' interests in shares had not changed since the end of the period under review.

Unless otherwise stated, figures given in the tables on pages 126 to 127 are for shares or interests in shares.

Non-Executive Directors' interests in shares (audited)

The table below shows the shareholding of each non-Executive Director as at 31 December 2023.

	As at 1 January 2023	As at 31 December 2023 or date of leaving
Douglas Caster	110,454	110,454
Laurence Mulliez	7,161	7,336
Helen Bunch	2,028	2,028
Jane Aikman	1,000	1,000
Clement Woon	55,000	55,000
Ian Marchant	0	35,000

As at 11 March 2024, the non-Executive Directors' interests in shares had not changed since the end of the period under review.

Post-employment share ownership guideline mechanics

All Executive Directors, including future Directors, are required to build their shareholding through vesting of executive share awards in a Global Nominee over time to ensure policy compliance with share ownership guidelines, including post-employment guidelines.

Mechanisms are in place to restrict the sale or transfer of vested shares held in the Nominee that are subject to (i) post-vesting holding periods and (ii) shareholder ownership guidelines on cessation of employment.

Executive Directors' share plans (audited)**Pete Raby****LTIP**

	Plan	As at 1 January 2023	Allocations during the year	Vested during the year	Lapsed during the year	As at 31 December 2023	Market price at date of allocation	Market price at date of vesting	Performance period
No further performance conditions, vested (subject to 2-year post-vesting holding)	2020	362,377	–	246,198	116,179	–	234.70p	239.52p	01.01.20 – 31.12.22
No further performance conditions, not yet vested	2021	276,486	–	–	–	276,486	315.30p	–	01.01.21 – 31.12.23
Subject to performance conditions	2022	414,320	–	–	–	414,320	287.70p	–	01.01.22 – 31.12.24
	2023	–	412,782	–	–	412,782	300.40p	–	01.01.23 – 31.12.25

Share options

	Plan	As at 1 January 2023	Granted during the year	Exercised during the year	Lapsed during the year	As at 31 December 2023	Option price at grant	Market price at date of vesting/exercise	Performance/maturity period
Continued service met	Sharesave	4,477	–	4,477	–	–	201.00p	297.50p	01.12.19 – 31.05.23
Subject to continued service	Sharesave	4,285	–	–	–	4,285	210.00p	–	01.12.22 – 31.05.26

Total interests in share plans

As at 1 January 2023	As at 31 December 2023
1,276,152 ^{1,2}	1,233,017 ^{2,3}

1. Includes 2020 deferred bonus award.

2. Includes 2021 and 2022 deferred bonus awards.

3. Includes 2023 deferred bonus award.

Richard Armitage**LTIP**

	Plan	As at 1 January 2023	Allocations during the year	Vested during the year	Lapsed during the year	As at 31 December 2023	Market price at date of allocation	Market price at date of vesting	Performance period
Subject to performance conditions	2022	207,587	–	–	–	207,587	307.10p	–	01.01.22 – 31.12.24
	2023	–	220,705	–	–	220,705	300.40p	–	01.01.23 – 31.12.25

Recruitment award

	Plan	As at 1 January 2023	Allocations during the year	Vested during the year	Lapsed during the year	As at 31 December 2023	Market price at date of allocation	Market price at date of vesting	Vesting period
Subject to continued service	2022	144,252	–	144,252	–	–	307.10p	288.21p	30.05.22 – 30.05.23

Share options

	Plan	As at 1 January 2023	Granted during the year	Exercised during the year	Lapsed during the year	As at 31 December 2023	Option price at grant	Market price at date of vesting	Maturity period
Subject to continued service	Sharesave	4,285	–	–	–	4,285	210.00p	–	01.12.22 – 31.05.26

Total interests in share plans

As at 1 January 2023	As at 31 December 2023
356,124	443,964 ¹

1. Includes 2023 deferred bonus award.

Remuneration report continued

Details of plans

LTIP	Details
LTIP	The performance conditions attached to the 2021 awards are set out on page 119. The performance conditions attached to the 2022 awards are on the same basis as the 2021 awards, except that the EPS range was amended to 6% to 13%, and a new ESG measure (carbon reduction) was introduced with a performance range of 5% to 15% carbon reduction. The performance conditions attached to the 2023 awards are set out on page 120.
LTIP-CSOP	LTIP 2020: The award to the CEO was structured as LTIP awards in the form of a conditional award of free shares. LTIP 2021, 2022 and 2023: The awards were structured as LTIP awards in the form of a conditional award of free shares.
UK Sharesave	Details
	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	Details
	Mandatory deferral of one-third of gross bonus result relating to the previous year, which is provided as a conditional award of shares of 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 26 (Related parties) to the consolidated financial statements. This Report was approved by the Board on 11 March 2024.

Remuneration governance

Remuneration Committee role

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, the Group Head of Reward and Ellason LLP, the Committee's independent advisor, 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.

Remuneration Committee membership

The Remuneration Committee is currently composed of four non-Executive Directors and the Chairman of the Company. Each of the non-Executive Directors is regarded by the Board as independent. The Chairman of the Company was considered independent upon appointment. The Remuneration Committee met four times during the year. Attendance at meetings by individual members is detailed in the Corporate Governance Report on page 80.

Key activities during 2023

During 2023, the key areas of focus for the Committee were:

- › determining whether targets for the 2022 bonus and 2020 LTIP were achieved, and, if so, to what extent (plus assessment of any windfall gains associated with the 2020 LTIP);
- › having reviewed the remuneration of the wider workforce, determining remuneration for Executive Directors and other senior executives, applying consistent guiding principles;
- › reviewing whether the measures and structure for the bonus and share incentive schemes remain appropriate, as well as reviewing the overall effectiveness of such schemes;
- › reviewing and agreeing Executive Director personal objectives for 2024;
- › receiving reports on share awards to employees, and employee participation in the Save As You Earn scheme;
- › reviewing feedback from institutional investors ahead of the Company's 2023 Annual General Meeting;
- › reviewing Executive Director share ownership guidelines, and Directors' holdings against the guidelines;
- › receiving regulatory and governance updates, and receiving reports on external market remuneration practices;
- › reviewing and discussing the Company's annual Gender Pay Gap Report;
- › appraising the independent remuneration advisor's performance and reviewing the terms of engagement;
- › approving the Chair's 2024 fees;
- › determining performance targets for the 2023 bonus;
- › determining performance targets for the 2024 share incentive schemes; and
- › reviewing the Committee's terms of reference.

Remuneration report continued

Committee performance evaluation

The Committee's performance was reviewed as part of the Board evaluation (see page 88 for details). It was concluded that the Committee had operated effectively during the period under review.

Committee advisor

Ellason LLP was appointed as the Committee's executive remuneration advisor from 1 January 2021. Ellason specialises in executive remuneration advice and during 2023 provided independent advice on remuneration policy, 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. Ellason reports directly to the Chair of the Remuneration Committee, does not provide any non-remuneration-related services to the Group, has no other connections either with Morgan Advanced Materials' or any of its individual Directors, and is considered to be independent.

Ellason is a signatory to the Remuneration Consultants Group's voluntary Code of Conduct.

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

Advisor	Fees (including expenses, excluding VAT)
Ellason	£42,893

Summary of shareholder voting

The following table shows the results of the binding vote on the 2022 Remuneration Policy (at the 2022 AGM) and the advisory vote on the 2022 Annual Report on Remuneration at the 2023 AGM:

Resolution	For	Against	Withheld
Remuneration Policy	96.45%	3.55%	98,036
Annual Report on Remuneration	98.30%	1.70%	85,987

Compliance statement

During the year under review, the Company has complied with the provisions relating to Directors' remuneration in the UK Corporate Governance Code. 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 439 of the Companies Act 2006 an advisory resolution to approve the Annual Report on Remuneration will be proposed at the AGM on 9 May 2024.

Signed on behalf of the Board

Helen Bunch

COMMITTEE CHAIR

Other disclosures

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 76 to 134 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 00286773.

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 2024 AGM will be held on 9 May 2024, commencing at 10:30am at the offices of Slaughter and May at One Bunhill Row, London, EC1Y 8YY. A circular incorporating the 2024 Notice of AGM is available in the Invest in us section of morganadvancedmaterials.com.

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 78 to 80.

Results and dividends

The total profit (attributable to owners of the parent and non-controlling interests) for the year ended 31 December 2023 was £56.3 million (2022: £96.7 million). Profit before taxation for the same period was £77.8 million (2022: £131.6 million). Revenue was £1,114.7 million (2022: £1,112.1 million) and operating profit was £91.9 million (2022: £140.8 million).

Basic earnings per share* from continuing operations was 16.4 pence (2022: 30.6 pence). Capital and reserves at the end of the year were £398.6 million (2022: £429.6 million). The total profit of £56.3million (2022: £96.7 million) will be transferred to equity.

The Directors recommend the payment of a final dividend of 6.7 pence per share on the Ordinary share capital of the Company, payable on 17 May 2024 to shareholders on the register at the close of business on 26 April 2024. Together with the interim dividend of 5.3 pence per share paid on 17 November 2023, this final dividend, if approved by shareholders, brings the total distribution for the year to 12.0 pence per share (2022: 12.0 pence).

Directors

All those who served as Directors at any time during the year under review are set out on pages 78 to 79. Douglas Caster also served as a Director up until 29 June 2023.

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 126.

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, suppliers and others

Details of how the Directors have had regard to the need to foster the Company's business relationships with customers, suppliers and others, and the effect of that

Other disclosures continued

regard including on the principal decisions taken by the Group during the year, are set out on pages 26 to 27 and pages 30 to 31 of the Strategic Report and on page 87 of the Corporate Governance Report.

Information required by LR 9.8.4R

The information required to be disclosed by Listing Rule 9.8.4 can be found in the following locations:

Details of any long-term incentive schemes	Remuneration Report, page 111
Shareholder waiver of dividends	Financial Statements, note 19, pages 176 to 178
Shareholder waiver of future dividends	Financial Statements, note 19, pages 176 to 178

The remaining disclosures required by LR 9.8.4 are not applicable to the Company.

Overseas branches

As at 31 December 2023, the Company had branches as follows:

- > Morgan AM&T BV (Sweden and Belgium)
- > Carbo San Luis SA (Chile)
- > Carbo San Luis SA (Peru) (in liquidation)
- > Morgan Advanced Materials Industries Ltd (UAE)
- > Morgan Advanced Materials plc (Belgium)
- > Thermal Ceramics UK Limited (Sweden).

People

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.

Engagement with employees – principal decisions

Details of how the Directors have engaged with UK employees can be found on pages 30 to 31 of the Strategic Report. Details of how the Directors had regards to the interests of UK employees and the effect of that regard on principal decisions taken by the Group during the financial year can be found on pages 31 and 32 of the Strategic Report.

Details of how Morgan Advanced Materials encourages employee involvement can be found in the Strategic report on pages 23 to 28.

Employment of disabled people

The Group has a range of employment policies which set out the standards, processes, expectations and responsibilities of its people and the organisation. These policies are designed to ensure that everyone, including those with existing or new disabilities, visible or invisible, are dealt with fairly and have equal opportunity.

Morgan Advanced Materials promotes equal opportunities for all employees and job applicants and does not unlawfully discriminate. The Group makes reasonable adjustments to accommodate any employee who may have a disability within the meaning of all global equality legislation, and where the Group is aware of such disability.

Research and development

The Group recognised £32.9 million in operating costs in respect of research and development (2022: £31.6 million). The Group did not capitalise any development costs in 2023 (2022: £nil). The Group has established four Centres of Excellence (CoEs), which are dedicated to driving materials development, to exacting customer specifications, and delivering performance through materials and production process innovation. The CoEs consolidate the Group's R&D efforts around its core technologies, to increase the effectiveness of our R&D spend, accelerate key projects and increase technical differentiation. The CoEs focus on the execution priorities for the global business units and the Group.

Greenhouse gas emissions, energy consumption and energy efficiency

Details of the Group's annual greenhouse gas emissions, energy consumption and energy efficiency are shown in the Strategic Report on page 53.

Political donations

No political donations have been made. Morgan Advanced Materials has a policy of not making donations to any political party, representative or candidate in any part of the world.

Charitable donations

Morgan Advanced Materials made donations of £42,825 to local charities and community activities in various countries.

Future developments

An indication of likely future developments of the Group is included in the Market Environment and Industry Trends section of the Strategic Report on pages 14 to 17 and the Our Strategy section of the Strategic Report on pages 18 to 19.

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 21 to the consolidated financial statements on pages 179 to 189. 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 2023 is set out in note 40 to the consolidated financial statements on page 211. The rights and obligations attaching to the Company's Ordinary shares, and restrictions on the transfer of shares in the Company (which include specific circumstances in which the Board is entitled to refuse to register the transfer of shares), 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.

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.

Additionally the Company has authorised, issued and fully paid 437,281 (2022: 437,281) cumulative Preference shares classified as borrowings totalling £0.4 million (2022: £0.4 million). The 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.

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 19 to the consolidated financial statements on pages 176 to 178.

Share allotment and repurchase authorities

The Directors were granted authority at the 2023 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 an aggregate nominal amount of £23,780,832 in any circumstances. This amount represented approximately one-third of the Company's issued share capital prior to that meeting. The Directors were also authorised to allot shares and to grant rights up to an aggregate nominal amount of £47,561,664 in connection with a rights issue only (but such amount to be reduced by any allotments made under the first limb of the authority). This amount represented approximately two-thirds of the Company's issued share capital prior to the meeting.

The Directors were also empowered at the 2023 AGM to allot shares for cash on a non-pre-emptive basis, both in connection with a rights issue or similar pre-emptive issue and, otherwise than in connection with any such issue, up to a maximum aggregate nominal amount of £3,567,124. Such amount represented approximately 5% of the Company's issued share capital as it stood prior to the meeting in line with the Pre-Emption Group's Statement of Principles on disapplying pre-emption rights. As permitted by those Principles, the Directors were also empowered to allot shares for cash on a non-pre-emptive basis up to the same amount for use only in connection with an acquisition or a specified capital investment.

The Directors were also authorised at the 2023 AGM to repurchase shares in the capital of the Company up to a maximum aggregate number of 28,536,998 shares. This represented approximately 10% of the Company's issued share capital prior to the meeting.

These share capital authorities and powers are due to lapse at the 2024 AGM at which time the Board will seek fresh authorities and powers.

Employee share and share option schemes

The Company operates a number of employee share and share option schemes. Details of outstanding share awards and share options are given in note 23 to the consolidated financial statements on pages 194 to 196.

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 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.

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.

Major shareholdings

As at the date of this report, insofar as it is known to the Company by virtue of notifications made in accordance with DTR 5, the table below sets out holders of notifiable interests representing 3% or more of the issued Ordinary share capital of the Company (such holdings may have changed since notification to the Company).

	As at 31 December 2023	
	Number of Ordinary shares	Percentage of issued share capital
Ameriprise Financial Inc., and its group	24,186,489	8.48
FIL Limited	15,414,047	5.40
Janus Henderson Group plc	14,540,443	5.10
Aberforth Partners LLP	14,338,459	5.03
Black Creek Investment Management Inc.	14,269,458	5.00
BlackRock, Inc.	14,263,250	4.99
M&G Plc	14,251,115	4.99
AXA Investment Managers SA	14,039,985	4.92
GLG Partners LP	11,410,477	3.99

No changes have been notified to the Company pursuant to Chapter 5 of the Disclosure Guidance and Transparency Rules between the end of the period under review and 11 March 2024, the latest practicable date prior to the date of this report.

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 £230 million multi-currency revolving credit facility agreement, which was signed on 18 November 2022 and the privately placed Note Purchase and Guarantee Agreements signed on 27 October 2016, 20 March 2017 and 23 May 2023, for which the aggregate outstanding loan amounts are US\$172 million, €60 million and the €92 million Schuldschein loan agreement signed on 16 June 2023.

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.

Other disclosures continued

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 United Kingdom adopted international accounting standards 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 United Kingdom adopted international accounting standards.
- 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 78 to 79, confirm that, to the best of their knowledge:

- The Group's consolidated financial statements, which have been prepared in accordance with United Kingdom adopted international accounting standards, 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 2023.

For the purposes of DTR 4.1.5R(2) and DTR 4.1.8, the Directors' Report on pages 76 to 134 and the Strategic Report on pages 2 to 75 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 they are aware, there is no relevant audit information of which the Company's auditor is unaware, and that they have taken all steps that they ought to have taken as a Director to make themselves 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 11 March 2024.

For and on behalf of the Board

Winifred Chime
COMPANY SECRETARY

11 March 2024

Morgan Advanced Materials plc
York House
Sheet Street
Windsor
Berkshire SL4 1DD

Registered in England and Wales,
No. 00286773

Independent Auditor's Report

Report on the audit of the financial statements

1. Opinion

In our opinion:

- the financial statements of Morgan Advanced Materials plc (the 'Company') and its subsidiaries (the 'Group') give a true and fair view of the state of the Group's and of the Company's affairs as at 31 December 2023 and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with United Kingdom adopted international accounting standards;
- the 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 balance sheets;
- the Consolidated statement of changes in equity;
- the Consolidated statement of cash flows;
- the notes 1 to 27 to the Consolidated financial statements;
- the Company balance sheet;
- the Company statement of changes in equity;
- the notes 28 to 44 to the Company financial statements.

The financial reporting framework that has been applied in the preparation of the Group financial statements is applicable law and United Kingdom adopted international accounting standards. The financial reporting framework that has been applied in the preparation of the 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 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 Company for the year are disclosed in note 4 to the financial statements. We confirm that we have not provided any non-audit services prohibited by the FRC's Ethical Standard to the Group or the 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: <ul style="list-style-type: none"> ➤ Inventory valuation; ➤ Impairment of non-financial assets; and ➤ Cyber security incident.
Materiality	The materiality that we used for the Group financial statements was £5.5m which was determined on the basis of 5.3% (FY22: 4.6%) of profit before tax and specific adjusting items (see section 6).
Scoping	Full scope audit work was performed on 17 (FY22: 17) reporting components, and specified audit procedures were undertaken on a further 12 (FY22: 12) reporting components. Our full scope and specified audit procedures covered 72.5% of Group revenue (FY22: 72.0%) and 73.9% of absolute Group profit before tax (FY22: 73.0%).
Significant changes in our approach	Our audit approach is consistent with the previous year with the exception of: <ul style="list-style-type: none"> ➤ The key audit matter with respect to the cyber security incident has been modified to respond to the in-year risk for the Group arising from the cyber incident, which occurred in January 2023, compared with the focus in the previous year which was as a post balance sheet event.

Independent Auditor's Report continued

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 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;
- › obtaining an understanding of the key controls around the budgeting and forecasting process used in the preparation of the going concern analysis and disclosures;
- › 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;
- › assessing the impact of macro-economic conditions on the business; and
- › assessing the adequacy of the disclosures in the financial statements.

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 Company's ability to continue as a going concern for a period of at least 12 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 £175.1m as at 31 December 2023 (FY22: £174.2m). There is a risk that inventory is not valued appropriately because of local manufacturing sites not correctly applying the Group provisioning accounting policy to write-down the net realisable value of excess and obsolete stock due to system limitations. Significant manual intervention is required to record and value inventory.

In the Consolidated Financial Statements, note 1 sets out the Group's accounting policy for inventory valuation and note 15 provides further analysis of the account balance.

How the scope of our audit responded to the key audit matter

We have performed the following audit procedures in respect of this key audit matter:

- › Understood the inventory provisioning processes at each significant component and obtained an understanding of the relevant controls in management's review of the provision;
- › Specifically understood the manual processes and relevant controls adopted during the period affected by the cyber incident, how management maintained inventory records during the impacted period; and the methodology used in the inventory provisioning process;
- › Assessed any unusual manual adjustments to inventory;
- › Assessed the inventory ageing and whether the Group accounting policy of fully providing for inventory more than 12 months has been applied. For items less than 12 months we evaluated the breakdown of the inventory by age;
- › Challenged management's key assumptions in determining inventory provisions by assessing the accuracy and completeness of items included in the provision by taking into account past data and the impact on future usage; and
- › Assessed the mathematical accuracy of the inventory provision by obtaining management's analysis and performing a recalculation based on the key inputs.

Key observations Based on our procedures performed, we are satisfied that the valuation of inventory at 31 December 2023 is appropriate.

5.2. Impairment of non-financial assets**Key audit matter description**

IAS 36 requires that at the end of each reporting period, an entity should assess whether there are any indicators of impairment or indicators that an impairment loss recognised in prior periods should be reversed. If such indication exists, the entity shall estimate the recoverable amount of that asset. Management's review for indicators of impairment or reversal identified sites and assets that required further consideration.

Impairment indicators were identified for certain assets in Seals and Bearings Europe, Seals and Bearings Asia, Electrical Carbon North America and Electrical Carbon Asia. Indicators for impairment reversal were identified at Technical Ceramics Cores and Technical Ceramics Europe. Total impairment charges for the year were £7.3m (FY22: £6.5m) and total impairment reversals were £8.1m (FY22: nil). Note 6 provides further analysis of the balance.

We focused the majority of our work on the carrying values of the cash-generating units (CGUs) where the risk of impairment or impairment reversal was material and the model was sensitive to changes to the input assumptions:

- › Seals and Bearings Asia, where an impairment charge of £1.9m (FY22: £1.6m) was recorded in the year.
- › Technical Ceramics Cores North America, where a full impairment reversal of £5.7m (FY22: nil) has been recorded.

Management has 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 used therein. The key assumptions in assessing non-financial assets for impairment include the discount rate and the short-term projected cash flows and we have focused this key audit matter on those assumptions and the material judgements contained therein. 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.

The Audit Committee Report on page 96 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.

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 relating to the impairment process;
- › Challenged management's indicator assessment for impairment or reversal by performing our own independent consideration of possible indicators;
- › Assessed the integrity of management's impairment model through testing of the mechanical accuracy and 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 the impact of macro-economic conditions on the CGUs;
- › 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 reasonable possible changes in assumptions to challenge the appropriateness of management's assessment of reasonable possible change scenarios; and
- › Worked with our 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 are satisfied that with the valuation of non-financial assets. We provided recommendations to management and the Audit Committee with respect to control improvements related to the review of the value in use models.

Independent Auditor's Report continued

5.3. Cyber security incident

Key audit matter description The Group was the subject of a cyber security incident in January 2023. Following the detection of unauthorised activity on its network, the Group took the decision to temporarily remove access and isolate various parts of its IT systems, including the Group's core financial reporting systems, while the threat was assessed. Following a forensic investigation, access to those systems was restored in an orderly manner.

The cyber security incident has consumed a significant amount of management's time and attention and disrupted the monthly financial close processes across the Group, particularly during the first half of the year. The higher proportion of manual processes and controls implemented in response during this period gives rise to an inherently higher risk of fraudulent financial entries and/or errors.

Specifically we identified a risk relating to the valuation of cyber-related costs as set out in note 6, as well as the completeness of any liabilities or contingent liabilities, relating to potential penalty claims from regulators and/or customers relating to the cyber incident.

The Audit Committee Report on page 96 refers to cyber security as an area discussed 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.

With the assistance of our IT specialists, we have:

- > performed inquiries with Finance and IT management to understand whether any control deficiencies existed that allowed the unauthorised activity to occur;
- > performed inquiries with management's cyber experts and assessed their reports, to understand:
 - the cause and timing of the cyber security incident; and
 - the impact of the cyber security incident and the assessment they have made regarding the availability and integrity of key information and data used in the financial reporting.
- > assessed the competence, capabilities and objectivity of the experts used by management; and
- > considered whether the cyber security incident would have an impact on the nature, timing and extent of our audit procedures to test the completeness and accuracy of information on which we relied and as a result, we performed further audit procedures where we considered it necessary.

We performed a higher degree of substantive testing at the most affected sites and accelerated the timing of our work with a specific focus on the impacted period up to the recovery of existing IT systems or the implementation of new IT systems.

We performed procedures to address the risk from the cyber security incident that incorrect or incomplete financial entries were made, including obtaining an understanding of the relevant manual controls adopted over the outage period, reconciliations of opening balances entered in the recovered or new systems from the manual records maintained during the outage period.

We have assessed the valuation of the cyber-related costs incurred, impairment of IT assets as well as completeness of any liabilities or contingent liabilities relating to the risk of any litigation or fines.

Our enquiries included direct contact with management's external experts, including considerations of whether there had been any reporting to regulators, to identify any financial reporting impact arising.

Key observations We did not identify any significant accounting issues as a consequence of the cyber incident. We have shared controls observations with management relating to the data migration and related reconciliations performed between the previous and newly implemented ERP systems during the year.

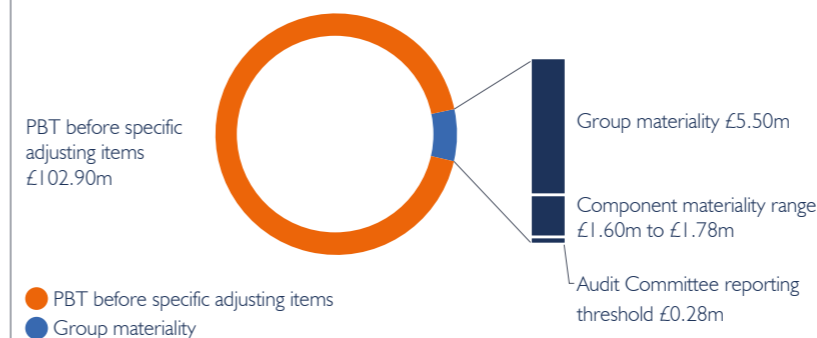
6. Our application of materiality

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	Company financial statements
Materiality	£5.5m (FY22: £6.0m)	£3.3m (FY22: £3.6m)
Basis for determining materiality	Materiality was determined based on 5.3% (FY22: 4.6%) of profit before tax and specific adjusting items as described in note 6.	Materiality was determined based on the Company's net assets (3%). This was then capped at 60% of Group materiality (FY22: 3% of net assets capped at 60% of Group materiality).
Rationale for the benchmark applied	Profit before tax and specific adjusting items is a key metric for users of the financial statements and reflects the way business performance is reported and assessed by external users of the financial statements.	The Company is non-trading and contains investments in the Group's trading components and as a result, we have determined net assets for the current year to be the appropriate basis.



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	Company financial statements
Performance materiality	65% (FY22: 65%) of Group materiality	65% (FY22: 65%) of Company materiality
Basis and rationale for determining performance materiality	In determining performance materiality, we considered the following factors: <ul style="list-style-type: none"> > our risk assessment, including our assessment of the Group's overall control environment including the impact of the cyber security incident on the Group, and our past experience of the audit; > the disaggregated nature of the Group and the degree of centralisation in the Group's financial reporting processes which reduces the likelihood of an individually material error; > the consistency of senior personnel and executive management; and > the level of corrected and uncorrected misstatements identified in the prior year audit. 	

6.3 Error reporting threshold

We agreed with the Audit Committee that we would report to the Committee all audit differences in excess of £0.28m (FY22: £0.30m), 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 70 sites in 20 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 focused our Group audit scope across all five of the established Global 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 Company is located in the UK and is audited directly by the Group audit team.

We have considered reporting components based on their contribution to Group revenue, and profit. Full scope audit work was completed on 17 (FY22: 17) components and specified audit procedures were undertaken on a further 12 (FY22: 12) components. Each reporting component in scope, with the exception of the Company, was subject to an audit materiality level between £1.60m and £1.78m (FY22: £1.76m and £1.95m). The Company component was subject to an audit materiality of £3.30m. Our full scope and specified audit procedures covered 72.5% of Group revenue (FY22: 72%) and 73.9% of absolute Group profit before tax (FY22: 73%).

At a Group level, we tested the consolidation and performed analytical review procedures over components that were not in scope for full audits or specified audit procedures.

Independent Auditor's Report continued

7.2. Our consideration of the control environment

The Group uses a number of different IT systems across the reporting components and the control environment is decentralised and reliant on manual processes. We involved our IT specialists to obtain an understanding of general IT controls, including general IT controls in place over the newly implemented ERP system in certain geographies during the year.

We obtained an understanding of relevant controls over revenue, inventory valuation, impairment reviews, the financial close and reporting process and management's review of judgements and estimates. We did not place reliance on controls over revenue at any site this year, due to the impact of the cyber incident where there were manual controls in operation during the year and general IT controls were not operating throughout the whole period.

Management is continuing work to align the systems of financial control and reporting across the Group, with further improvements required to the IT environment in order for us to adopt a controls reliance approach to our audit. Management have included an assessment on page 95.

In response to the cyber security incident in January 2023, we performed incremental procedures as described in section 5.3.

7.3. Our considerations of climate-related risks

In planning our audit, we have considered the potential impact of climate change on the Group's business and its financial statements.

The Group considers the risk and opportunities relevant to be an emerging issue for the Group. As a part of our audit procedures, we have obtained management's climate-related risk assessment and held discussions with those charged with governance to understand the process of identifying climate-related risks, the determination of mitigating actions and the impact on the Group's financial statements. While the directors acknowledged that the transition and physical risks posed by climate change have the potential to impact the medium- to long-term success of the business, they have assessed that there is no material impact arising from climate change on the judgements and estimates made in the financial statements as at 31 December 2023 as explained in note 1 on page 149.

We performed our own qualitative risk assessment of the potential impact of climate change on the Group's account balances and classes of transactions and did not identify any additional risks of material misstatement. Our procedures include reading disclosures included in the Strategic Report to consider whether they are materially consistent with the financial statements and our knowledge obtained in the audit.

7.4. Working with other auditors

The audit work on all components was performed by Deloitte Touche Tohmatsu Limited member firms. The component work was performed under the direction, supervision and review of the Group audit team.

Revenue



● Full audit scope 54%
● Specified audit procedures 19%
● Review at group level 27%

Profit before tax



● Full audit scope 54%
● Specified audit procedures 20%
● Review at group level 26%

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 auditors 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;
- Providing direction on enquiries made by the component auditors through online and telephone conversations and in-person visits; and
- A review of the component auditors' engagement file by a senior member of the Group engagement team.

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.

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 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 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 directors, management, internal audit and the audit committee about their own identification and assessment of the risks of irregularities, including those that are specific to the Group's sector;
- 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; and
 - the internal controls established to mitigate risks of fraud or non-compliance with laws and regulations.
- the implications of the cyber security incident which occurred in January 2023.
- 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: the cyber security incident 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, data protection and 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 cyber security incident as a key audit matter related to the potential risk of fraud or non-compliance with laws and regulations.

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. 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, including in respect of the cyber security incident as described in section 5.3;
- 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 tested a sample of sales recognised during the period by agreeing to invoice, dispatch

Independent Auditor's Report continued

note and cash collection (where appropriate) to assess whether 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 significant component audit teams and internal specialists 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 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 70;
- › 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 page 70;
- › the directors' statement on fair, balanced and understandable set out on page 134;
- › the board's confirmation that it has carried out a robust assessment of the emerging and principal risks set out on page 54;
- › the section of the annual report that describes the review of effectiveness of risk management and internal control systems set out on page 97; and
- › the section describing the work of the audit committee set out on page 93.

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 Company, or returns adequate for our audit have not been received from branches not visited by us; or
- › the 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 four years, covering the years ending 31 December 2020 to 31 December 2023.

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.

As required by the Financial Conduct Authority (FCA) Disclosure Guidance and Transparency Rule (DTR) 4.1.15R – DTR 4.1.18R, these financial statements will form part of the Electronic Format Annual Financial Report filed on the National Storage Mechanism of the FCA in accordance with DTR 4.1.15R – DTR 4.1.18R. This auditor's report provides no assurance over whether the Electronic Format Annual Financial Report has been prepared in compliance with DTR 4.1.15R – DTR 4.1.18R.

Jane Makrakis, ACA
(Senior statutory auditor)
For and on behalf of Deloitte LLP
Statutory Auditor

Reading, United Kingdom

11 March 2024

Financial statements



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Consolidated income statement

FOR THE YEAR ENDED 31 DECEMBER 2023

	31 December 2023			31 December 2022			
	Note	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	1,114.7	–	1,114.7	1,112.1	–	1,112.1
Operating costs before amortisation of intangible assets, impairments and reversal of impairments of non-financial assets	4	(994.4)	(25.9)	(1,020.3)	(961.1)	1.0	(960.1)
Profit from operations before amortisation of intangible assets, impairments and reversal of impairments of non-financial assets	3	120.3	(25.9)	94.4	151.0	1.0	152.0
Amortisation of intangible assets	4	(3.3)	–	(3.3)	(4.7)	–	(4.7)
Impairment of non-financial assets	6	–	(7.3)	(7.3)	–	(6.5)	(6.5)
Reversal of impairment of non-financial assets	6	–	8.1	8.1	–	–	–
Operating profit	3	117.0	(25.1)	91.9	146.3	(5.5)	140.8
Finance income		3.9	–	3.9	1.6	–	1.6
Finance expense		(18.0)	–	(18.0)	(10.8)	–	(10.8)
Net financing costs	7	(14.1)	–	(14.1)	(9.2)	–	(9.2)
Profit before taxation		102.9	(25.1)	77.8	137.1	(5.5)	131.6
Income tax expense	8	(26.0)	3.8	(22.2)	(37.1)	1.1	(36.0)
Profit from continuing operations		76.9	(21.3)	55.6	100.0	(4.4)	95.6
Profit from discontinued operations²	9	–	0.7	0.7	–	1.1	1.1
Profit for the year		76.9	(20.6)	56.3	100.0	(3.3)	96.7
Profit for the year attributable to:							
Shareholders of the Company		67.9	(20.6)	47.3	91.3	(3.3)	88.0
Non-controlling interests		9.0	–	9.0	8.7	–	8.7
		76.9	(20.6)	56.3	100.0	(3.3)	96.7
Earnings per share	10						
Continuing and discontinued operations							
Basic earnings per share				16.6p			31.0p
Diluted earnings per share				16.5p			30.7p
Continuing operations							
Basic earnings per share				16.4p			30.6p
Diluted earnings per share				16.3p			30.3p
Dividends³							
Interim dividend							
– pence				5.30p			5.30p
– £m				15.1			15.1
Proposed final dividend							
– pence				6.70p			6.70p
– £m				19.1			19.1

1. Details of specific adjusting items from continuing operations are given in note 6 to the consolidated financial statements.

2. Profits 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.

Consolidated statement of comprehensive income

FOR THE YEAR ENDED 31 DECEMBER 2023

	Note	31 December 2023 £m	31 December 2022 £m
Profit for the year		56.3	96.7
Other comprehensive (expense)/income:			
Items that will not be reclassified subsequently to profit or loss:			
Remeasurement (loss)/gain on defined benefit plans	22	(11.5)	5.5
Tax effect of components of other comprehensive income not reclassified	8	(0.5)	(3.4)
		(12.0)	2.1
Items that may be reclassified subsequently to profit or loss:			
Foreign exchange translation differences		(32.8)	17.5
Cash flow hedges:			
Change in fair value		1.1	(0.2)
Transferred to profit and loss		0.2	0.1
Net investment hedges:			
Change in fair value		(0.3)	–
		(31.8)	17.4
Total other comprehensive (expense)/income		(43.8)	19.5
Total comprehensive income		12.5	116.2
Attributable to:			
Shareholders of the Company		6.7	106.7
Non-controlling interests		5.8	9.5
		12.5	116.2
Total comprehensive income attributable to shareholders of the Company arising from:			
Continuing operations		6.0	105.6
Discontinued operations		0.7	1.1
		6.7	106.7

Consolidated balance sheet

AS AT 31 DECEMBER 2023

	Note	2023 £m	2022 £m
Assets			
Property, plant and equipment	11	293.8	283.2
Right-of-use assets	12	31.6	33.6
Intangible assets: goodwill	13	177.5	181.9
Intangible assets: other	13	4.7	7.1
Investments		2.2	–
Other receivables	16	3.4	3.2
Deferred tax assets	14	17.6	15.3
Total non-current assets		530.8	524.3
Inventories	15	175.1	174.2
Derivative financial assets		1.5	1.3
Trade and other receivables	16	191.6	202.5
Current tax receivable		1.2	0.3
Cash and cash equivalents	17	124.5	117.7
Total current assets		493.9	496.0
Total assets		1,024.7	1,020.3
Liabilities			
Borrowings	20	309.1	230.1
Lease liabilities	20	36.6	41.4
Employee benefits: pensions	22	25.2	15.6
Provisions	24	11.5	16.1
Non-trade payables	18	2.4	2.1
Deferred tax liabilities	14	1.8	2.0
Total non-current liabilities		386.6	307.3
Borrowings and bank overdrafts	20	0.6	36.1
Lease liabilities	20	10.5	10.5
Trade and other payables	18	192.0	195.0
Current tax payable		25.6	30.3
Provisions	24	10.3	9.9
Derivative financial liabilities		0.5	1.6
Total current liabilities		239.5	283.4
Total liabilities		626.1	590.7
Total net assets		398.6	429.6
Equity			
Share capital	19	71.3	71.3
Share premium		111.7	111.7
Reserves		6.5	35.1
Retained earnings		170.8	170.9
Total equity attributable to shareholders of the Company		360.3	389.0
Non-controlling interests		38.3	40.6
Total equity		398.6	429.6

The financial statements were approved by the Board of Directors on 11 March 2024 and were signed on its behalf by:

Pete Raby CHIEF EXECUTIVE OFFICER
Richard Armitage CHIEF FINANCIAL OFFICER

Consolidated statement of changes in equity

FOR THE YEAR ENDED 31 DECEMBER 2023

	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 2022	71.3	111.7	(16.7)	(0.1)	(1.0)	35.7	0.6	109.1	310.6	39.0	349.6
Profit for the year	–	–	–	–	–	–	–	88.0	88.0	8.7	96.7
Other comprehensive income/(expense):											
Remeasurement gain on defined benefit plans and related taxes	–	–	–	–	–	–	–	2.1	2.1	–	2.1
Foreign exchange differences and related taxes	–	–	16.7	–	–	–	–	–	16.7	0.8	17.5
Cash flow hedging fair value changes and transfers	–	–	–	(0.1)	–	–	–	–	(0.1)	–	(0.1)
Total other comprehensive income/(expense)	–	–	16.7	(0.1)	–	–	–	2.1	18.7	0.8	19.5
Total comprehensive income/(expense)	–	–	16.7	(0.1)	–	–	–	90.1	106.7	9.5	116.2
Transactions with owners:											
Dividends	–	–	–	–	–	–	–	(31.6)	(31.6)	(7.9)	(39.5)
Equity-settled share-based payments	–	–	–	–	–	–	–	5.7	5.7	–	5.7
Own shares acquired for share incentive schemes (net)	–	–	–	–	–	–	–	(2.4)	(2.4)	–	(2.4)
At 31 December 2022	71.3	111.7	–	(0.2)	(1.0)	35.7	0.6	170.9	389.0	40.6	429.6
At 1 January 2023	71.3	111.7	–	(0.2)	(1.0)	35.7	0.6	170.9	389.0	40.6	429.6
Profit for the year	–	–	–	–	–	–	–	47.3	47.3	9.0	56.3
Other comprehensive income/(expense):											
Remeasurement loss on defined benefit plans and related taxes	–	–	–	–	–	–	–	(12.0)	(12.0)	–	(12.0)
Foreign exchange differences and related taxes	–	–	(29.6)	–	–	–	–	–	(29.6)	(3.2)	(32.8)
Cash flow hedging fair value changes and transfers	–	–	–	1.3	–	–	–	–	1.3	–	1.3
Net investment hedging fair value changes and transfers	–	–	(0.3)	–	–	–	–	–	(0.3)	–	(0.3)
Total other comprehensive income/(expense)	–	–	(29.9)	1.3	–	–	–	(12.0)	(40.6)	(3.2)	(43.8)
Total comprehensive income/(expense)	–	–	(29.9)	1.3	–	–	–	35.3	6.7	5.8	12.5
Transactions with owners:											
Dividends	–	–	–	–	–	–	–	(34.2)	(34.2)	(8.1)	(42.3)
Equity-settled share-based payments	–	–	–	–	–	–	–	2.9	2.9	–	2.9
Own shares acquired for share incentive schemes (net)	–	–	–	–	–	–	–	(4.1)	(4.1)	–	(4.1)
At 31 December 2023	71.3	111.7	(29.9)	1.1	(1.0)	35.7	0.6	170.8	360.3	38.3	398.6

Details of the reserves are provided in note 19.

Consolidated statement of cash flows

FOR THE YEAR ENDED 31 DECEMBER 2023

	31 December 2023	31 December 2022
	Note	£m
Operating activities		
Profit for the year from continuing operations		55.6
Profit for the year from discontinued operations	9	0.7
Adjustments for:		
Depreciation – property, plant and equipment		31.9
Depreciation – right-of-use assets		7.6
Amortisation		3.3
Net financing costs	7	14.1
Profit on disposal of business	2.6	–
Non-cash specific adjusting items included in operating profit		(2.5)
Fair value gain on equity instruments held at FVTPL		(0.9)
Profit on sale of property, plant and equipment		(1.6)
Income tax expense	8	22.2
Equity-settled share-based payment expense	4	2.9
Cash generated from operations before changes in working capital and provisions		133.3
Increase in trade and other receivables		(4.0)
Increase in inventories		(12.3)
Increase in trade and other payables		13.3
Decrease in provisions		(3.4)
Payments to defined benefit pension plans (net of IAS 19 pension charges)	22	(0.2)
Cash generated from operations		126.7
Interest paid – borrowings and overdrafts		(15.5)
Interest paid – lease liabilities		(2.4)
Income tax paid		(30.3)
Net cash from operating activities		78.5
Investing activities		
Purchase of property, plant and equipment and software		(60.4)
Purchase of investments	21	(5.6)
Proceeds from sale of property, plant and equipment		1.8
Grants received for purchase of equipment		0.1
Interest received		3.9
Disposal of investments	2	–
Net cash from investing activities		(60.2)
Financing activities		
Purchase of own shares for share incentive schemes	19	(4.7)
Proceeds from exercise of share options	19	0.6
Increase in borrowings	17	247.2
Repayment of borrowings	17	(193.9)
Payment of lease liabilities	17	(8.9)
Dividends paid to shareholders of the Company		(34.2)
Dividends paid to non-controlling interests		(8.1)
Net cash from financing activities		(2.0)
Net increase/(decrease) in cash and cash equivalents		16.3
Cash and cash equivalents at start of the year		117.7
Effect of exchange rate fluctuations on cash held		(9.5)
Cash and cash equivalents at year end	17	124.5

Notes to the consolidated financial statements

I. Material accounting policies, estimates and judgements

Morgan Advanced Materials plc (the 'Company') is a public company limited by shares incorporated in the UK under the Companies Act and is headquartered in the UK. The address of the registered office is given in Shareholder information on page 220.

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 75.

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 2023. 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 ('IFRS') as adopted by the UK. 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 198 to 216.

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.

Material 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) 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.

Notes to the consolidated financial statements continued

I. Material 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 and accumulated in the translation reserve.

Specific adjusting items

The Group uses specific adjusting items, which are not defined or specified under IFRS. These specific adjusting items, which are not considered to be a substitute for IFRS measures, provide additional helpful information. 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 as or when 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 (GBU). 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 2023, 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 GBU, 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 relate to a product or process that is technically and commercially feasible, and when 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.

I. Material accounting policies, estimates and judgements (continued)

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 and 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.

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 (ie 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 (ie including the forward elements) as the hedging instrument for all of its hedging relationships involving forward contracts.

Note 21 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 19.

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.

Notes to the consolidated financial statements continued

I. Material accounting policies, estimates and judgements (continued)

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 the 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.

Net investment hedge accounting

The Group uses foreign currency denominated borrowings as a hedge against translation exposure on the Group's net investment in overseas companies. Where the hedge is fully effective at hedging, the variability in the net assets of such companies caused by changes in exchange rates and the changes in value of borrowings are recognised in other comprehensive income and accumulated in the translation reserve. The ineffective part of any changes in value caused by changes in exchange rates is recognised immediately in profit or loss.

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, impairments and reversal of impairments of non-financial 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 USD5,000 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 or 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.

I. Material accounting policies, estimates and judgements (continued)

(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 or groups of cash-generating units and is tested at least annually for impairment. If the recoverable amount of the cash-generating unit or group of cash-generating units is less than the carrying amount of the unit or group, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit or group and then to reduce the carrying amount of the other intangibles and other assets of the unit or group on a pro-rate basis. An impairment loss recognised for goodwill is not reversed in a subsequent period.

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

When the Group incurs configuration and customisation costs as part of a cloud-based software-as-a-service agreement, and where this does not result in the creation of an asset which the Group has control over, then these costs are expensed.

Impairment of non-financial assets, excluding goodwill

The carrying amounts of the Group's assets and cash-generating units are reviewed at each balance sheet date to determine whether there is any indication of impairment. If any such indication exists, the asset or cash-generating unit's recoverable amount is estimated.

The recoverable amount of other assets and cash-generating units 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 or cash-generating unit. 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 or cash-generating unit'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.

Notes to the consolidated financial statements continued

I. Material accounting policies, estimates and judgements (continued)

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 (ECL)' 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 bank balances and cash deposits. Cash deposits include demand deposits and short-term highly liquid investments with maturities of three months or less on origination 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.

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 (ie forming part of shareholders' funds) only to the extent that they meet the following two conditions:

- (i) they include no contractual obligations upon the Group to deliver cash or other financial assets or to exchange financial assets or financial liabilities with another party under conditions that are potentially unfavourable to the Group; and
- (ii) where the instrument will or may be settled in the Company's own equity instruments, it is either a non-derivative that includes no obligation to deliver a variable number of the Company's own equity instruments or is a derivative that will be settled by the Company exchanging a fixed amount of cash or other financial assets for a fixed number of its own equity instruments.

To the extent that this definition is not met, the proceeds of issue are classified as a financial liability. Where the instrument so classified takes the legal form of the Company's own shares, the amounts presented in these financial statements for called-up share capital and share premium account exclude amounts in relation to those shares.

Finance payments associated with financial liabilities are dealt with as part of finance expenses. Finance payments associated with financial instruments that are classified in equity are dividends and are recorded directly in equity.

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.

I. Material accounting policies, estimates and judgements (continued)

(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.

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 the substance of the shares does not contain an equity element. 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

Equity dividends on Ordinary share capital are recognised as a liability in the Company's financial statements on the date that the shareholder's right to receive payment is established. Dividends declared after the balance sheet date are not recognised as there is no present obligation at the balance sheet date.

Critical accounting judgements and key sources of estimation uncertainty

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.

Notes to the consolidated financial statements continued

I. Material accounting policies, estimates and judgements (continued)

Critical accounting 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
- impairment of non-financial assets which are material
- 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.

For the year ended 31 December 2023, costs associated with our response to the cyber security incident and charges in relation to the impact of Argentina's currency devaluation were also classified as specific adjusting items, due to their size and nature.

Determining whether an item is part of specific adjusting items requires judgement to determine the nature and the intention of the transaction.

Note 24: 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.

Key sources of estimation uncertainty

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 notes below.

The potential climate change-related risks and opportunities to which the Group is exposed, as identified by management, are disclosed in the Group's TCFD disclosures on pages 44 to 53. Management has assessed the potential financial impacts relating to the identified risks, primarily considering the useful lives of property, plant and equipment, the possibility of impairment of goodwill and other long-lived assets and the recoverability of the Group's deferred tax assets. Management has exercised judgement in concluding that there are no further material financial impacts of the Group's climate-related risks and opportunities on the consolidated financial statements. These judgements will be kept under review by management as the future impacts of climate change depend on environmental, regulatory and other factors outside of the Group's control which are not all currently known.

Note 22: Pensions and other post-retirement employee benefits: key actuarial assumptions

The principal actuarial assumptions applied to pensions are shown in note 22, including a sensitivity analysis of the reasonably possible changes for the inflation, discount rate and mortality rate assumptions. 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.

I. Material accounting policies, estimates and judgements (continued)

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 14: 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. While 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 21: Credit risk

Note 21 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.

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 75. The financial position of the Group, its cash flows, liquidity position and borrowing facilities, are described in the Financial Review on pages 64 to 69. In addition, note 21 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 £230.0 million unsecured multi-currency revolving credit facility, which matures in November 2028. As at 31 December 2023, the Group had both significant available liquidity and headroom on its covenants. Total committed borrowing facilities were £496.9 million. The amount drawn under these facilities was £309.0 million, which together with net cash and cash equivalents of £123.9 million, gave a total headroom of £311.8 million. The multi-currency revolving credit facility was £42.1 million drawn. The Group had no scheduled debt maturities until 2026.

The principal borrowing facilities are subject to covenants that are measured semi-annually in June and December, being net debt to EBITDA of a maximum of 3 times and interest cover of a minimum of 4 times, based on measures defined in the facilities agreements which are adjusted from the equivalent IFRS amounts.

The Group has carefully modelled its cash flow outlook, taking account of reasonably possible changes in trading performance, exchange rates and plausible downside scenarios. This review indicated that there was sufficient headroom and liquidity for the business to continue for the 18 month period based on the facilities available as discussed in note 21 to the financial statements. The Group was also expected to be in compliance with the required covenants discussed above.

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 46% and an increase in net debt of 40% would still allow the Group to operate within its financial covenants. The Directors do not consider either of these scenarios to be plausible given the diversity of the Group's end-markets and its broad manufacturing base.

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. As part of the ongoing risk management process, principal and emerging risks are identified and reviewed on a regular basis. In addition, the Directors have assessed the risk of climate change and do not consider that it will impact the Group's ability to operate as a going concern for the period under consideration.

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.

Notes to the consolidated financial statements continued

1. Material accounting policies, estimates and judgements (continued)

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 in the Definitions and reconciliations of non-GAAP measures to GAAP measures section on pages 72 to 75.

Newly adopted standards

In the current year, the Group has applied a number of amendments to IFRS Accounting Standards as adopted by the UK that are mandatorily effective for an accounting period that begins on or after 1 January 2023. Their adoption has not had any material impact on the disclosures or on the amounts reported in these financial statements.

- › IFRS 17 Insurance Contracts (including the June 2020 and December 2021 Amendments to IFRS 17)
- › Amendments to IAS 1 Presentation of Financial Statements and IFRS Practice Statement 2 Making Material Judgements – Disclosure of Accounting Policies
- › Amendments to IAS 12 Income Taxes – Deferred Tax related to Assets and Liabilities arising from a Single Transaction
- › Amendments to IAS 12 Income Taxes – International Tax Reform – Pillar Two Model Rules
- › Amendments to IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors – Definition of Accounting Estimates.

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 10 and IAS 28 Sale or Contribution of Assets between an Investor and its Associate or Joint Venture
- › Amendments to IAS 1 Classification of Liabilities as Current or Non-current
- › Amendments to IAS 1 Non-current Liabilities with Covenants
- › Amendments to IAS 7 and IFRS 7 Supplier Finance Arrangements
- › Amendments to IFRS 16 Lease Liability in a Sale and Leaseback.

The above standards and interpretations are effective for the period beginning 1 January 2024 and adoption 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.

2. Acquisitions and disposals

2023

There were no acquisitions or disposals of businesses by the Group in 2023.

2022

Disposal of Sukhoy Log

On 29 July 2022, the Group completed the sale of its investment in the joint venture Sukhoy Log, based in Russia. The investment had a carrying value of £nil having been fully impaired in previous years. The Group received consideration of £0.6 million and incurred transaction costs of £0.2 million, resulting in a net consideration of £0.4 million. A profit on disposal of £0.4 million was recognised in specific adjusting items within the consolidated income statement, see also note 6.

There was no income received from Sukhoy Log in the year ended 31 December 2022. The disposal group was included in the Thermal Ceramics operating segment.

3. Segment reporting

The Group's results are reported as five separate GBUs, which have been identified as the Group's reportable operating segments, as detailed on page 7. 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. We will in future manage the Group through three distinct segments: Thermal Products, Performance Carbon and Technical Ceramics. This new structure will be effective from 1 January 2024. More information on this is included on page 69.

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		Electrical Carbon		Seals and Bearings	
	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m
Continuing operations								
Revenue from external customers	402.2	421.4	52.2	57.8	201.4	188.7	145.8	148.5
Segment adjusted operating profit¹	34.5	48.7	5.7	7.8	41.5	39.7	11.4	19.0
Corporate costs ²								
Group adjusted operating profit¹								
Amortisation of intangible assets	(1.2)	(1.6)	(0.2)	(0.3)	(0.5)	(0.7)	(0.7)	(0.8)
Operating profit before specific adjusting items	33.3	47.1	5.5	7.5	41.0	39.0	10.7	18.2
Specific adjusting items included in operating profit/(loss) ³	(8.0)	(2.8)	(1.3)	–	(2.3)	0.1	(7.4)	(1.6)
Operating profit/(loss)	25.3	44.3	4.2	7.5	38.7	39.1	3.3	16.6
Finance income								
Finance expense								
Profit before taxation								
Segment assets	333.9	361.2	42.6	44.0	174.1	159.5	110.8	115.8
Segment liabilities	92.6	93.2	8.5	8.9	35.5	32.6	25.1	26.5
Segment capital expenditure	13.6	16.8	3.6	3.5	16.1	8.7	12.1	9.7
Segment depreciation – property, plant and equipment	11.8	11.2	2.1	2.1	5.8	5.3	5.8	6.0
Segment depreciation – right-of-use assets	3.2	3.2	0.3	0.3	0.9	1.0	0.5	0.6
Segmental impairment of non-financial assets	–	3.2	–	–	1.5	–	5.8	1.6
Segment reversal of impairment of non-financial assets	2.4	–	–	–	–	–	–	–

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 218, reconciliations of the statutory results to the adjusted measures can be found on pages 72 to 75.
2. Corporate costs consist of central head office costs.
3. Details of specific adjusting items from continuing operations are given in note 6 to the consolidated financial statements.

Notes to the consolidated financial statements continued

3. Segment reporting (continued)

	Technical Ceramics		Segment totals		Corporate costs		Group	
	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m
Continuing operations								
Revenue from external customers	313.1	295.7	1,114.7	1,112.1	–	–	1,114.7	1,112.1
Segment adjusted operating profit¹	33.1	41.7	126.2	156.9	–	–	126.2	156.9
Corporate costs ²					(5.9)	(5.9)	(5.9)	(5.9)
Group adjusted operating profit¹							120.3	151.0
Amortisation of intangible assets	(0.7)	(1.3)	(3.3)	(4.7)	–	–	(3.3)	(4.7)
Operating profit before specific adjusting items	32.4	40.4	122.9	152.2	(5.9)	(5.9)	117.0	146.3
Specific adjusting items included in operating profit/(loss) ³	8.0	(1.2)	(11.0)	(5.5)	(14.1)	–	(25.1)	(5.5)
Operating profit/(loss)	40.4	39.2	111.9	146.7	(20.0)	(5.9)	91.9	140.8
Finance income							3.9	1.6
Finance expense							(18.0)	(10.8)
Profit before taxation							77.8	131.6
Segment assets	210.6	199.8	872.0	880.3	152.7	140.0	1,024.7	1,020.3
Segment liabilities	74.7	86.3	236.4	247.5	389.7	343.2	626.1	590.7
Segment capital expenditure	14.9	19.3	60.3	58.0	–	–	60.3	58.0
Segment depreciation – property, plant and equipment	6.4	5.7	31.9	30.3	–	–	31.9	30.3
Segment depreciation – right-of-use assets	2.7	2.7	7.6	7.8	–	–	7.6	7.8
Segment impairment of non-financial assets	–	1.7	7.3	6.5	–	–	7.3	6.5
Segment reversal of impairment of non-financial assets	5.7	–	8.1	–	–	–	8.1	–

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 218, reconciliations of the statutory results to the adjusted measures can be found on pages 72 to 75.

2. Corporate costs consist of central head office costs.

3. Details of specific adjusting items from continuing operations are given in note 6 to the consolidated financial statements.

Revenue from external customers and non-current assets by geography

	Revenue from external customers		Non-current assets (excluding tax and financial instruments)	
	2023 £m	2022 £m	2023 £m	2022 £m
Continuing operations				
US	427.4	405.6	219.8	212.6
China	114.8	121.4	43.4	45.5
Germany	88.7	85.1	41.9	38.0
UK (the Group's country of domicile)	43.6	53.2	101.6	101.1
Other Asia, Australasia, Middle East and Africa	197.1	194.1	54.6	61.2
Other Europe	173.2	182.0	37.1	37.5
Other North America	44.9	39.1	2.1	2.1
South America	25.0	31.6	12.7	11.0
	1,114.7	1,112.1	513.2	509.0

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 5% of revenue.

3. Segment reporting (continued)

Revenue from external customers by end-market

	2023 £m	2022 £m
Continuing operations		
Semiconductors	108.6	91.3
Healthcare	78.7	74.7
Clean energy and clean transportation	50.0	51.7
Faster growing markets	237.3	217.7
Industrial	315.9	344.5
Conventional transportation	200.2	179.9
Metals	150.2	159.9
Petrochemical and chemical	110.8	112.6
Security and defence	68.5	65.2
Conventional energy	31.8	32.3
Core markets	877.4	894.4
	1,114.7	1,112.1

Intercompany sales to other segments

	Thermal Ceramics		Molten Metal Systems		Electrical Carbon		Seals and Bearings		Technical Ceramics		Segment totals	
	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m
Intercompany sales to other segments	1.0	0.4	0.1	0.1	0.7	0.5	2.0	0.7	0.7	1.0	4.5	2.7

4. Operating costs before specific adjusting items

	Note	2023 £m	2022 £m
Continuing operations			
Change in stocks of finished goods and work in progress		(2.9)	(4.5)
Raw materials and consumables		305.6	308.6
Other operating costs		164.9	176.4
		467.6	480.5
Employee costs:			
Wages and salaries		315.3	292.3
Equity-settled share-based payment expense	23	2.9	5.1
Social security costs and other benefits		66.5	62.1
Pension costs	22	16.4	16.2
		401.1	375.7
Depreciation – property, plant and equipment	11	31.9	30.3
Depreciation – right-of-use assets	12	7.6	7.8
		39.5	38.1
Short-term leases and leasing of low value assets:			
Plant and equipment		0.1	0.1
Other leases		0.4	0.4
		0.5	0.5
Other operating charges and income:			
Net foreign exchange gains/(losses)		2.3	(2.0)
Net other operating charges		83.4	68.3
		85.7	66.3
Total operating costs before specific adjusting items and amortisation of intangible assets		994.4	961.1
Amortisation of intangible assets	13	3.3	4.7
Total operating costs before specific adjusting items		997.7	965.8

Notes to the consolidated financial statements continued

4. Operating costs before specific adjusting items (continued)

The following costs are included in total operating costs before specific adjusting items in the table above:

1. Research and development

The Group recognised £32.9 million in expense in respect of research and development (2022: £31.6 million). These costs are included in employee costs and other operating costs in the above table. There are no individually material project costs.

2. Audit and non-audit fees

A summary of the audit and non-audit fees in respect of services provided by the auditor, which are included in net other operating costs, for the year ended 31 December 2023 is set out below. Additional audit fees of £2.4 million were incurred for the audit of the Company's annual accounts and the audits of the subsidiaries of the Company in relation to the cyber security incident, of which £1.2 million relates to the previous year. Fees in relation to non-audit services were £38,000 (2022: £41,000).

	2023 £m	2022 £m
Fees payable to the Company's auditor for the audit of the Company's annual accounts:		
in respect of the current year	1.2	0.8
in respect of the prior year	1.2	–
Fees payable to the Company's auditor and its associates for other services:		
the auditing of accounts of any subsidiaries of the Company	2.8	2.1
audit-related assurance services	–	0.1
	5.2	3.0

5. Staff numbers

The monthly average number of persons employed by the Group (including Directors) during the year, analysed by reporting segment, was as follows:

	Number of employees	
	2023	2022
Reportable operating segments		
Thermal Ceramics	2,470	2,430
Molten Metal Systems	440	430
Electrical Carbon	1,440	1,390
Seals and Bearings	1,410	1,370
Technical Ceramics	2,860	2,560
Segment total	8,620	8,180
Corporate	50	50
Group	8,670	8,230

Average employee numbers have been rounded to the nearest 10.

6. Specific adjusting items

	Note	2023 £m	2022 £m
Continuing operations			
Costs associated with the cyber security incident		(14.7)	–
Charges in relation to the impact of Argentina's currency devaluation		(5.8)	–
Net restructuring (charge)/credit		(3.5)	0.6
Net business closure and exit costs		(1.9)	–
Impairment of non-financial assets		(7.3)	(6.5)
Reversal of impairment of non-financial assets		8.1	–
Net profit on disposal of business	2	–	0.4
Total specific adjusting items before income tax		(25.1)	(5.5)
Income tax credit from specific adjusting items		3.8	1.1
Total specific adjusting items after income tax		(21.3)	(4.4)

Specific adjusting items in relation to discontinued operations are disclosed in note 9.

6. Specific adjusting items (continued)

Specific adjusting items from continuing operations

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 results of the Group to allow the reader to obtain an understanding of the financial information and the performance of the Group excluding these items.

In 2023, specific adjusting items were £25.1 million (2022: £5.5 million) and comprised the following:

2023

Costs associated with the cyber security incident

During 2023, we incurred £14.7 million of exceptional costs and charges in relation to the cyber security incident in January 2023. These were comprised of legal and advisory costs, IT recovery and support costs and impairment charges for IT assets which were rendered unusable as a result of the incident.

Charges in relation to the impact of Argentina's currency devaluation

On 13 December 2023, Argentina devalued its currency by more than 50%. The impact of the currency devaluation (£2.6 million) has been classified as a specific adjusting item. An impairment review was also performed as at 31 December 2023 and, due to restrictions on imports limiting the ability to purchase raw materials and the subsequent effect on forecast trading, we have fully impaired the carrying value of property, plant and equipment and the value of raw materials which, in the current circumstances, we would be unable to sell. The impairment charge in relation to property, plant and equipment and inventory were £1.9 million and £1.3 million respectively.

Net restructuring charge

The Group has taken the opportunity to reduce our global footprint and rationalise costs in order to focus resources on our faster growing markets, and optimise factory operations. This restructuring programme commenced in the second half of 2023 and will continue into 2024. A charge of £6.5 million has been recognised in relation to this and comprises costs associated with staff redundancies and site closure costs.

A restructuring provision of £3.0 million recorded for Technical Ceramics, ceramic cores during the Group's 2020 restructuring programme has been released following settlement of a multi-employer pension plan and the re-letting of the site.

Net business closure and exit costs

During 2023, we commenced liquidation of a Thermal Ceramics business in China. Costs associated with this were £1.9 million and included severance, decommissioning and advisory fees.

The land and buildings owned by another Thermal Ceramics business in China which was closed in 2020 were sold in December 2023. The gain associated with this sale was £2.4 million.

We disposed of a Thermal Ceramics business in France in 2015, for which we retained responsibility for remediating the impact of historical manufacturing processes on the environment. An assessment of the remaining required remediation was performed in 2023 and as a consequence of this review we have provided £2.4 million.

Impairment of non-financial assets

Seals and Bearings, Europe

An impairment charge of £2.9 million has been recognised after reassessing the value in use of property, plant and equipment in a business in Italy which was experiencing limited growth. This represents a partial impairment of the assets; the carrying value of the assets following this impairment was £5.3 million. The calculation of value in use was performed as at 31 December 2023, a long-term growth rate of 1.0% was used for years beyond the five-year forecast period and in calculating the terminal value, with a pre-tax discount rate of 17.3%.

An impairment charge of £0.3 million has been recognised after assessing the viability of a development asset, which could not be successfully commissioned.

Seals and Bearings, Asia

An impairment charge of £1.1 million has been recognised after reassessing the value in use of property, plant and equipment in a business which was experiencing limited growth and under-utilisation of key assets. This represents a partial impairment of assets; the carrying value of the assets following this impairment was £2.2 million. The calculation was performed as at 31 December 2023, using a long-term growth rate of 1.0% and a pre-tax discount rate of 13.9%.

Electrical Carbon, North America

An impairment charge of £1.5 million has been recognised after assessing the viability of a development asset in North America which was not deemed to be commercially viable.

Electrical Carbon, Asia

An impairment charge of £0.7 million has been recognised in relation to assets associated with a manufacturing line which, based on current projections, is expected to be under-utilised from 2025 onwards.

Notes to the consolidated financial statements continued

6. Specific adjusting items (continued)

Reversal of impairment of non-financial assets

In 2020, as a result of the COVID-19 pandemic, we impaired property, plant and equipment within our Technical Ceramics, ceramic cores business and Thermal Ceramics, Europe. Following our review as at 31 December 2023 of assets which continue to be used and which were impaired in previous years, we have reversed a portion of this impairment. For the ceramic cores business we reversed £5.7 million, being a full reversal, reinstating the net book value at which the assets would have been held if the impairment had not been booked in 2020, because the business and the aerospace industry have demonstrated sustained growth. For Thermal Ceramics, Europe we have recorded a partial impairment reversal of £2.4 million following sustained recovery of the industrial market segments. This reversal is based on a value in use calculation which was performed at 31 December 2023, using a long-term growth rate of 1.0% for years beyond the five-year forecast period and in calculating terminal value, with a pre-tax discount rate of 13.6%.

Review of cumulative impairment of non-financial assets

Impairment charges of £20.6 million for non-financial assets which the business continues to use have been recorded during the current and previous years (Technical Ceramics, Asia £7.7 million, Thermal Ceramics £7.2 million, Seals and Bearings, Asia £2.9 million and Seals and Bearings, Europe £2.8 million). These impaired amounts could be reversed if the related businesses were to outperform significantly against their budget. A sensitivity analysis was carried out using reasonably possible changes to the key assumptions in assessing the value in use of these non-financial assets. This did not result in a material reversal of the impaired amounts.

2022**Impairment of non-financial assets****Seals and Bearings, Asia**

An impairment charge of £0.6 million was recognised relating to assets purchased to support a customer contract which did not materialise.

A further impairment charge of £1.0 million was recognised after reassessing the value in use of property, plant and equipment in a business in Asia which is taking longer than anticipated to generate revenues. This represented a partial impairment of the assets; the carrying value of the assets following this impairment was £5.2 million. The calculation of value in use was performed as at December 2022. A long-term growth rate of 1.0% was used for years beyond the five-year forecast period and in calculating the terminal value. A pre-tax discount rate of 12.9% was used to determine the value in use.

Thermal Ceramics, Europe

An impairment charge of £1.2 million was recognised following a fire in December which destroyed a warehouse and inventory. The assets were subsequently written off.

An impairment charge of £1.1 million was recognised after reassessing the value in use of property, plant and equipment in a business in France which was experiencing limited growth and under-utilisation of key assets. This represented a partial impairment of the assets; the carrying value of the assets following this impairment was £0.3 million. The calculation of value in use was performed as at December 2022. A long-term growth rate of 1.0% was used for years beyond the five-year forecast period and in calculating the terminal value. A pre-tax discount rate of 13.7% was used to determine the value in use.

Thermal Ceramics, South America

An impairment charge of £0.9 million was recognised in relation to assets associated with a closed manufacturing line.

Technical Ceramics, Asia

An impairment charge of £1.7 million was recognised after reassessing the value in use of property, plant and equipment in a business in Asia which was taking longer than anticipated to generate revenues. This represented a partial impairment of the assets; the carrying value of the assets following this impairment was £3.2 million. The calculation of value in use was performed as at December 2022. A long-term growth rate of 1.0% was used for years beyond the five-year forecast period and in calculating the terminal value. A pre-tax discount rate of 12.9% was used to determine the value in use.

Restructuring credit

A credit of £0.6 million was recognised in the year ended 31 December 2022. This represented the release of restructuring provisions recorded in relation to the Group's 2020 restructuring programme. The remaining provision of £10.5 million as at 31 December 2022 included lease exit costs and multi-employer pension obligations for two sites which were closed during the year ended 31 December 2021. In 2022, the cash outflows relating to the pension obligations were expected to continue for up to 19 years, subject to any settlement being reached in advance of that date. Cash outflows in relation to the lease were expected to continue for four years. Refer to note 24 for further information.

Net profit on disposal of business

The Group disposed of its investment in the joint venture Sukhoy Log, based in Russia, during the year ended 31 December 2022. This disposal generated a net profit of £0.4 million. Refer to note 2 for further information.

7. Finance income and expense

	2023 £m	2022 £m
Continuing operations		
Recognised in profit or loss		
Interest on bank balances and cash deposits	3.9	1.6
Finance income	3.9	1.6
Interest expense on borrowings and overdrafts	(15.6)	(7.0)
Interest expense on lease liabilities	(2.4)	(2.4)
Net interest on IAS 19 defined benefit pension obligations	–	(1.4)
Finance expense	(18.0)	(10.8)
Net financing costs recognised in profit or loss	(14.1)	(9.2)

No finance income or expense related to discontinued operations in either the current or preceding year.

8. Taxation – income tax expense

	2023 £m	2022 £m
Continuing operations		
Recognised in profit or loss		
Current tax		
Current year	25.5	36.5
Adjustments for prior years	–	0.5
	25.5	37.0
Deferred tax		
Current year	(2.5)	(0.4)
Adjustments for prior years	(0.8)	(0.6)
	(3.3)	(1.0)
Total income tax expense recognised in profit or loss	22.2	36.0
Recognised in other comprehensive income		
Tax effect on components of other comprehensive income:		
Deferred tax associated with defined benefit schemes	0.5	3.4
Total tax recognised in other comprehensive income	0.5	3.4

There was no deferred tax associated with share schemes recognised in other comprehensive income (2022: none).

Notes to the consolidated financial statements continued

8. Taxation – income tax expense (continued)

Reconciliation of effective tax rate

	2023 £m	2023 %	2022 £m	2022 %
Profit before tax	77.8		131.6	
Income tax charge using the domestic corporation tax rate	18.3	23.5	25.0	19.0
Effect of different tax rates in other jurisdictions	1.4	1.8	7.5	5.7
Local taxes including withholding tax suffered	1.3	1.7	3.4	2.6
Permanent differences	0.1	0.1	0.2	0.2
Movements related to unrecognised temporary differences	2.0	2.6	(0.1)	(0.1)
Adjustments in respect of prior years	(0.9)	(1.2)	–	–
Statutory effective rate of tax	22.2	28.5	36.0	27.4

The effective rate of tax before specific adjusting items is 25.3% (2022: 27.0%).

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 Organisation for Economic Co-operation and Development (OECD)'s BEPS actions, tax rate and legislation changes, expiry of the statute of limitations and resolution of tax audits and disputes.

The OECD/G20 Inclusive Framework on BEPS (Base Erosion and Profit Shifting) published the Pillar Two model rules designed to address the tax challenges arising from the digitalisation of the global economy.

The IASB issued amendments to IAS 12 Income Taxes. The amendments apply with immediate effect and introduce a mandatory temporary exception from the recognition and disclosure of deferred taxes arising from the implementation of the OECD's Pillar Two Model Rules. The Group has applied the exception under the IAS 12 amendment to recognising and disclosing information about deferred tax assets and liabilities related to top-up income in preparing its consolidated financial statements for the year ending 31 December 2023.

On 20 June 2023, Finance (No.2) Act 2023 was substantively enacted in the UK, introducing a global minimum effective tax rate of 15%. The legislation implements a domestic top-up tax and a multinational top-up-tax which will be effective for the Group's financial year beginning 1 January 2024. The Group is in scope of the substantively enacted legislation and has performed an assessment of the Group's potential exposure to Pillar Two income taxes.

The assessment of the potential exposure to Pillar Two income taxes is based on the submitted country-by-country reporting data of the constituent entities in the Group. Based on the assessment, the Pillar Two effective tax rates in the majority of the jurisdictions in which the Group operates are above 15%. However, the Group has an entity in United Arab Emirates where the transitional safe harbour relief does not apply as the Pillar Two effective tax rate is below 15%. The Group does not expect a material exposure to Pillar Two income taxes in this jurisdiction.

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:

	31 December 2023			31 December 2022			
	Note	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		–	0.7	0.7	–	0.7	0.7
Operating income		–	–	–	–	0.4	0.4
Profit before taxation		–	0.7	0.7	–	1.1	1.1
Income tax expense		–	–	–	–	–	–
Profit from discontinued operations		–	0.7	0.7	–	1.1	1.1
Basic earnings per share from discontinued operations	10			0.2p			0.4p
Diluted earnings per share from discontinued operations	10			0.2p			0.4p

In 2023, a gain of £0.7 million was recognised from a long-term contract.

In 2022, a gain of £1.1 million was recognised following the receipt of cash from a long-term contract and disposal of an investment in accordance with the terms of the disposal agreement.

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 2023 £m	31 December 2022 £m
Net cash generated from operating activities	0.4	1.1
Net cash generated from investing activities	–	–
Net cash used in financing activities	–	–
	0.4	1.1

Notes to the consolidated financial statements continued

10. Earnings per share

	31 December 2023			31 December 2022		
	Earnings £m	Basic earnings per share pence	Diluted earnings per share pence	Earnings £m	Basic earnings per share pence	Diluted earnings per share pence
Profit for the year attributable to shareholders of the Company	47.3	16.6p	16.5p	88.0	31.0p	30.7p
Profit from discontinued operations	(0.7)	(0.2)p	(0.2)p	(1.1)	(0.4)p	(0.4)p
Profit from continuing operations	46.6	16.4p	16.3p	86.9	30.6p	30.3p
Specific adjusting items	25.1	8.8p	8.7p	5.5	1.9p	1.9p
Amortisation of intangible assets	3.3	1.2p	1.1p	4.7	1.7p	1.6p
Tax effect of the above ¹	(3.8)	(1.3)p	(1.3)p	(1.1)	(0.4)p	(0.4)p
Non-controlling interests' share of the above adjustments	–	–	–	–	–	–
Adjusted profit for the year from continuing operations as used in adjusted earnings per share²	71.2	25.0p	24.8p	96.0	33.8p	33.5p

1. The tax effect of the amortisation of intangible assets was £nil (2022: £nil).

2. Definitions of these non-GAAP measures can be found in the glossary of terms on page 218, reconciliations of the statutory results to the adjusted measures can be found on pages 72 to 75.

	2023	2022
Number of shares (millions)	284.8	284.2
Weighted average number of Ordinary shares for the purposes of basic earnings per share¹	284.8	284.2
Effect of dilutive potential Ordinary shares:		
Share options	2.5	2.6
Weighted average number of Ordinary shares for the purposes of diluted earnings per share	287.3	286.8

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.

11. Property, plant and equipment

	Note	Land and buildings £m	Plant, equipment and fixtures £m	Total £m
Cost				
Balance at 1 January 2022		199.8	677.2	877.0
Additions		3.8	49.7	53.5
Disposals		(1.3)	(9.1)	(10.4)
Transfers between categories		0.3	(0.3)	–
Effect of movement in foreign exchange		16.6	52.7	69.3
Balance at 31 December 2022		219.2	770.2	989.4
Balance at 1 January 2023		219.2	770.2	989.4
Additions		7.3	54.0	61.3
Disposals		(0.3)	(12.4)	(12.7)
Transfers between categories		0.4	(0.4)	–
Effect of movement in foreign exchange		(10.5)	(34.0)	(44.5)
Balance at 31 December 2023		216.1	777.4	993.5
Depreciation and impairment losses				
Balance at 1 January 2022		103.0	525.9	628.9
Depreciation charge for the year		5.0	25.3	30.3
Impairment losses	6	2.0	2.6	4.6
Disposals		(0.7)	(8.4)	(9.1)
Transfers between categories		(0.4)	0.4	–
Effect of movement in foreign exchange		8.8	42.7	51.5
Balance at 31 December 2022		117.7	588.5	706.2
Balance at 1 January 2023		117.7	588.5	706.2
Depreciation charge for the year		6.0	25.9	31.9
Impairment losses	6	1.7	8.3	10.0
Impairment reversals		(0.1)	(5.4)	(5.5)
Disposals		(0.2)	(11.6)	(11.8)
Effect of movement in foreign exchange		(6.1)	(25.0)	(31.1)
Balance at 31 December 2023		119.0	580.7	699.7
Carrying amounts				
At 1 January 2022		96.8	151.3	248.1
At 31 December 2022		101.5	181.7	283.2
At 31 December 2023		97.1	196.7	293.8

In 2023, no assets were pledged as security for liabilities (2022: none). Profit on sale of property, plant and equipment presented in the cash flow includes £nil (2022: £nil) of insurance proceeds for replacement of assets.

Notes to the consolidated financial statements continued

12. Leases

The reconciliation in the movement of the Group's right-of-use assets is set out in the table below:

	Land and buildings £m	Plant and equipment £m	Total £m
Balance at 1 January 2022	27.5	4.4	31.9
Additions	1.2	1.8	3.0
Remeasurements	3.1	0.6	3.7
Depreciation charge for the year	(5.1)	(2.7)	(7.8)
Effect of movement in foreign exchange	2.3	0.5	2.8
Balance at 31 December 2022	29.0	4.6	33.6
Balance at 1 January 2023	29.0	4.6	33.6
Additions	0.6	5.1	5.7
Remeasurements	0.9	(0.2)	0.7
Depreciation charge for the year	(4.8)	(2.8)	(7.6)
Impairment losses	–	(0.4)	(0.4)
Impairment reversals	1.3	–	1.3
Effect of movement in foreign exchange	(1.8)	0.1	(1.7)
Balance at 31 December 2023	25.2	6.4	31.6

The weighted average lease term is 10.8 years for land and buildings and 3.7 years for plant and equipment (2022: 11.6 years and 3.3 years respectively). The maturity analysis of lease liabilities is presented in note 20.

Amounts recognised in the consolidated income statement in respect of leasing arrangements are set out in the table below:

	2023 £m	2022 £m
Depreciation expense on right-of-use assets	(7.6)	(7.8)
Interest expense on lease liabilities	(2.4)	(2.4)
Expense relating to short-term leases and leasing of low value assets	(0.5)	(0.5)
	(10.5)	(10.7)

The total cash flows from leasing activities in the year ended 31 December 2023 was £11.8 million (2022: £11.9 million) as set out in the table below:

	2023 £m	2022 £m
Payment of lease liabilities	(8.9)	(9.0)
Interest expense on lease liabilities	(2.4)	(2.4)
Expense relating to short-term leases and leasing of low value assets	(0.5)	(0.5)
	(11.8)	(11.9)

At 31 December 2023, the Group is committed to future payments of £0.5 million (2022: £0.6 million) for short-term leases and leasing of low value assets.

At 31 December 2023, future cash flows in respect of leases which the Group had entered into but which had not yet commenced was £nil (2022: £nil).

The total of future minimum lease income under non-cancellable leases, where the Group is a lessor is £nil (2022: £nil).

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 2022		172.9	57.6	4.1	0.7	34.8	270.1
Additions (externally purchased)		–	–	–	–	1.2	1.2
Disposals		–	–	–	–	(0.1)	(0.1)
Effect of movement in foreign exchange		9.0	6.3	0.2	0.1	1.9	17.5
Balance at 31 December 2022		181.9	63.9	4.3	0.8	37.8	288.7
Balance at 1 January 2023		181.9	63.9	4.3	0.8	37.8	288.7
Additions (externally purchased)		–	–	–	–	0.6	0.6
Disposals		–	–	–	–	(1.0)	(1.0)
Effect of movement in foreign exchange		(4.4)	(3.0)	(0.1)	–	(1.2)	(8.7)
Balance at 31 December 2023		177.5	60.9	4.2	0.8	36.2	279.6
Amortisation and impairment losses							
Balance at 1 January 2022		–	56.1	3.5	0.7	26.7	87.0
Amortisation charge for the year		–	0.7	0.1	–	3.9	4.7
Disposals		–	–	–	–	(0.1)	(0.1)
Effects of movement in foreign exchange		–	6.3	0.2	0.1	1.5	8.1
Balance at 31 December 2022		–	63.1	3.8	0.8	32.0	99.7
Balance at 1 January 2023		–	63.1	3.8	0.8	32.0	99.7
Amortisation charge for the year		–	0.4	0.1	–	2.8	3.3
Impairment losses		–	–	–	–	0.7	0.7
Impairment reversals		–	(0.6)	(0.7)	–	–	(1.3)
Disposals		–	–	–	–	(1.0)	(1.0)
Effects of movement in foreign exchange		–	(3.1)	–	–	(0.9)	(4.0)
Balance at 31 December 2023		–	59.8	3.2	0.8	33.6	97.4
Carrying amounts							
At 1 January 2022		172.9	1.5	0.6	–	8.1	183.1
At 31 December 2022		181.9	0.8	0.5	–	5.8	189.0
At 31 December 2023		177.5	1.1	1.0	–	2.6	182.2

Notes to the consolidated financial statements continued

13. Intangible assets (continued)

Impairment test for cash-generating units or groups of 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 or groups of cash-generating units that are expected to benefit from the synergies of the business combination that gave rise to the goodwill. Goodwill impairment testing is performed at the operating segment level as defined by IFRS 8, as this is the lowest level at which goodwill is monitored.

Goodwill is attributed to each operating segment as follows:

	2023 £m	2022 £m
Thermal Ceramics	86.8	88.9
Molten Metal Systems	9.2	9.4
Electrical Carbon	30.0	30.7
Seals and Bearings	15.3	15.8
Technical Ceramics	36.2	37.1
	177.5	181.9

Each operating segment is assessed for impairment annually and whenever there is an indication of impairment.

The carrying value of goodwill has been assessed with reference to its value in use, reflecting the projected discounted cash flows of each operating segment to which goodwill has been allocated. The key assumptions used in determining value in use relate to short- and long-term 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 to five 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 operating segment.

In 2023, a 1.0% growth rate (2022: 1.0%) has been used for years beyond 2028 and to calculate a terminal value. Management has assessed these growth rates, including the terminal growth rate as reasonable for each operating segment.

In 2023, the Group has used the following pre-tax discount rates for calculating the value in use of each of the operating segments: Thermal Ceramics: 14.4% (2022: 13.8%), Molten Metal Systems: 15.9% (2022: 15.6%), Electrical Carbon: 15.0% (2022: 14.6%), Seals and Bearings: 14.2% (2022: 14.0%), Technical Ceramics 14.1% (2022: 14.1%).

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 operating segments in any one of the following three circumstances, which are considered reasonably possible changes:

- > If the pre-tax discount rate was increased by 10%
- > If growth for years two to five was decreased by 10% and no growth was assumed in the calculation of terminal value
- > If the cash flow projections of all businesses were reduced by 10%.

14. Recognised deferred tax assets and liabilities

Deferred tax assets and liabilities are attributable to the following:

	Assets 2023 £m	Assets 2022 £m	Liabilities 2023 £m	Liabilities 2022 £m	Net 2023 £m	Net 2022 £m
Property, plant and equipment	–	–	(10.6)	(12.7)	(10.6)	(12.7)
Right-of-use assets and lease liabilities	2.7	3.6	–	–	2.7	3.6
Intangible assets	–	–	(0.4)	(0.4)	(0.4)	(0.4)
Employee benefits	8.3	10.2	–	–	8.3	10.2
Provisions	8.9	11.4	–	–	8.9	11.4
Tax value of loss carried forward recognised	6.0	1.7	–	–	6.0	1.7
Other items	0.9	–	–	(0.5)	0.9	(0.5)
Offset	(9.2)	(11.6)	9.2	11.6	–	–
	17.6	15.3	(1.8)	(2.0)	15.8	13.3

Deferred tax assets and liabilities are offset when there is a legally enforceable right to do so and when they relate to taxes levied by the same tax authority on either the same entity or on different entities where it is intended to settle the tax on a net basis.

Unrecognised deferred tax assets

Deferred tax assets have not been recognised in respect of the following items:

	2023 £m	2022 £m
Tax losses	139.2	107.8
Capital losses	43.4	43.4
Other deductible temporary differences	121.3	129.7
	303.9	280.9

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

	Recognised in profit or loss £m	Recognised directly in equity £m	31 December 2022 £m	Recognised in profit or loss £m	Recognised directly in equity £m	31 December 2023 £m
Property, plant and equipment	(0.4)	–	(12.7)	2.1	–	(10.6)
Right-of-use assets and lease liabilities	(0.3)	–	3.6	(0.9)	–	2.7
Intangible assets	0.2	–	(0.4)	–	–	(0.4)
Employee benefits	0.5	(3.4)	10.2	(1.4)	(0.5)	8.3
Provisions	0.6	–	11.4	(2.5)	–	8.9
Tax value of loss carried forward recognised	0.7	–	1.7	4.3	–	6.0
Others	(0.3)	1.0	(0.5)	1.7	(0.3)	0.9
	1.0	(2.4)	13.3	3.3	(0.8)	15.8

Deferred income tax of £4.2 million (2022: £4.0 million) is provided on the potential unremitted earnings of overseas subsidiary undertakings. Where the remittance of dividends is not anticipated deferred tax is not currently recognised or disclosed as it is considered immaterial.

Notes to the consolidated financial statements continued

15. Inventories

	2023 £m	2022 £m
Raw materials and consumables	52.2	55.5
Work in progress	56.5	53.3
Finished goods	66.4	65.4
	175.1	174.2

The Group holds consignment inventory amounting to £25.6 million (2022: £28.8 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 2023, provisions of £5.8 million were made against inventories and recognised in operating costs (2022: £5.0 million).

16. Trade and other receivables

	2023 £m	2022 £m
Non-current		
Trade receivables	0.3	–
Prepayments	0.6	0.2
Other receivables	2.5	3.0
	3.4	3.2
Current		
Gross trade receivables	169.0	179.7
Expected credit losses	(9.0)	(9.1)
Net trade receivables	160.0	170.6
Contract assets	0.3	1.0
Prepayments	15.6	14.8
VAT, goods and sales taxes receivable	9.3	8.7
Other non-trade receivables ¹	6.4	7.4
	191.6	202.5

1. Other non-trade receivables in 2022 have been re-presented to disaggregate VAT, goods and sales taxes receivable from the balance.

The Group's exposure to credit and currency risks related to trade and other receivables is disclosed in note 21.

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.

17. Cash and cash equivalents

	2023 £m	2022 £m
Bank balances	112.5	105.8
Cash deposits	12.0	11.9
Cash and cash equivalents	124.5	117.7

In 2023, the Group had restricted cash of £1.6 million (2022: £4.0 million) as a result of exchange controls in Argentina.

Reconciliation of cash and cash equivalents to net debt¹

	2023 £m	2022 £m
Opening borrowings and lease liabilities	(318.1)	(223.8)
Increase in borrowings	(247.2)	(113.3)
Repayment of borrowings	193.9	39.0
Payment of lease liabilities	8.9	9.0
Total changes from cash flows	(44.4)	(65.3)
New leases and lease remeasurement	(6.4)	(6.7)
Effect of movements in foreign exchange	12.1	(22.3)
Closing borrowings and lease liabilities	(356.8)	(318.1)
Cash and cash equivalents	124.5	117.7
Closing net debt¹	(232.3)	(200.4)

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 218, reconciliations of the statutory results to the adjusted measures can be found on pages 72 to 75.

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 2022	(174.0)	(49.8)	(223.8)	127.3	(96.5)
Cash outflow	–	–	–	(0.7)	(0.7)
Borrowings and lease liability cash flow	(74.3)	9.0	(65.3)	–	(65.3)
Net interest paid	–	–	–	(9.4)	(9.4)
Net cash inflow/(outflow)	(74.3)	9.0	(65.3)	(10.1)	(75.4)
Share purchases	–	–	–	(2.9)	(2.9)
New leases and lease remeasurement	–	(6.7)	(6.7)	–	(6.7)
Exchange and other movements	(17.9)	(4.4)	(22.3)	3.4	(18.9)
At 31 December 2022	(266.2)	(51.9)	(318.1)	117.7	(200.4)
At 1 January 2023	(266.2)	(51.9)	(318.1)	117.7	(200.4)
Cash inflow	–	–	–	38.9	38.9
Borrowings and lease liability cash flow	(53.3)	8.9	(44.4)	–	(44.4)
Net interest paid	–	–	–	(17.9)	(17.9)
Net cash inflow/(outflow)	(53.3)	8.9	(44.4)	21.0	(23.4)
Share purchases	–	–	–	(4.7)	(4.7)
New leases and lease remeasurement	–	(6.4)	(6.4)	–	(6.4)
Exchange and other movements	9.8	2.3	12.1	(9.5)	2.6
At 31 December 2023	(309.7)	(47.1)	(356.8)	124.5	(232.3)

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 218, reconciliations of the statutory results to the adjusted measures can be found on pages 72 to 75.

Notes to the consolidated financial statements continued

18. Trade and other payables

	2023 £m	2022 £m
Non-current		
Accruals	0.7	0.6
Other payables	1.7	1.5
	2.4	2.1
Current		
Trade payables	78.1	78.6
Contract liabilities	8.6	8.9
Accruals	72.5	69.6
Other tax and social security	15.6	19.9
Creditors in relation to capital expenditure	9.7	8.3
Other payables ¹	7.5	9.7
	192.0	195.0

1. Other payables in 2022 have been re-presented to disaggregate creditors in relation to capital expenditure 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 £8.6 million of contract liabilities as at 31 December 2023 are expected to be recognised as revenue in 2024. Contract liabilities outstanding as at 31 December 2022 of £8.9 million were recognised as revenue in 2023.

In 2022 trade payables included amounts due where extended payment terms had been agreed with the supplier using a supplier financing facility. This facility was closed in 2023. The total amount outstanding on such extended payment terms at 31 December 2023 was £nil (2022: £0.3 million).

19. Capital and reserves

Translation reserve

The translation reserve comprises all foreign exchange differences arising from the translation of the financial statements of foreign operations and the cumulative foreign exchange differences deferred into the net investment hedge. The foreign exchange differences deferred into the net investment hedge accumulated in the translation reserve are as follows:

	2023 £m	2022 £m
Balance at 1 January	–	–
Loss arising on changes in fair value of net investment hedges during the period	(0.3)	–
Balance at 31 December	(0.3)	–

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).

	2023 £m	2022 £m
Balance at 1 January	(0.2)	(0.1)
Gain/(loss) arising on changes in fair value of hedging instruments during the period	1.1	(0.2)
Gain reclassified to profit or loss	0.2	0.1
Balance at 31 December	1.1	(0.2)

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.

19. Capital and reserves (continued)

Retained earnings

The Company has acquired its own shares to satisfy the requirements of the various share option incentive schemes. At 31 December 2023, 807,911 shares (2022: 1,173,686) 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 (2022: 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:

	2023		2022	
	Shares	Cost £m	Shares	Cost £m
As at 1 January	1,173,686	3.1	1,360,098	5.0
New shares purchased	1,774,145	4.7	1,102,704	2.9
Exercise of share options	(2,139,920)	(5.7)	(1,289,116)	(4.8)
As at 31 December	807,911	2.1	1,173,686	3.1

Consideration received in respect of shares transferred to participants of employee share schemes was £0.6 million (2022: £0.5 million). The market value of shares held by the Trust at 31 December 2023 was £2.3 million (2022: £3.7 million).

Dividends

The following Ordinary dividends were declared and paid by the Company:

	Per share		Total	
	2023 pence	2022 pence	2023 £m	2022 £m
2021 final ¹	–	5.9	–	16.5
2022 interim	–	5.3	–	15.1
2022 final	6.7	–	19.1	–
2023 interim	5.3	–	15.1	–
	12.0	11.2	34.2	31.6

1. The 2021 final dividend paid is shown net of £0.3 million returned from untraced shareholders, in accordance with the Company's Articles of Association.

After 31 December 2023 the following dividends were proposed by the Directors for 2023. These dividends have not been provided for and there are no income tax consequences. The proposed 2023 final dividend is based upon the number of shares outstanding at the balance sheet date.

	£m
6.7 pence per qualifying Ordinary share	19.1
	19.1

Called-up share capital

	2023 £m	2022 £m
Equity share capital		
Fully paid: 285,369,988 (2022: 285,369,988) issued Ordinary shares of 25 pence each	71.3	71.3
	71.3	71.3

Number of Ordinary shares in issue

	2023	2022
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 (2022: 285,369,988).

Details of options outstanding in respect of Ordinary shares are given in note 23.

Additionally the Company has authorised, issued and fully paid 437,281 (2022: 437,281) cumulative Preference shares classified as borrowings totalling £0.4 million (2022: £0.4 million). The 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.

Notes to the consolidated financial statements continued

19. Capital and reserves (continued)

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% per annum.

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% per annum.

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.

20. 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 21.

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.

Where ancillary credit facilities are provided to operating subsidiaries, they are authorised and supervised by Group Treasury in accordance with the Group's Treasury Policy. 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.

	2023 £m	2022 £m
Non-current liabilities		
Senior Notes	188.2	154.8
Bank and other borrowings	120.5	74.9
Cumulative Preference shares	0.4	0.4
Lease liabilities	36.6	41.4
	345.7	271.5
Current liabilities		
Senior Notes	–	34.6
Bank and other borrowings	0.6	1.5
Lease liabilities	10.5	10.5
	11.1	46.6

During the year, the Group entered into a new €92 million Schuldschein Loan Agreement with maturity in June 2028.

In 2023, bank and other borrowings did not include any borrowings secured on the assets of the Group (2022: £nil).

As at 31 December 2023 the Group had available headroom under the bank syndication of £187.9 million (2022: £154.0 million).

21. Financial risk management

This note presents information about the Group's exposure to a variety of financial risks: credit risk, liquidity risk, market risk and foreign currency 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 Board. It acts as a service centre for Morgan Advanced Materials plc's 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	
	2023 £m	2022 £m
FVTPL – equity instruments	2.2	–
Trade receivables	160.3	170.6
Cash and cash equivalents	124.5	117.7
Derivatives	1.5	1.3
	288.5	289.6

FVTPL – equity instruments

In 2023, the Group purchased an equity instrument in Argentina for £5.0 million, designated in Argentine pesos. The equity instrument has been classified as fair value through profit and loss ('FVTPL'). In 2023, a fair value gain of £0.9 million has been recognised, offset by a foreign exchange loss of £3.7 million. The carrying amount of the equity instrument as at 31 December 2023 was £2.2 million. There were no such transactions in 2022.

Trade 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.

Movements on the provision for expected credit losses were as follows:

	2023 £m	2022 £m
Balance at 1 January	(9.1)	(10.9)
Net remeasurement of loss allowance	(0.6)	(1.4)
Amounts written off	0.4	3.9
Effect of movement in foreign exchange	0.3	(0.7)
Balance at 31 December	(9.0)	(9.1)

Notes to the consolidated financial statements continued

21. Financial risk management (continued)

There has been no change in the estimation techniques or significant assumptions made during the current reporting period in assessing the loss allowance for these financial assets. The loss allowance for trade receivables by ageing category is as follows:

	2023				2022			
	Expected credit loss rate %	Gross trade receivables £m	Expected credit losses £m	Net trade receivables £m	Expected credit loss rate %	Gross trade receivables £m	Expected credit losses £m	Net trade receivables £m
Not past due	0.2%	133.3	(0.2)	133.1	0.1%	144.7	(0.2)	144.5
Past due 0–30 days	1.0%	19.9	(0.2)	19.7	0.5%	21.5	(0.1)	21.4
Past due 31–60 days	0.0%	3.7	–	3.7	–	3.9	–	3.9
Past due 61–90 days	6.3%	1.6	(0.1)	1.5	61.9%	2.1	(1.3)	0.8
Past due more than 90 days	81.0%	10.5	(8.5)	2.0	100.0%	7.5	(7.5)	–
		169.0	(9.0)	160.0		179.7	(9.1)	170.6

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. These arrangements principally cover the USA, Eurozone and UK and are represented by both zero balancing arrangements and notional pooling arrangements. The notional cash pooling arrangements are presented on a gross basis. Credit risk is managed by investing in 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, and are also presented in the table to show the total net exposure of the Group.

	Gross amounts of recognised financial assets/ (liabilities) £m	Amounts offset £m	Net amounts presented on the balance sheet £m	Financial instruments not offset in the balance sheet £m	Net amount £m
2023					
Derivative financial assets	1.5	–	1.5	–	1.5
Derivative financial liabilities	(0.5)	–	(0.5)	–	(0.5)
Cash and cash equivalents	124.5	–	124.5	(0.6)	123.9
Bank and other borrowings	(0.6)	–	(0.6)	0.6	–
2022					
Derivative financial assets	1.3	–	1.3	–	1.3
Derivative financial liabilities	(1.6)	–	(1.6)	–	(1.6)
Cash and cash equivalents	117.7	–	117.7	(1.5)	116.2
Bank and other borrowings	(1.5)	–	(1.5)	1.5	–

1. Gross amounts of recognised financial assets and liabilities in 2022 have been re-presented to show the mark-to-market position of the individual derivatives.

21. Financial risk management (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 2023							
	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								
3.37% US Dollar Senior Notes 2026	3.37%	2026	76.6	84.0	2.6	2.6	78.8	–
1.55% Euro Senior Notes 2026	1.55%	2026	21.7	22.6	0.3	0.3	22.0	–
4.87% US Dollar Senior Notes 2026	4.87%	2026	20.0	22.1	1.0	1.0	20.1	–
1.74% Euro Senior Notes 2028	1.74%	2028	8.7	9.5	0.2	0.2	9.1	–
2.89% Euro Senior Notes 2030	2.89%	2030	21.7	26.0	0.6	0.6	1.9	22.9
5.47% US Dollar Senior Notes 2031	5.47%	2031	7.9	11.0	0.4	0.4	1.3	8.9
5.53% US Dollar Senior Notes 2033	5.53%	2033	7.9	11.9	0.4	0.4	1.3	9.8
5.61% US Dollar Senior Notes 2035	5.61%	2035	23.7	38.8	1.3	1.3	4.0	32.2
Bank and other borrowings		Up to 2028	121.1	123.0	1.1	–	121.9	–
5.50% Cumulative First Preference shares	5.50%		0.1	–	–	–	–	–
5.00% Cumulative Second Preference shares	5.00%		0.3	–	–	–	–	–
Lease liabilities	5.03%	Up to 2044	47.1	58.6	10.5	9.0	18.3	20.8
Trade payables			78.1	78.1	78.1	–	–	–
Creditors in relation to capital expenditure			9.7	9.7	9.7	–	–	–
Other payables			9.2	9.2	7.5	1.7	–	–
			453.8	504.5	113.7	17.5	278.7	94.6

Bank and other borrowings includes an unsecured multi-currency revolving credit facility set to mature in November 2028.

Notes to the consolidated financial statements continued

21. Financial risk management (continued)

	31 December 2022							
	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	22.1	22.4	22.4	–	–	–
3.17% US Dollar Senior Notes 2023	3.17%	2023	12.4	12.8	12.8	–	–	–
1.55% Euro Senior Notes 2026	1.55%	2026	22.2	23.4	0.3	0.3	22.8	–
3.37% US Dollar Senior Notes 2026	3.37%	2026	80.6	91.0	2.7	2.7	85.6	–
4.87% US Dollar Senior Notes 2026	4.87%	2026	21.1	24.2	1.0	1.0	22.2	–
1.74% Euro Senior Notes 2028	1.74%	2028	8.9	9.9	0.2	0.2	0.5	9.0
2.89% Euro Senior Notes 2030	2.89%	2030	22.1	27.1	0.6	0.6	1.9	24.0
Bank and other borrowings ¹		Up to 2027	76.4	77.9	1.9	–	76.0	–
5.50% Cumulative First Preference shares	5.50%		0.1	–	–	–	–	–
5.00% Cumulative Second Preference shares	5.00%		0.3	–	–	–	–	–
Lease liabilities	4.77%	Up to 2051	51.9	65.3	10.5	8.5	19.9	26.4
Trade payables			78.6	78.6	78.6	–	–	–
Creditors in relation to capital expenditure			8.3	8.3	8.3	–	–	–
Other payables			11.2	11.2	9.7	1.5	–	–
			416.2	452.1	149.0	14.8	228.9	59.4

1. Contractual cashflows in 2022 have been re-presented to remove unamortised fees.

21. Financial risk management (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
2023						
Cash flow hedges						
Forward exchange contracts – assets	1.5	107.2	107.2	–	–	–
Forward exchange contracts – liabilities	(0.4)	(105.6)	(105.6)	–	–	–
	1.1	1.6	1.6	–	–	–
Fair value flow hedges						
Forward exchange contracts – assets	–	16.1	16.1	–	–	–
Forward exchange contracts – liabilities	(0.1)	(16.0)	(16.0)	–	–	–
	(0.1)	0.1	0.1	–	–	–
	1.0	1.7	1.7	–	–	–
2022						
Cash flow hedges						
Forward exchange contracts – assets	1.1	79.7	79.2	0.5	–	–
Forward exchange contracts – liabilities	(1.3)	(79.5)	(79.0)	(0.5)	–	–
	(0.2)	0.2	0.2	–	–	–
Fair value flow hedges						
Forward exchange contracts – assets	0.2	18.0	18.0	–	–	–
Forward exchange contracts – liabilities	(0.3)	(17.9)	(17.9)	–	–	–
	(0.1)	0.1	0.1	–	–	–
	(0.3)	0.3	0.3	–	–	–

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 Board. 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	
	2023 £m	2022 £m	2023 £m	2022 £m
Financial assets	–	–	124.5	117.7
Financial liabilities	(235.7)	(241.7)	(121.1)	(76.4)
	(235.7)	(241.7)	3.4	41.3

Notes to the consolidated financial statements continued

21. Financial risk management (continued)

The fixed-rate financial liabilities comprise the currency equivalent of £188.2 million (2022: £189.4 million) of Senior Notes, £0.4 million (2022: £0.4 million) of cumulative Preference shares and lease liabilities of £47.1 million (2022: £51.9 million). The average cost of the Group's fixed-rate instruments is 3.93% (2022: 3.32%) including lease liabilities and 3.65% (2022: 2.92%) excluding lease liabilities.

The variable rate financial assets include the bank balances and cash deposits detailed in note 17 and the variable rate financial liabilities include bank borrowings detailed in note 20. Where cash and overdrafts are included in Group cash pool arrangements interest is charged on net bank balances and borrowings. The average rate of the Group's variable rate instruments is 5.6% (2022: 2.5%).

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 £0.9 million (2022: £0.5 million). A decrease of 100 basis points would have decreased profit by £0.7 million (2022: £0.3 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.

Functional currency of Group operations	2023			2022		
	GBP £m	USD £m	Euro £m	GBP £m	USD £m	Euro £m
Trade receivables	12.4	(6.9)	(2.8)	9.5	0.3	(0.1)
Trade payables	(9.3)	5.0	3.5	(3.8)	0.2	1.7
Net debt ¹	(8.8)	1.5	0.3	(8.0)	0.6	1.1
Net balance sheet exposure	(5.7)	(0.4)	1.0	(2.3)	1.1	2.7

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 218, reconciliations of the statutory results to the adjusted measures can be found on pages 72 to 75.

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 which hedge 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 2023 was a liability of £1.1 million (2022: £0.2 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.

21. Financial risk management (continued)

The Group's currency split of total borrowings was as follows:

	2023 £m	2022 £m
GBP	(0.4)	76.7
USD	156.5	114.2
Euro	153.6	75.3
	309.7	266.2

The Group's sensitivity to changes in foreign exchange rates on financial assets and liabilities as at 31 December 2023 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 £18.9 million (2022: £11.2 million). Conversely, if GBP had weakened by 10%, reported net financial liabilities would have increased by £27.9 million (2022: £13.9 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: Local currency		Change in fair value for recognising hedge ineffectiveness		Carrying amount of the hedging instruments assets/ (liabilities)	
	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m
Cash flow hedges								
Highly probable forecast sales	to Dec 2024	to Jun 2024	37.7	29.7	(1.0)	0.3	(0.5)	0.5
Highly probable forecast purchases	to Dec 2024	to Jun 2024	35.6	9.7	(0.7)	0.1	(0.6)	0.1

Weighted average hedge rates for the year were as follows:

	Weighted average exchange rates	
	2023 £m	2022 £m
EUR/GBP	1.16	1.15
AUD/GBP	1.99	1.70
SGD/GBP	1.68	1.62
USD/GBP	1.27	1.20

Hedged items

	Change in value used for calculating hedge ineffectiveness		Balance in cash flow hedge reserve/foreign currency translation reserve for continuing hedges	
	2023 £m	2022 £m	2023 £m	2022 £m
Cash flow hedges				
Forecast sales	1.0	(0.3)	0.5	(0.5)
Forecast purchases	0.7	(0.1)	0.6	(0.1)

Notes to the consolidated financial statements continued

21. Financial risk management (continued)

As at 31 December 2023 the amount in the hedging reserve and translation reserve arising from hedging relationships for which hedge accounting is no longer applied was £nil (2022: £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 18 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.

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:

	2023		2022	
	Closing rate	Average rate	Closing rate	Average rate
GBP to:				
USD	1.27	1.24	1.21	1.24
Euro	1.15	1.15	1.13	1.17

For illustrative purposes, the table below provides details of the impact on 2023 revenue, Group adjusted operating profit and profit before tax if the actual reported results, calculated using 2023 average exchange rates, were restated for GBP weakening by 10 cents against USD in isolation and 10 cents against the Euro in isolation:

	2023			2022		
	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 profit¹/profit before tax if:						
GBP weakens by 10c against USD in isolation	42.8	4.9	4.1	42.0	5.3	5.0
GBP weakens by 10c against the Euro in isolation	21.5	2.5	2.2	20.8	3.4	3.1

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 218, reconciliations of the statutory results to the adjusted measures can be found on pages 72 to 75.

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.

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.

21. Financial risk management (continued)

Debt to adjusted capital

	2023			2022		
	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	309.7	–	309.7	266.2	–	266.2
Lease liabilities	47.1	(47.1)	–	51.9	(51.9)	–
Less: cash and cash equivalents	(124.5)	–	(124.5)	(117.7)	–	(117.7)
Net debt ¹	232.3	(47.1)	185.2	200.4	(51.9)	148.5
Total equity	398.6	–	398.6	429.6	–	429.6
Less: amounts accumulated in equity relating to cash flow hedges	(1.1)	–	(1.1)	0.2	–	0.2
Adjusted capital	397.5	–	397.5	429.8	–	429.8
Net debt ¹ to adjusted capital ratio	0.6	n/a	0.5	0.5	n/a	0.3

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 218, reconciliations of the statutory results to the adjusted measures can be found on pages 72 to 75.

Net debt¹ to EBITDA¹

	2023			2022		
	As stated £m	IFRS 16 impact £m	Excluding IFRS 16 £m	As stated £m	IFRS 16 impact £m	Excluding IFRS 16 £m
Net debt ¹	232.3	(47.1)	185.2	200.4	(51.9)	148.5
Operating profit before specific adjusting items	117.0	(3.7)	113.3	146.3	(3.6)	142.7
Depreciation and amortisation	42.8	(7.6)	35.2	42.8	(7.8)	35.0
EBITDA ¹	159.8	(11.3)	148.5	189.1	(11.4)	177.7
Net debt ¹ to EBITDA ¹ ratio	1.5x	n/a	1.2x	1.1x	n/a	0.8x

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 218, reconciliations of the statutory results to the adjusted measures can be found on pages 72 to 75.

Interest cover

	2023			2022		
	As stated £m	IFRS 16 impact £m	Excluding IFRS 16 £m	As stated £m	IFRS 16 impact £m	Excluding IFRS 16 £m
EBITDA ¹	159.8	(11.3)	148.5	189.1	(11.4)	177.7
Net finance costs (excluding IAS 19 pension charge)	14.1	(2.4)	11.7	7.8	(2.4)	5.4
Interest cover	11.3x	n/a	12.7x	24.2x	n/a	32.9x

1. Definitions of these non-GAAP measures can be found in the glossary of terms on page 218, reconciliations of the statutory results to the adjusted measures can be found on pages 72 to 75.

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 continued

21. Financial risk management (continued)

Fair values

	31 December 2023				31 December 2022			
	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	–	–	–	–	(22.1)	–	(21.6)	(21.6)
3.17% US Dollar Senior Notes 2023	–	–	–	–	(12.4)	–	(12.1)	(12.1)
3.37% US Dollar Senior Notes 2026	(76.6)	–	(71.6)	(71.6)	(80.6)	–	(73.5)	(73.5)
1.55% Euro Senior Notes 2026	(21.7)	–	(20.3)	(20.3)	(22.2)	–	(20.1)	(20.1)
4.87% US Dollar Senior Notes 2026	(20.0)	–	(19.4)	(19.4)	(21.1)	–	(20.2)	(20.2)
1.74% Euro Senior Notes 2028	(8.7)	–	(8.0)	(8.0)	(8.9)	–	(7.7)	(7.7)
2.89% Euro Senior Notes 2030	(21.7)	–	(19.6)	(19.6)	(22.1)	–	(19.0)	(19.0)
5.47% US Dollar Senior Notes 2031	(7.9)	–	(7.7)	(7.7)	–	–	–	–
5.53% US Dollar Senior Notes 2033	(7.9)	–	(7.6)	(7.6)	–	–	–	–
5.61% US Dollar Senior Notes 2035	(23.7)	–	(22.8)	(22.8)	–	–	–	–
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)
	(188.6)	–	(177.4)	(177.4)	(189.8)	–	(174.6)	(174.6)
Financial assets held at FVTPL	2.2	2.2	–	2.2	–	–	–	–
Derivative financial assets held at fair value	1.5	–	1.5	1.5	1.3	–	1.3	1.3
	3.7	2.2	1.5	3.7	1.3	–	1.3	1.3
Derivative financial liabilities held at fair value	(0.5)	–	(0.5)	(0.5)	(1.6)	–	(1.6)	(1.6)

The table above analyses the fair values of financial instruments held by the Group, 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).

21. Financial risk management (continued)

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 3.7%–6.3% (2022: 4.2%–6.4%).

There have been no transfers between Level 1 and Level 2 during 2023 and 2022 and there were no Level 3 financial instruments in either 2023 or 2022.

22. 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 USA.

Summary of net defined benefit obligations

	2023 £m	2022 £m
Present value of unfunded defined benefit obligations	(36.9)	(36.5)
Present value of funded defined benefit obligations	(479.2)	(485.3)
Fair value of plan assets	490.9	506.2
	(25.2)	(15.6)

Amounts recognised in profit or loss

	Note	2023 £m	2022 £m
Current service cost		(2.4)	(2.7)
Administrative expenses recognised outside of the pension liability		(1.1)	(1.5)
Curtailments and settlements		–	0.2
Total expense within operating costs relating to defined benefit plans		(3.5)	(4.0)
Defined contribution plans		(12.9)	(12.2)
Total expense within operating costs	4	(16.4)	(16.2)
Net interest on net defined benefit liability	7	–	(1.4)
Total expense recognised in profit or loss		(16.4)	(17.6)

Amounts recognised in other comprehensive income

	2023 £m	2022 £m
Experience gain/(loss) on plan obligations	1.2	(14.4)
Changes in financial assumptions underlying the present value of plan obligations – (loss)/gain	(12.7)	225.6
Changes in demographic assumptions underlying the present value of plan obligations – gain	2.9	0.8
Actual return on plan assets (excluding amounts included in net interest expense)	(2.9)	(206.5)
Remeasurements recognised in other comprehensive income	(11.5)	5.5
Deferred tax associated with the above	(0.5)	(3.4)
Total amount recognised in other comprehensive income	(12.0)	2.1

Defined contribution plans

The Group operates a number of defined contribution pension plans. The total expense relating to these plans in the current year was £12.9 million (2022: £12.2 million). The expense includes ongoing contributions to the US Multi-Employer Plan of £0.2 million (2022: £0.3 million). The Group expects to contribute £13.5 million to ongoing defined contribution arrangements in 2024.

Notes to the consolidated financial statements continued

22. 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 12 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 Group in 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 Scheme's 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 2022 and resulted in combined assessed deficits of £49.7 million on the 'Technical Provisions' basis. The Company subsequently agreed with the Trustees to make a lump sum contribution to the Schemes of £67.0 million on 29 December 2022 in lieu of the remaining contributions that would otherwise have been due under the existing recovery plans from the 31 March 2019 valuations. The sum paid also represented the value of the deficit on the more prudent 'Long Term Objective' basis. As a result, no further contributions to the Schemes are expected to be required pending the results of the next full valuations as at 31 March 2025.

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, are auto-enrolled into the Morgan Group Personal Pension Plan for their future pension benefits.

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.

The Group has recognised a liability in relation to Guaranteed Minimum Pensions (GMPs), an initiative to remove inequalities in scheme benefits that arise from GMPs being unequal between men and women. A project to equalise members' benefits in the Morgan Pension Scheme is currently being progressed by a Joint Trustee and Employer Working Group.

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 while in, payment. Overall, the US Schemes' duration is around nine 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 2023 and the Scheme was 95% funded on this basis.

On the Defined Benefit Obligation (DBO) basis used for IAS 19 purposes, the Scheme was almost 100% funded with a deficit as at 31 December 2023 of £0.3 million (2022: £3.4 million).

No further significant contributions to the MUSE DB Scheme are anticipated in the medium term.

European schemes

In Europe (excluding UK), 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.

22. Pensions and other post-retirement employee benefits (continued)

	31 December 2023				
	UK £m	US £m	Europe £m	Rest of the World £m	Total £m
Summary of net obligations					
Present value of unfunded defined benefit obligations	–	(5.2)	(27.1)	(4.6)	(36.9)
Present value of funded defined benefit obligations	(362.8)	(107.0)	(1.3)	(8.1)	(479.2)
Fair value of plan assets	375.3	106.7	0.2	8.7	490.9
	12.5	(5.5)	(28.2)	(4.0)	(25.2)
Movements in present value of defined benefit obligation					
At 1 January 2023	(359.5)	(121.9)	(28.3)	(12.1)	(521.8)
Current service cost	–	–	(0.8)	(1.6)	(2.4)
Interest cost	(16.7)	(5.6)	(1.0)	(0.3)	(23.6)
Actuarial gain/(loss)					
Experience gain/(loss) on plan obligations	(0.3)	2.0	–	(0.5)	1.2
Changes in financial assumptions – gain/(loss)	(10.4)	(1.9)	(0.6)	0.2	(12.7)
Changes in demographic assumptions – gain	2.9	–	–	–	2.9
Benefits paid	21.2	9.2	1.7	0.9	33.0
Exchange adjustments	–	6.0	0.6	0.7	7.3
At 31 December 2023	(362.8)	(112.2)	(28.4)	(12.7)	(516.1)
Movements in fair value of plan assets					
At 1 January 2023	384.7	112.7	0.4	8.4	506.2
Interest on plan assets	17.9	5.4	–	0.3	23.6
Remeasurement gain/(loss)	(6.1)	2.9	–	0.3	(2.9)
Contributions by employer	–	0.6	1.6	1.2	3.4
Benefits paid	(21.2)	(9.2)	(1.7)	(0.9)	(33.0)
Exchange adjustments	–	(5.7)	(0.1)	(0.6)	(6.4)
At 31 December 2023	375.3	106.7	0.2	8.7	490.9
Actual return on assets	11.8	8.3	–	0.6	20.7
Fair value of plan assets by category					
Equities	–	6.3	–	–	6.3
Growth assets ¹	48.9	–	–	–	48.9
Bonds	26.5	97.7	–	–	124.2
Liability-driven investments (LDI) ²	196.6	–	–	–	196.6
Matching insurance policies	101.9	1.4	0.2	6.3	109.8
Other	1.4	1.3	–	2.4	5.1
	375.3	106.7	0.2	8.7	490.9

1. Growth assets include investment in Multi-Asset Funds as well as UK property.

2. 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 circa 100% of the invested assets of the UK Schemes measured on the 'Long Term Objective' basis (Gilts +50bps) (excluding matching insurance policies).

Notes to the consolidated financial statements continued

22. Pensions and other post-retirement employee benefits (continued)

The Group expects to contribute £3.6 million to these arrangements in 2024.

	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 2024	–	0.6	1.7	1.3	3.6

	31 December 2022				
	UK £m	US £m	Europe £m	Rest of the World £m	Total £m
Summary of net obligations					
Present value of unfunded defined benefit obligations	–	(5.8)	(26.7)	(4.0)	(36.5)
Present value of funded defined benefit obligations	(359.5)	(116.1)	(1.6)	(8.1)	(485.3)
Fair value of plan assets	384.7	112.7	0.4	8.4	506.2
	25.2	(9.2)	(27.9)	(3.7)	(15.6)

Movements in present value of defined benefit obligation

	UK £m	US £m	Europe £m	Rest of the World £m	Total £m
At 1 January 2022	(544.0)	(139.3)	(39.4)	(11.8)	(734.5)
Current service cost	–	–	(1.1)	(1.6)	(2.7)
Interest cost	(10.3)	(3.9)	(0.3)	(0.2)	(14.7)
Actuarial gain/(loss)					
Experience gain/(loss) on plan obligations	(14.7)	(0.1)	0.4	–	(14.4)
Changes in financial assumptions – gain	184.5	28.2	12.2	0.7	225.6
Changes in demographic assumptions – gain/(loss)	0.9	–	(0.1)	–	0.8
Benefits paid	24.1	9.2	1.6	1.2	36.1
Curtailements and settlements	–	–	–	0.2	0.2
Exchange adjustments	–	(16.0)	(1.6)	(0.6)	(18.2)
At 31 December 2022	(359.5)	(121.9)	(28.3)	(12.1)	(521.8)

Movements in fair value of plan assets

	UK £m	US £m	Europe £m	Rest of the World £m	Total £m
At 1 January 2022	492.3	131.6	0.4	7.5	631.8
Interest on plan assets	9.4	3.8	–	0.1	13.3
Remeasurement loss	(177.2)	(28.9)	–	(0.4)	(206.5)
Contributions by employer	84.3	0.7	1.6	2.0	88.6
Benefits paid	(24.1)	(9.2)	(1.6)	(1.2)	(36.1)
Exchange adjustments	–	14.7	–	0.4	15.1
At 31 December 2022	384.7	112.7	0.4	8.4	506.2
Actual return on assets	(167.8)	(25.1)	–	(0.3)	(193.2)

Fair value of plan assets by category

	UK £m	US £m	Europe £m	Rest of the World £m	Total £m
Equities	–	6.1	–	–	6.1
Growth assets ¹	40.3	–	–	–	40.3
Bonds	18.0	104.8	–	–	122.8
Liability-driven investments (LDI) ²	210.9	–	–	–	210.9
Matching insurance policies	106.1	1.4	0.4	6.4	114.3
Other	9.4	0.4	–	2.0	11.8
	384.7	112.7	0.4	8.4	506.2

1. Growth assets include investment in Global Diversified and Multi-Asset Funds as well as UK property.

2. 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 circa 100% of the invested assets of the UK Schemes.

22. 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, life expectancy and several other assumptions. In making these estimates and assumptions, the Directors consider advice provided by external advisors, 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 USA is material to the cost of the promised benefits. In both the UK and Europe, where relevant, 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 %
2023				
Discount rate	4.52	4.80	3.40	5.52
Salary increase	n/a	n/a	2.10	4.50
Inflation (UK: RPI/CPI)	3.05/2.31	n/a	2.10	n/a
Pensions increase ¹	3.00/2.94/3.62	n/a	2.10	n/a
Mortality – post-retirement:				
Life expectancy of a male aged 60 in accounting year (years)	25.62	25.00	25.33	n/a
Life expectancy of a male aged 60 in accounting year +20 (years)	27.10	25.80	28.12	n/a
2022				
Discount rate	4.81	4.99	3.70	5.30
Salary increase	n/a	n/a	2.20	5.00
Inflation (UK: RPI/CPI)	3.26/2.47	n/a	2.20	n/a
Pensions increase ¹	3.00/3.11/3.70	n/a	2.20	n/a
Mortality – post-retirement:				
Life expectancy of a male aged 60 in accounting year (years)	25.79	24.80	25.19	n/a
Life expectancy of a male aged 60 in accounting year +20 (years)	27.24	24.90	27.98	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 continued

22. 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	2023		2022		
	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%	5.6	4.9	5.8	5.0
Discount rate ¹	Decrease by 0.5%	29.2	25.6	30.0	25.9
Inflation	Increase by 0.1%	1.8	1.7	1.8	1.7
Inflation ¹	Increase by 0.5%	9.7	9.1	9.2	8.7
Mortality – post-retirement ¹	Pensioners live 1 year longer	20.5	13.4	20.5	13.6
Exchange rates	GBP weakens against USD by 10%	12.5	0.6	13.5	1.0
	GBP weakens against EUR by 10%	3.1	3.1	3.3	3.2

1. Sensitivities included as reasonably possible changes under IAS1.

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 assets 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 advisors.

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 a significant extent by a 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 (including providing protection against changes to future inflation expectations) for an amount equal to approximately 100% of the liabilities valued on the 'Long Term Objective' basis. 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.

23. Share-based payments

The Group operates various share option programmes that allow Group employees to acquire shares in the Company. During 2023, 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 pages 104 to 130.

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 2023 was £2.9 million (2022: £5.7 million).

23. Share-based payments (continued)

The following options and awards were outstanding at 31 December 2023 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	–	6,778,794	22 March 2024	21 March 2026
Sharesave	All UK employees	Continued employment	181.00p–321.00p	1,156,881	1 December 2023	31 May 2027
DBP	Senior employees	Continued employment	–	355,848	22 March 2024	21 March 2026
RSU	Select employees	Continued employment	–	493,824	21 March 2024	14 November 2026

The numbers and weighted average exercise prices of share options are as follows:

	2023		2022	
	Weighted average exercise price	Number of options	Weighted average exercise price	Number of options
Outstanding at the beginning of the period	28.30p	7,517,706	26.44p	8,174,265
Granted during the period	29.62p	4,240,455	23.24p	2,985,494
Forfeited during the period	24.87p	(580,988)	39.31p	(158,602)
Exercised during the period	33.06p	(2,138,502)	39.31p	(1,280,013)
Lapsed during the period	41.30p	(253,324)	0.71p	(2,203,438)
Outstanding at the end of the period	27.63p	8,785,347	28.30p	7,517,706
Exercisable at the end of the period	170.65p	222,637	182.49p	138,258

The weighted average share price at the date of exercise during the period was 276.49 pence (2022: 293.19 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 2023			
	LTIP	Sharesave	DBP	RSU
Share price at award date	287.50p–294.50p	250.50p	287.50p	287.50p–294.50p
Exercise price	n/a	209.00p	n/a	n/a
Fair value at measurement date	96.00p–257.00p	47.00p	287.50p	287.50p–294.50p
Fair value measurement method	Actuarial binomial method	Modified binomial method	n/a	n/a
Fair value model inputs:				
Expected volatility (expressed as weighted average volatility used in the model)	30%	35%		
Option life (expressed as weighted average life used in the model)	3.0 years	3.3 years		
Expected dividends	4.2%	4.9%		
Risk-free interest rate	3.8%	4.3%		

Notes to the consolidated financial statements continued

23. Share-based payments (continued)

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 2023 was 211.70 pence (2022: 204.74 pence).

24. Provisions and contingent liabilities

	Closure and restructuring provisions £m	Legal and other provisions £m	Environmental provisions £m	Total £m
Balance at 1 January 2023	10.5	8.1	7.4	26.0
Provisions made during the year	3.0	0.9	2.6	6.5
Provisions used during the year	(2.2)	(1.3)	(1.4)	(4.9)
Provisions reversed during the year	(3.0)	(1.8)	(0.2)	(5.0)
Effect of movements in foreign exchange	(0.4)	(0.3)	(0.1)	(0.8)
Balance at 31 December 2023	7.9	5.6	8.3	21.8
Current	5.6	2.3	2.4	10.3
Non-current	2.3	3.3	5.9	11.5
	7.9	5.6	8.3	21.8

Closure and restructuring provisions

Closure and restructuring provisions relate to 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. The provisions are expected to be utilised in the next one to two years.

We have a provision for a multi-employer pension obligation for a site which was closed during 2021. The cash outflows relating to the pension obligation may continue for up to 18 years, subject to any settlement being reached in advance of that date.

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 not probable, 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 £10.3 million (2022: £10.2 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. The provisions are expected to be utilised in the next five to ten years.

24. Provisions and contingent liabilities (continued)

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.

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 14.

25. Capital commitments

In 2023, commitments for property, plant and equipment and computer software expenditure for which no provision has been made in these accounts amount to £5.2 million (2022: £5.9 million) for the Group.

26. 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 43), 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:

	2023 £m	2022 £m
Short-term employee benefits	5.9	4.8
Employer national insurance contributions	0.6	1.0
Pension and other post-employment costs	0.3	0.3
Share-based payment expense	0.9	1.9
Termination payments	–	0.1
Non-Executive Directors' fees and benefits	0.5	0.5
Total compensation of key management personnel	8.2	8.6

Other related party transactions

The Group pays an annual fee of £18,000 to Dunelm Energy for administrative support, a company in which Ian Marchant, the Group Chairman, has an interest. As Ian joined the business part way through the year, £13,500 was paid in 2023.

27. Subsequent events

There were no reportable subsequent events following the balance sheet date.

Company balance sheet

AS AT 31 DECEMBER 2023

	Note	2023 £m	2022 £m
Non-current assets			
Intangible assets	30	–	1.1
Property, plant and equipment	31	3.5	3.7
Right-of-use assets	32	0.4	0.9
Investments in subsidiary undertakings	33	716.4	757.8
Debtors – amounts due after more than one year	34	252.8	139.0
Employee benefits: pensions	38	3.1	6.4
		976.2	908.9
Current assets			
Debtors – amounts due within one year	34	135.2	159.1
Cash and cash equivalents		15.6	7.2
		150.8	166.3
Current liabilities			
Creditors – amounts falling due within one year	35	126.8	122.4
Provisions	39	1.1	2.2
		127.9	124.6
Net current assets		22.9	41.7
Total assets less current liabilities		999.1	950.6
Non-current liabilities			
Creditors – amounts falling due after more than one year	36	394.7	270.6
Provisions	39	3.0	3.0
		397.7	273.6
Net assets		601.4	677.0
Capital and reserves			
Equity shareholders' funds			
Share capital	40	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		365.7	441.3
Shareholders' funds		601.4	677.0

Under Section 408 of the Companies Act 2006, the Company is exempt from the requirement to present its own income statement. During 2023, the Company recognised a net loss of £36.6 million (2022: net profit of £13.6 million).

The financial statements were approved by the Board of Directors on 11 March 2024 and were signed on its behalf by:

Pete Raby **Richard Armitage**
CHIEF EXECUTIVE OFFICER CHIEF FINANCIAL OFFICER

Company statement of changes in equity

FOR THE YEAR ENDED 31 DECEMBER 2023

	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 2022	71.3	111.7	17.0	35.7	458.2	693.9
Total comprehensive income for the year:						
Profit for the year	–	–	–	–	13.6	13.6
Other comprehensive income	–	–	–	–	(2.5)	(2.5)
Transactions with owners:						
Dividends	–	–	–	–	(31.6)	(31.6)
Equity-settled share-based payment transactions	–	–	–	–	6.0	6.0
Own shares acquired for share incentive schemes (net)	–	–	–	–	(2.4)	(2.4)
Balance at 31 December 2022	71.3	111.7	17.0	35.7	441.3	677.0
Balance at 1 January 2023	71.3	111.7	17.0	35.7	441.3	677.0
Total comprehensive income for the year:						
Loss for the year	–	–	–	–	(36.6)	(36.6)
Other comprehensive income	–	–	–	–	(3.6)	(3.6)
Transactions with owners:						
Dividends	–	–	–	–	(34.2)	(34.2)
Equity-settled share-based payment transactions	–	–	–	–	2.9	2.9
Own shares acquired for share incentive schemes (net)	–	–	–	–	(4.1)	(4.1)
Balance at 31 December 2023	71.3	111.7	17.0	35.7	365.7	601.4

Notes to the Company financial statements

28. 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 IFRS
- > 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 pounds sterling, which is the Company's functional currency.

The Company's financial statements are prepared on a going concern basis as set out in note 1 of 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 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

28. Accounting policies (continued)

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.

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, 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 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' (ECL) model). The Group measures the loss allowance for trade receivables at an amount equal to lifetime ECL.

Notes to the Company financial statements continued

28. Accounting policies (continued)

Trade and other creditors

Trade and other creditors are recognised initially at fair value. Subsequent to initial recognition they are measured at amortised cost using the effective interest method. 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.

Impairment of financial assets

The Company recognises provisions for 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. Life 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 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 considered amounts due from 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 44.

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 21. 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 38.

28. 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 not 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 23 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.

Notes to the Company financial statements continued

28. Accounting policies (continued)

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 amount of assets, liabilities, income and expenses.

In addition to the areas of judgement and estimates outlined in note 1 to the consolidated Group financial statements, the Company also identifies the assumptions required in investments impairment assessments as a source of 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 global economic uncertainty, there is an increased level of risk and therefore a key source of estimate uncertainty in these assumptions, see note 33 for sensitivity analysis.

29. Staff numbers and costs

The monthly average number of persons employed by the Company (including Directors) during the year was as follows:

Number of employees	2023	2022
Number of employees including Directors	69	69

Full details of the Directors' remuneration for the period can be found in the Remuneration report on pages 104 to 130.

Aggregate employee-related costs were as follows:

	Note	2023 £m	2022 £m
Wages and salaries		7.6	9.0
Equity-settled share-based payments	23	2.9	5.1
Social security costs		2.1	1.6
Other pension costs		1.2	0.7
		13.8	16.4

In 2023, £3.0 million (2022: £2.2 million) of the equity-settled share-based payments amount was recharged to other Morgan Group companies.

30. Intangible assets

	Software £m
Cost	
Balance at 1 January 2023	10.5
Additions – externally purchased	–
Disposals	(0.5)
Balance at 31 December 2023	10.0
Amortisation	
Balance at 1 January 2023	9.4
Amortisation for the year	0.9
Impairment	0.2
Disposals	(0.5)
Balance at 31 December 2023	10.0
Carrying amounts	
At 31 December 2022	1.1
At 31 December 2023	–

31. Property, plant and equipment

	Plant, equipment and fixtures £m	Land and buildings £m	Total £m
Cost			
Balance at 1 January 2023	2.1	6.5	8.6
Additions	0.2	–	0.2
Balance at 31 December 2023	2.3	6.5	8.8
Depreciation and impairment losses			
Balance at 1 January 2023	1.1	3.8	4.9
Depreciation charge for the year	0.4	–	0.4
Balance at 31 December 2023	1.5	3.8	5.3
Carrying value			
At 31 December 2022	1.0	2.7	3.7
At 31 December 2023	0.8	2.7	3.5

32. Leasing

The reconciliation in the movement of the carrying value 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 2023	0.4	0.5	0.9
Remeasurements	(0.3)	–	(0.3)
Depreciation charge for the year	(0.1)	(0.1)	(0.2)
Balance at 31 December 2023	–	0.4	0.4

The Company leases several assets including buildings and IT equipment. The average lease term at 31 December 2023 is 0.9 years (2022: 1.9 years).

At 31 December 2023, the Company has not applied any exemptions for short-term leases or leases of low value assets.

Notes to the Company financial statements continued

33. Investment in subsidiary undertakings

	Shares in Group undertakings £m	Loans £m	Total £m
Cost			
Balance at 1 January 2023	449.4	394.6	844.0
Reclassification	–	18.0	18.0
Loans advanced	–	74.1	74.1
Loan repayments	–	(44.0)	(44.0)
Effect of movement in foreign exchange	–	(10.3)	(10.3)
Balance at 31 December 2023	449.4	432.4	881.8
Provisions			
Balance at 1 January 2023	21.6	64.6	86.2
Provided in the year	43.2	17.8	61.0
Reclassification	–	18.0	18.0
Effect of movement in foreign exchange	–	0.2	0.2
Balance at 31 December 2023	64.8	100.6	165.4
Carrying amounts			
At 31 December 2022	427.8	330.0	757.8
At 31 December 2023	384.6	331.8	716.4

In December, management conducted a review of the Company's investment in subsidiary undertakings. Following this review management identified impairment losses of £43.2 million (2022: £1.0 million) and the reversal of impairment losses of £nil (2022: £0.2 million) against a number of shares in Group undertakings. In addition, management identified £17.8 million impairment losses (2022: £nil) and no reversal of impairment losses (2022: £nil) against loans.

The impairment assessment of shares in Group undertakings uses the 2024 results in an EBITDA* multiple valuation, which is sensitive to changes in the principal assumptions. In line with the fair value hierarchy in note 21 this has been classified as a Level 2 valuation. A 2% increase in either EBITDA* or the multiple would increase the carrying value of the share in Group undertakings by £3.2 million at 31 December 2023. A 2% decrease would decrease the carrying value by £3.2 million. Management considers these changes in assumptions to be reasonably possible.

Note 43 to the financial statements gives details of the Company's fixed asset investments.

34. Debtors

	Note	2023 £m	2022 £m
Due within one year			
Amounts owed by Group undertakings		127.1	152.8
Other debtors		3.3	2.2
Derivative financial assets	44	1.6	2.0
Prepayments		3.2	2.1
		135.2	159.1
Due after more than one year			
Derivative financial assets	44	0.4	–
Amounts owed by Group undertakings		252.4	139.0
		252.8	139.0

35. Creditors: amounts falling due within one year

	Note	2023 £m	2022 £m
Bank overdrafts		0.8	1.6
Borrowings	37	–	34.5
Lease liabilities		0.2	0.5
Trade creditors		2.9	2.8
Amounts owed to Group undertakings		109.4	69.1
Other creditors		3.0	–
Accruals		8.8	7.5
Derivative financial liabilities	44	1.7	6.4
		126.8	122.4

36. Creditors: amounts falling due after more than one year

	Note	2023 £m	2022 £m
Amounts owed to Group undertakings		83.4	33.5
Borrowings	37	308.5	229.6
Lease liabilities		0.1	0.3
Derivative financial liabilities	44	2.7	7.2
		394.7	270.6

Notes to the Company financial statements continued

37. Borrowings

Terms and debt repayment schedule

	31 December 2023				31 December 2022			
	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	–	–	–	–	(22.1)	–	(21.6)	(21.6)
3.17% US Dollar Senior Notes 2023	–	–	–	–	(12.4)	–	(12.1)	(12.1)
3.37% US Dollar Senior Notes 2026	(76.6)	–	(71.6)	(71.6)	(80.6)	–	(73.5)	(73.5)
1.55% Euro Senior Notes 2026	(21.7)	–	(20.3)	(20.3)	(22.2)	–	(20.1)	(20.1)
4.87% US Dollar Senior Notes 2026	(20.0)	–	(19.4)	(19.4)	(21.1)	–	(20.2)	(20.2)
1.74% Euro Senior Notes 2028	(8.7)	–	(8.0)	(8.0)	(8.9)	–	(7.7)	(7.7)
2.89% Euro Senior Notes 2030	(21.7)	–	(19.6)	(19.6)	(22.1)	–	(19.0)	(19.0)
5.47% US Dollar Senior Notes 2031	(7.9)	–	(7.7)	(7.7)	–	–	–	–
5.53% US Dollar Senior Notes 2033	(7.9)	–	(7.6)	(7.6)	–	–	–	–
5.61% US Dollar Senior Notes 2035	(23.7)	–	(22.8)	(22.8)	–	–	–	–
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)
	(188.6)	–	(177.4)	(177.4)	(189.8)	–	(174.6)	(174.6)
Derivative financial assets held at fair value ¹	2.0	–	2.0	2.0	2.0	–	2.0	2.0
	2.0	–	2.0	2.0	2.0	–	2.0	2.0
Derivative financial liabilities held at fair value ¹	(4.4)	–	(4.4)	(4.4)	(13.6)	–	(13.6)	(13.6)

1. Derivative financial assets and liabilities in 2022 have been re-presented.

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 to their fair value.

In 2023, no borrowings were secured on the assets of the Company (2022: £nil).

38. 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.

	2023 £m	2022 £m
Pension plans and employee benefits		
Present value of funded defined benefit obligations	(119.1)	(118.9)
Fair value of plan assets	122.2	125.3
Net obligations	3.1	6.4
Movements in present value of defined benefit obligation		
At 1 January	(118.9)	(175.9)
Interest cost	(5.5)	(3.5)
Remeasurement (losses)/gains:		
Changes in financial assumptions	(3.6)	57.0
Changes in demographic assumptions	1.1	0.9
Experience adjustments on benefit obligations	0.3	(6.1)
Benefits paid	7.5	8.7
At 31 December	(119.1)	(118.9)
Movements in fair value of plan assets		
At 1 January	125.3	160.9
Interest on plan assets	5.8	3.1
Remeasurement losses	(1.4)	(54.3)
Contributions by employer	–	24.3
Benefits paid	(7.5)	(8.7)
At 31 December	122.2	125.3
Actual return on assets	4.4	(51.2)
Expense recognised in the income statement		
	2023 £m	2022 £m
Administrative expenses (including administration expenses incurred by the Company directly)	(0.8)	(1.2)
Net interest on net defined benefit liability	0.3	(0.4)
Total expense recognised in the income statement	(0.5)	(1.6)

The fair values of the plan assets were as follows:

	2023 £m	2022 £m
Equities and growth assets	56.9	59.8
Bonds	7.6	17.9
Matching insurance policies	43.1	44.9
Other	14.6	2.7
Total	122.2	125.3

Notes to the Company financial statements continued

38. 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:	2023 %	2022 %
Inflation (RPI/CPI)	3.05/2.31	3.26/2.47
Discount rate	4.52	4.81
Pensions increase	3.00/2.94/3.62	3.00/3.11/3.70
Salary increase	n/a	n/a
Mortality – post-retirement:		
Life expectancy of a male aged 60 in accounting year (years)	25.6	25.8
Life expectancy of a male aged 60 in accounting year +20 (years)	27.1	27.2

Funding

The most recent full actuarial valuations of the UK Schemes were undertaken as at 31 March 2022 and resulted in combined assessed deficits of £49.7 million on the 'Technical Provisions' basis. The Company subsequently agreed with the Trustees to make a lump sum contribution to the Schemes of £67.0 million on 29 December 2022 in lieu of the remaining contributions that would otherwise have been due under the existing recovery plans from the 31 March 2019 valuations. The sum paid represented the value of the deficit on the more prudent 'Long Term Objective' basis on the date of that agreement, 25 October 2022. As a result, no further contributions to the Schemes are expected to be required pending the results of the next full valuations as at 31 March 2025.

Sensitivity analysis

The sensitivities of the Company's net balance sheet to the principal assumptions are:

	Change in assumption	2023 Decrease effect £m	2022 Decrease effect £m
Discount rate	Decrease by 0.1%	1.0	1.0
Inflation	Increase by 0.1%	0.4	0.4
Mortality – post-retirement	Pensioners live 1 year longer	2.6	2.5

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 Group operates a defined contribution pension plan ('the Morgan Group Personal Pension Plan'). The total Company expense relating to this plan in 2023 was £0.7 million (2022: £0.7 million).

39. Provisions and contingent liabilities

	Dilapidation provisions £m	Other provisions £m	Total £m
Balance at 1 January 2023	0.1	5.1	5.2
Provisions used during the year	–	(1.1)	(1.1)
Balance at 31 December 2023	0.1	4.0	4.1
Current	0.1	1.0	1.1
Non-current	–	3.0	3.0
	0.1	4.0	4.1

Other provisions relate to legal claims and environmental provisions and are based on the Company's assessment of the probable cost of these activities.

39. Provisions and contingent liabilities (continued)**Contingent liabilities and guarantees**

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.

The Company participates in a cash pooling arrangement provided by Lloyds Bank plc with other UK Group companies. As part of that pooling arrangement, the Company has provided a guarantee for any liabilities of the other participating companies to the bank, limited to the lower of:

- an amount equal to the base currency amount of the total liabilities in the cash pool; and
- an amount equal to the base currency amount of such guarantor's own net credit balance in the cash pool.

At the balance sheet date, the guaranteed amount was £nil (2022: £0.1 million).

There are no other contingent liabilities in the Company as at 31 December 2023.

40. Share capital

	Ordinary shares	
In issue at beginning and end of the period	2023 £m	2022 £m
	285,369,988	
Allotted, called up and fully paid		
Ordinary shares of 25 pence each	71.3	71.3
	71.3	71.3

Additionally the Company has authorised, issued and fully paid 437,281 (2022: 437,281) cumulative Preference shares classified as borrowings totalling £0.4 million (2022: £0.4 million). The 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 19 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 144.

41. 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 19.

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 2023 was 807,911 (2022: 1,173,686) and at that date had a market value of £2.3 million (2022: £3.7 million).

In 2023, the amount of reserves of Morgan Advanced Materials plc that may be distributed under Section 831(4) of the Companies Act 2006 was £189.1 million (2022: £264.5 million). This comprises a portion of the profit and loss account.

Notes to the Company financial statements continued

42. Related parties

The Company has related party relationships with its subsidiaries, 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:

	2023 £m	2022 £m
Transactions with subsidiaries		
Income from management services	4.0	1.9
Net interest income	3.8	4.6
Dividend income	14.0	13.9
Loans owed by related parties	–	–
Loans owed to related parties	4.6	2.3
Other amounts owed by related parties	2.6	1.8
Other amounts owed to related parties	1.0	1.0

43. Fixed asset investments

In accordance with Section 409 of the Companies Act 2006, a full list of related undertakings as at 31 December 2023 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. ²²	Argentina	Talcahuano 736, 4th Floor, Buenos Aires, CI013AAP, 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	30–36 Birralelee Road, Regency Park, SA 5010, 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 ¹³	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 ¹⁵	China	Zhenxing Road, Pulandian Economic Development Zone, Dalian, Liaoning Province, China	100.00%
Morgan Guangzhou Trading Company Limited	China	No. A163 Room 326, Scientific Research Office Building 63 Pu South Road, Guangzhou, Huangpu District, 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 09, 28th Floor (2809), 288 LongShan Road, Greenland Kanhu Plaza, Suzhou New District, Suzhou, 215163, China	100.00%
Morgan Thermal Ceramics (Shanghai) Co. Ltd ¹⁵	China	18 Kang An Road, Kang Qiao Industrial Zone, Pudong, Shanghai 201315, China	100.00%
Morgan International Trading (Shanghai) Co. Ltd 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 ^{11,13}	China	2 Liye Road, Economic Development Zone, Wuxi, Jiangsu Province, 214131, China	100.00%

43. Fixed asset investments (continued)

Name of undertaking	Country of incorporation	Registered office address	% shareholding owned by the Group
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. 06 Xi'nian 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.S	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%
Thermal Ceramics S.A. ¹⁰	France	Centre de Vie BP 75, 3 rue du 18 Juin 1827, 42162 Andrézieux-Bouthéon, France	100.00%
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	Weidenbaumsweg 103, 21035, Hamburg, 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%
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-II, Pandav Nagar, Mayur Vihar Phase I, Delhi, 110091, India	100.00%
Morganite Crucible (India) Ltd	India	B-II, MIDC Industrial Area, Waluj, Aurangabad, 431136, Maharashtra, India	75.00%
Ciria India Limited ¹⁵	India	P-II, 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 Vittori Pisani 20, 20124, Milan, Italy	100.00%
Morgan Carbon Italia S.R.L.	Italy	Via Vittori Pisani 20, 20124, Milan, Italy	100.00%
Morganite Carbon Kabushiki Kaisha	Japan	1-5, Isogamidori 7-chome, Chuo-ku, Kobe-shi, Hyogo, Japan	100.00%
Shin-Nippon Thermal Ceramics Corporation ⁷	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%

Notes to the Company financial statements continued

43. Fixed asset investments (continued)

Name of undertaking	Country of incorporation	Registered office address	% shareholding owned by the Group
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%
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%
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%
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	Av. Europa, 106, 12006, Castellón, Spain	100.00%
Morganite Española S.A.	Spain	Av. Europa, 106, 12006, Castellón, Spain	100.00%
Morgan Matroc S.A. (in liquidation)	Spain	Roger de Lluria 104 5 ^o -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	No. 98 Sathorn Square Building, 37th Floor, North Sathorn Road, Silom, Bangrak, Bangkok, Thailand	100.00%
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%
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 ¹	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 ¹	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
Morgan North America Holding Limited	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%

43. Fixed asset investments (continued)

Name of undertaking	Country of incorporation	Registered office address	% shareholding owned by the Group
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 1 Limited	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	99.01%
TCG Guardian 2 Limited	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	99.01%
Terrassen Holdings Limited ⁸	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	100.00%
The Morgan Crucible Company Limited	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 ^{3,20}	United Kingdom	York House, Sheet Street, Windsor, Berkshire, SL4 1DD, UK	99.01%
Certech, Inc. ²²	United States	1 Park Place West, Wood-Ridge, New Jersey, 07075, USA	100.00%
Graphite Die Mold, Inc. ²²	United States	18 Air Line Park, Durham, Connecticut 06422-1000, USA	100.00%
Morgan Advanced Ceramics, Inc. ²²	United States	2425 Whipple Road, Hayward, California 94544, USA	100.00%
Morgan Advanced Materials and Technology Inc. ²²	United States	441 Hall Avenue, St Marys, Pennsylvania 15857, USA	100.00%
Morganite Crucible Inc. ²³	United States	2102 Old Savannah Road, Augusta, Georgia 30906, USA	100.00%
Morganite Industries Inc. ²¹	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. ²²	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. 2% owned by Morgan Advanced Materials plc.

10. 1.98% owned by Morgan Advanced Materials plc.

11. Deregistered and liquidated in February 2023.

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. Ownership held in Ordinary A, B and C and Preference A and B Shares.

21. Ownership held in Class A, Class B and Class C Common Stock.

22. Ownership held in Common Stock.

23. Ownership held in Preferred Stock and no par Common Stock.

Notes to the Company financial statements continued

43. Fixed asset investments (continued)

UK incorporated subsidiaries which have taken exemption from audit per Section 479A of the Companies Act 2006 for the year ended 31 December 2023 are listed below.

Morgan Advanced Materials plc will guarantee the debts and liabilities of the companies claiming the statutory audit exemption at the balance sheet date in accordance with Section 479C of the Companies Act 2006. The Company has assessed the probability of loss under the guarantee as remote.

Name of undertaking	Registered number
Clearpower Limited	06247523
MCCO Limited	03246886
MNA Finance Limited	10423297
Morgan Europe Holding Limited	02540399
Morgan European Finance Limited	09910922
Morgan Finance Management Limited	10423619
Morgan Holdings Limited	01956134
Morgan International Holding Limited	10677668
Morgan North America Holding Limited	08789720
Morgan Trans Limited	02557161
Morganite Carbon Limited	00679647
Morganite Crucible Limited	02133533
TCG Guardian 2 Limited	05564065
Terrassen Holdings Limited	01352995
The Morgan Crucible Company Limited	07328730

44. Derivative financial assets and liabilities

	2023 £m	2022 £m
Derivative financial assets		
Forward foreign exchange contracts non-designated		
– amounts falling due within one year	1.6	2.0
– amounts falling due after more than one year	0.4	–
	2.0	2.0
Derivative financial liabilities		
Forward foreign exchange contracts non-designated		
– amounts falling due within one year	(1.7)	(6.4)
– amounts falling due after more than one year	(2.7)	(7.2)
	(4.4)	(13.6)

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 asset 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 IFRSs

	2019 Results before specific adjusting items restated ^{1,2} £m	2020 Results before specific adjusting items £m	2021 Results before specific adjusting items £m	2022 Results before specific adjusting items £m	2023 Results before specific adjusting items £m
Revenue	1,049.5	910.7	950.5	1,112.1	1,114.7
Profit from operations before amortisation of intangible assets	134.2	91.7	124.5	151.0	120.3
Amortisation of intangible assets	(8.1)	(6.1)	(6.0)	(4.7)	(3.3)
Operating profit	126.1	85.6	118.5	146.3	117.0
Net financing costs	(16.9)	(11.9)	(9.2)	(9.2)	(14.1)
Share of profit of associate (net of income tax)	0.5	0.6	0.4	–	–
Profit before taxation	109.7	74.3	109.7	137.1	102.9
Income tax expense	(29.9)	(20.2)	(29.7)	(37.1)	(26.0)
Profit after taxation before discontinued operations	79.8	54.1	80.0	100.0	76.9
Discontinued operations	0.7	–	–	–	–
Profit for the period	80.5	54.1	80.0	100.0	76.9
Assets employed					
Property, plant and equipment	317.2	267.6	248.1	283.2	293.8
Right-of-use assets	49.1	35.5	31.9	33.6	31.6
Intangible assets	204.8	185.4	183.1	189.0	182.2
Investments and other receivables	12.2	11.2	2.9	3.2	5.6
Deferred tax assets	6.0	14.4	15.9	15.3	17.6
Net current assets	125.1	136.7	202.8	212.6	254.4
Total assets less current liabilities	714.4	650.8	684.7	736.9	785.2
Employee benefits: pensions	156.8	176.3	102.7	15.6	25.2
Non-current provisions and other items	241.0	234.0	231.2	289.7	359.6
Deferred tax liabilities	4.9	0.5	1.2	2.0	1.8
Total net assets	311.7	240.0	349.6	429.6	398.6
Equity					
Total equity attributable to equity holders of the Parent Company	270.2	202.3	310.6	389.0	360.3
Non-controlling interests	41.5	37.7	39.0	40.6	38.3
Total equity	311.7	240.0	349.6	429.6	398.6
Ordinary dividends per share³	4.0p	5.5p	9.1p	12.0p	12.0p
Earnings per share					
Continuing and discontinued operations					
Basic earnings/(loss) per share	25.7p	(7.9)p	25.9p	31.0p	16.6p
Diluted earnings/(loss) per share	25.5p	(7.9)p	25.7p	30.7p	16.5p
Adjusted earnings per share ⁴	28.0p	19.0p	27.2p	33.8p	25.0p
Diluted adjusted earnings per share ⁴	27.8p	18.9p	27.0p	33.5p	24.8p

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.
2. Figures for 2019 have been restated to classify the Group's cumulative Preference shares as borrowings.
3. 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.
4. Definitions of these non-GAAP measures can be found in the glossary of terms on page 218, reconciliations of the statutory results to the adjusted measures can be found on pages 72 to 75.

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 advisors 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.
Underlying	Reference to underlying reflects the trading results of the Group without the impact of specific adjusting items and amortisation of intangible assets that would otherwise impact the users' understanding of the Group's performance. The Directors believe that adjusted results provide additional useful information on the core operational performance of the Group, and review the results of the Group on an adjusted basis internally.

1. Reconciliations of these non-GAAP measures to GAAP measures can be found on pages 72 to 75.

Shareholder information

Analysis of Ordinary shareholdings as at 31 December 2023

		Number of holdings	% of total holdings	Number of shares	% of share capital
Size of holding	1–2,000	3,365	75.30	1,784,334	0.63
	2,001–5,000	538	12.04	1,717,747	0.60
	5,001–10,000	180	4.03	1,273,528	0.45
	10,001–50,000	177	3.96	3,836,547	1.34
	50,001–100,000	44	0.98	3,283,233	1.15
	100,001 and above	165	3.69	273,474,599	95.83
		4,469	100.00	285,369,988	100.00
Holding classification	Individuals	4,031	90.20	6,658,653	2.33
	Nominee companies	321	7.18	228,980,492	80.24
	Trusts (pension funds etc)	3	0.07	2,652	0.00
	Others	114	2.55	49,728,191	17.43
		4,469	100.00	285,369,988	100.00

Key dates

9 May 2024	2024 Annual General Meeting (AGM), commencing at 10.30am.
6 August 2024	Half-year results announced via the Regulatory News Service and on the Company's website.

2023 and 2024 dividend payment dates

1 October 2023	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.
17 November 2023	An interim cash dividend of 5.3 pence per Ordinary share of 25 pence each was paid to shareholders registered at the close of business on 27 October 2023.
1 April 2024	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.
17 May 2024	Subject to shareholders' approval at the 2024 AGM, a final cash dividend of 6.7 pence per Ordinary share of 25 pence each will be paid to shareholders registered at the close of business on 26 April 2024.

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 advisors.
Share price	The price can be obtained on the Company's website: morganadvancedmaterials.com
ISIN Code	GB0006027295
LEI	I4K14LL95N2PHDL7EG85
Ticker symbol	MGAM

Shareholder information continued

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 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 sustainability and responsibility/EHS reports are also available to view and download.
Company registrars	Equiniti Limited, Aspect House, Spencer Road, Lancing, West Sussex, BN99 6DA www.shareview.co.uk
Shareview portfolio	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 in UK pounds sterling 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 directly 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, or multiple dividend payments, 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.
Buying and selling shares	Equiniti offer a service to buy and sell shares in UK listed companies. For more information, visit www.shareview.co.uk or call +44(0)3456 037 037. Providing this information is not a recommendation to buy or sell shares and this service may not be suitable for all shareholders. The price and value of any investments and income from them can fluctuate and may fall. Therefore, you may get back less than the amount you invested. Past performance is not a guide to future performance. Neither the Company nor Equiniti provides advice or makes recommendations about investments. If you have any doubts about the suitability of an investment, you should seek advice from a suitably qualified professional advisor.
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.
Unsolicited telephone calls and mail	Shareholders in companies may receive unsolicited phone calls or correspondence concerning investment matters. If you are offered unsolicited investment advice, discounted shares, a premium price for shares you own, or free company or research reports, please check the company or person contacting you is properly authorised by the Financial Conduct Authority before getting involved. Further information about what you should do is available on our website in the 'Shareholder Centre' within the Investors section.
Asset Reunification Programme	Morgan Advanced Materials has launched a tracing programme with the aim of reuniting 'lost' shareholders or their estates with unclaimed cash entitlements in respect of Morgan dividend payments. Cash entitlements may not have been claimed due to an address change, or where a shareholder is deceased and the beneficiaries or executors of an estate are not aware of the holding. If you would like to clarify whether you or a deceased person for whose estate you act holds shares in Morgan Advanced Materials please contact Equiniti for further assistance.



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