

Spirax-Sarco Engineering plc

Engineering our difference



Annual Report 2022



Our colleagues

+ See pages 52-55



Our customers

+ See pages 12-15



Our environment

+ See pages 16-17

Engineering our difference

Our Purpose is to create sustainable value for all our stakeholders as we engineer a more efficient, safer and sustainable world.

In 2022, we made a difference to our customers, each other and the world around us.

Accelerating our Purpose to engineer a more efficient, safer and sustainable world we grew stronger in the face of geopolitical and economic adversity, our **colleagues** inspired each other to do the right thing by living our Values and we celebrated our own differences and diversity.

It was a year when we gave back even more to our **communities** and reduced our impact on the **environment**, advancing our journey to meet our **One Planet: Engineering with Purpose** sustainability goals.

Across the Group, we combined our capabilities, developing new-to-world solutions to decarbonise industrial processes to meet our **customers'** changing

needs, working closely with our **suppliers** to support our customers' sustainability and efficiency aims, with an unwavering focus on safety.

Our story of 2022 shows how, through our commitment to all our stakeholders and to creating long-term sustainable **shareholder** value, we engineered OUR difference.



Our communities

+ See pages 68-71



Our suppliers

+ See pages 18-19



Our shareholders

+ See pages 118-119

“At Spirax-Sarco Engineering we are committed to making our difference for all our stakeholders through living our Purpose.”

Nicholas Anderson
Group Chief Executive

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Who we are

Spirax-Sarco Engineering plc is a multi-national industrial engineering Group with expertise in the control and management of steam, electric thermal solutions, peristaltic pumping and associated fluid path technologies.

Our technologies play an essential role in critical industrial processes across multiple industries as diverse as Food & Beverage, Pharmaceutical & Biotechnology, Power Generation and Healthcare.

With customers in 165 countries, we provide the engineered solutions that sit behind the production of many items used in daily life.

Our Purpose, supported by our culture and Values, unites us, guides our decisions and inspires us everywhere that we operate.



Operating units**

146



People

10,400+



Sales and service engineers

2,100+



Countries with a resident direct sales presence

67



Core product lines

1,700+



Direct buying customers†

110,000

** Operating units are business units that invoice locally

† Actively purchasing in the last 24 months

Spirax-Sarco Engineering plc

Thermal Energy Management

Steam Specialties

Core product expertise

Industrial and commercial steam systems, including condensate management, controls and thermal energy management products and solutions.

The difference we make

Steam is relatively easy to control and is capable of transferring large energy loads in the form of heat. It is used across a broad range of industries, in all geographies and a wide range of applications including: heating, curing, cooking, drying, cleaning, sterilising, space heating, humidifying, vacuum packing and producing hot water on demand. The generation of steam can also be decarbonised and we're leading the way by combining technologies with our Electric Thermal Solutions Business. We've developed a range of new-to-world, sustainable first-fit and retrofit heating solutions, as well as thermal energy storage applications for more sustainable steam on demand.

+ See pages 78-82

**spirax
sarco**
First for Steam Solutions

GESTRA
Engineering steam performance

Electric Thermal Solutions

Core product expertise

Electrical process heating and temperature management solutions, including industrial heaters and systems, heat tracing and a range of component technologies.

The difference we make

Electrical heating solutions are a complementary medium to steam and there are synergies in terms of the broad industrial and geographical application. Our electrical process heating and temperature management solutions provide more efficient processes through improved thermal energy management and control systems. They are easy to incorporate, install, maintain and control and can have zero emissions at point of use, making them a sustainable choice. Our solutions are particularly utilised in applications that require rapid 'on-off' control, higher temperatures and concentrated power loads as well as in an increasing range of sustainable applications where decarbonisation of industrial processes is a key driver.

+ See pages 83-87

ELECTRIC THERMAL SOLUTIONS

CHROMALOX **ALFA** **THERMOCOAX** **OLUREX**

Watson-Marlow

Core product expertise

Peristaltic and niche pumps and associated fluid path technologies, including pumps, tubing, specialty filling systems and products for single use applications.

The difference we make

Our pump and fluid path technologies provide sustainable value for customers across process and life sciences industries. Our solutions provide engineering excellence across single-use, system integration, and OEM applications, and we are committed to advanced design and manufacturing techniques, delivering sustainable manufacturing capabilities to customers. We provide total process confidence and security in accurate metering, dosing, transfer and filling. With a low cost of ownership, reliability and ease of maintenance, our technologies combine to provide a cost-effective end-to-end solution. Through our expertise we transform customers' production processes to be more efficient, safer and sustainable.

+ See pages 88-91

**WATSON
MARLOW** Fluid
Technology
Solutions

The industries we serve

We apply our products, solutions and expertise across a diverse range of industrial sectors, helping our customers to increase their efficiency, safety and sustainability.

Pharmaceutical & Biotechnology



Our peristaltic pumps, valves and single-use components enable precise flow control and fluid isolation. Clean steam reduces the risk of product and process contamination. Electrical heating is used in a wide range of process heating applications.



Food & Beverage



Steam is used for blanching, cooking, baking, brewing, distilling, packaging, cleaning and sterilising. Electric heating elements are used in commercial food equipment. Pumps are used to meter and transfer ingredients, deliver food to process lines and handle process waste.



OEM Machinery



Original Equipment Manufacturers (OEMs) are companies that build and supply machines for use in industry. Our activities with OEMs vary from simple product supply to advising on machine performance improvements and process plant design.



Oil & Gas



Electrical heating products reduce fluid viscosity, deliver freeze protection and help separate natural gas, crude oil and water during extraction. Our steam products enable optimum steam system performance and reduce energy use during oil and gas production.



Chemicals



Steam and electricity are widely used as an energy source in chemical production and product processing, while our pumps are used to safely and accurately transfer and dose critical chemical components.



Power Generation



Electrical heating technologies are widely used to optimise power generation. Steam turbines transfer chemical energy in fuel into electrical energy and steam is used to distribute and reuse waste heat formed during the power generation process.



13% of Group revenues to 'other' industries including, Pulp & Paper, Aerospace & Defence and Textiles.

Healthcare



Steam is used in hospitals and clinics for space heating, hot water production, humidification and sterilisation. Pumps and associated equipment are used in the manufacture of products for the Healthcare industry.



Water & Wastewater



Peristaltic pumps are used to dose chemicals during water treatment processes and to transfer viscous and abrasive slurries. Electrical heating solutions provide freeze protection, temperature maintenance and space heating in water treatment plants.



Buildings



Steam is used to provide space heating, humidification and hot water in public and private buildings, while our electrical products are used for hot water and heat generation, snow-melting, gutter and roof de-icing and frost-heave prevention.



Mining & Precious Metal Processing



Peristaltic pumps reduce water, energy and chemical use and increase productivity while moving and processing abrasive ores and slurries. Electrical heating is used for temperature maintenance and space heating for workers.



Semiconductor



Electrical products are used in water manufacturing and printing production processes to ensure thermal uniformity which is critical during chip manufacturing process; clean and pure steam generators supply the humidification system to ensure the air is not too dry or wet.



Transport



Electrical heating components provide freeze protection and defrost for engines, rotating equipment, mechanical systems and fluid delivery. PTFE lined hoses are used for braking, cooling, transmission and steering systems. Our steam heat exchange and recovery solutions are used on cruise ships.



Financial summary

for the year ended 31st December 2022

Strong performance in 2022; anticipate good growth in 2023

- Revenues up 20% or 14% organically; driven by volume growth and price increases to protect margins
- Statutory operating profit down 1% due to revenue investments, ETS restructure and acquisition costs
- Adjusted operating profit of £380.2 million up 12% or 7% organically
- Adjusted operating profit margin of 23.6%, down 170 bps due to revenue investments
- Steam Specialties organic sales up 12%; Cotopaxi acquisition enhances Digital growth capabilities
- Electric Thermal Solutions organic sales up 14%; strategic acquisitions of Vulcanic and Durex Industries
- Watson-Marlow organic sales up 16%; Biopharm** normalising, Process Industries up strongly
- Net debt[^] increased to 1.5x EBITDA* on a pro-forma basis, following ETS acquisitions
- Adjusted cash conversion lower at 57% due to record capital investment and inventory rebuilding
- Total dividend up by 12% to 152.0 pence; maintaining 55-year CAGR track record at 11%

2022 highlights

Statutory	2022	2021	Reported	
Revenue [†]	£1,610.6m	£1,344.5m	+20%	
Operating profit	£318.8m	£320.9m	-1%	
Operating profit margin	19.8%	23.9%	-410 bps	
Profit before taxation	£308.1m	£314.5m	-2%	
Basic earnings per share	305.1p	318.3p	-4%	
Dividend per share	152.0p	136.0p	+12%	
Adjusted*	2022	2021	Reported	Organic*
Revenue [†]	£1,610.6m	£1,344.5m	+20%	+14%
Adjusted operating profit	£380.2m	£340.3m	+12%	+7%
Adjusted operating profit margin	23.6%	25.3%	-170 bps	-160 bps
Adjusted profit before taxation	£370.6m	£333.9m	+11%	
Adjusted earnings per share	377.2p	338.9p	+11%	
Adjusted cash conversion	57%	82%		

[†] The term 'sales' is used interchangeably with 'revenue' when describing the financial performance of the business.

* Organic measures are at constant currency and exclude contributions from acquisitions and disposals (with our Russian operating companies treated as disposals from the date at which the Group suspended all trading with and within Russia).

[^] Net debt includes total borrowings, cash and bank overdrafts but excludes lease liabilities, as set out in Note 24 to the Financial Statements.

** Biopharm refers to sales made to the Pharmaceutical & Biotechnology sector

See Note 2 to the Financial Statements for an explanation of alternative performance measures.

Segmental reporting

Our segmental reporting is consistent with how we present management information to the Board. A detailed segmental breakdown is provided in Note 3 of the Consolidated Financial Statements on pages 200 to 202. A performance review by operating segment is set out on pages 74 to 91.

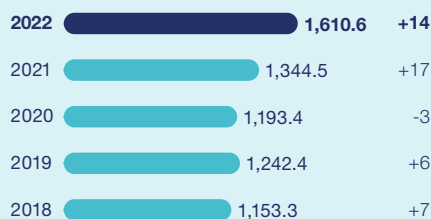
	2022 Revenue	Change		2022 Adjusted operating profit*	Change		2022 Statutory operating profit	Change
		Reported	Organic		Reported	Organic		Reported
Steam Specialties	£866.0m	+15%	+12%	£206.1m	+9%	+8%	£196.2m	+5%
Electric Thermal Solutions	£256.1m	+41%	+14%	£39.9m	+66%	+23%	£7.3m	-34%
Watson-Marlow	£488.5m	+20%	+16%	£160.0m	+7%	+3%	£154.4m	+6%
Corporate expenses				(£25.8m)			(£39.1m)	
Total	£1,610.6m	+20%	+14%	£380.2m	+12%	+7%	£318.8m	-1%

*All adjusted profit measures exclude certain items, which totalled a charge of £61.4 million (2021: charge of £19.4 million), as set out in Note 2 to the Financial Statements.

Revenue £m

KPI

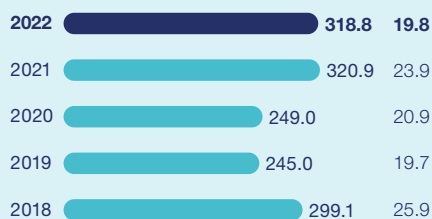
£1,610.6m

Organic
change %

Statutory operating profit £m

£318.8m

Margin %

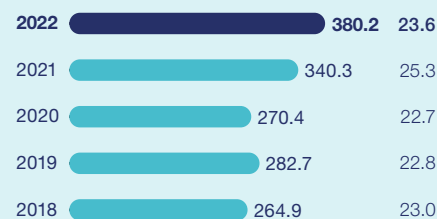


Adjusted operating profit* £m

KPI

£380.2m

Margin %

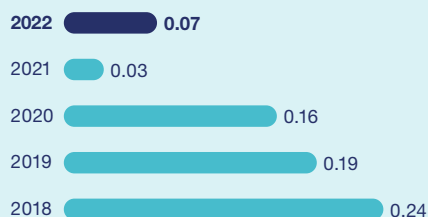


Health and Safety

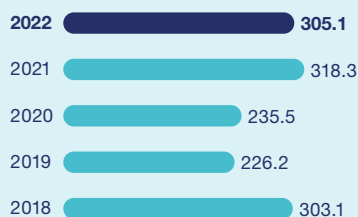
Over three-day lost time injury rate
per 100,000 hours worked

KPI

0.07

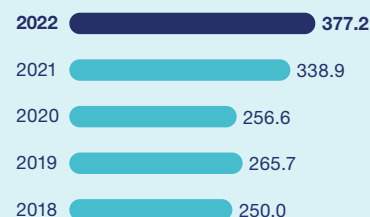
Statutory earnings
per share p

305.1p

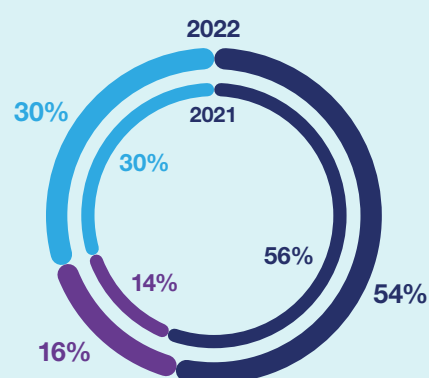
Adjusted earnings
per share* p

KPI

377.2p

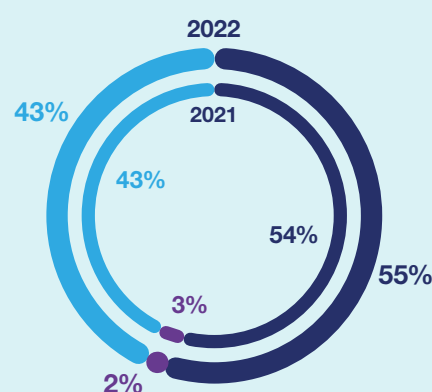


Revenue by segment %



- Steam Specialties
- Electric Thermal Solutions
- Watson-Marlow

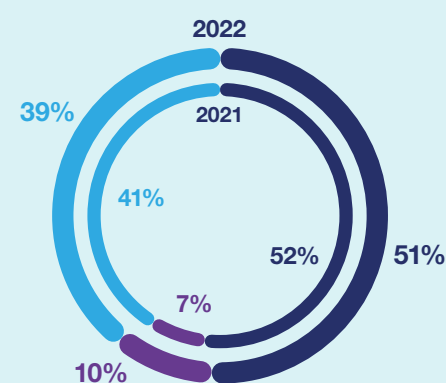
Statutory operating profit by segment %



- Steam Specialties
- Electric Thermal Solutions
- Watson-Marlow

Before corporate expenses of £39.1 million.
(2021: £22.4 million)

Adjusted operating profit by segment* %



- Steam Specialties
- Electric Thermal Solutions
- Watson-Marlow

Before corporate expenses of £25.8 million.
(2021: £22.4 million)

*All adjusted profit measures exclude certain items, which totalled a charge of £61.4 million (2021: charge of £19.4 million), as set out in Note 2 to the Financial Statements. The Group's three operating segments, as defined by IFRS 8, are Steam Specialties, Electric Thermal Solutions and Watson-Marlow.

Chair's Statement

Leading with Purpose.

“We are pleased with the progress made, across different dimensions, which has created significant value for all our stakeholders in ways that are meaningful to them.”

Jamie Pike
Chair

Introduction

In a volatile year for the world's economies, the effects of the deteriorating macroeconomic situation were felt across our global societies, impacting our Group's stakeholders in many different ways. In these more challenging times, the Board has remained focused on ensuring the decisions we make create value for all our stakeholders and is pleased with the Group's strong and resilient performance.

During 2022, the Board engaged effectively and continued to reflect stakeholder views in our decision making. This was evidenced when making investment decisions such as increasing our manufacturing capacity, improving our sustainability performance, accelerating our Digital Strategy and the introduction of our Group Inclusion Plan.

The Board also considered the impact we have on stakeholders when taking more difficult decisions, such as the closure of our loss-making manufacturing facility in Soissons (France) and the Group's withdrawal from Russia.

Our commitment to inclusion, equity and diversity

Our Board is diverse ethnically, culturally and in terms of gender, bringing value to our Group, because of our Board members' rich diversity of perspectives and experiences, enabling them to better understand and consider the needs of all our stakeholders.

At the end of December 2022, the Board met the 40% female representation target and with three members of the Board coming from a minority ethnic background, we exceeded the Parker Review target of at least



one individual. The Board composition was stable during 2022 and our focus for the year was on Board consolidation and succession planning for senior leadership.

Given the increasing importance placed on sustainability by all stakeholders, the Board supported elevating the representation of this area to the Group Executive Committee (GEC) level, with Sarah Peers, Group Director of Sustainability, becoming a member of the GEC effective 1st October 2022.

The Board was pleased to approve and oversee the implementation of the Group's Inclusion Plan in 2022, noting the impact it is already having across the Group. In 2022, we continued increasing the number of women in senior roles across the Group and improving gender balance in our senior leadership team (GEC plus their direct reports) which reached 34% female representation by October 2022. Although usual attrition and employee changes in the fourth quarter reduced this to 32% at the year-end, we anticipate female representation in our senior leadership will return to 34% by April 2023 and we remain committed to reaching at least 40% female representation across our senior leadership. We are also pleased that our global graduate programme again achieved its goal of 50% female intake for the year.

To further strengthen our focus on inclusion and equity leading to greater diversity in

our Group, we approved a set of refreshed Diversity goals at our December meeting. The goals are published on page 50 of the Sustainability Report and reaffirm our commitment to having a female Chair, Senior Independent Director, Chief Executive or Chief Financial Officer by the end of 2025, in line with the recommendations of the FTSE Women Leaders Review (formerly Hampton-Alexander).

We are fully supportive of the Group's continued activity to champion these important societal changes. In 2022, Nimesh Patel, Chief Financial Officer, became a Co-Chair of the FTSE Women Leaders Review and Nicholas Anderson, Group Chief Executive, is now an Ambassador for the 25x25 campaign, which is seeking to achieve 25 female CEOs in the FTSE100 by 2025. We became signatories to the UN Women's Empowerment Principles and the UN LGBTI Standards of Conduct for Business, building on previous commitments, including as signatories to the Change the Race Ratio campaign which we began supporting in 2021.

Although not yet required to do so, we have voluntarily reported on all diversity and inclusion data which complies with the Financial Reporting Conduct's new disclosure rules on this topic in respect of Board composition. These disclosures are published on page 107 of the Governance Report.

Chair's Statement continued

Board highlights

The Board met nine times in 2022. This included two ad hoc meetings to address the acquisitions of Vulcanic and Durex Industries. The Board was actively and directly involved in progressing the Group's **One Planet: Engineering with Purpose** Sustainability Strategy. Other highlights in the year included visits to three operating companies in the UK and USA. The Board also reviewed and approved strategy updates for Digital and Health & Safety. Eight colleague engagement focus groups were held and the Board undertook a full organisational and succession review down to the level of GEC-3.

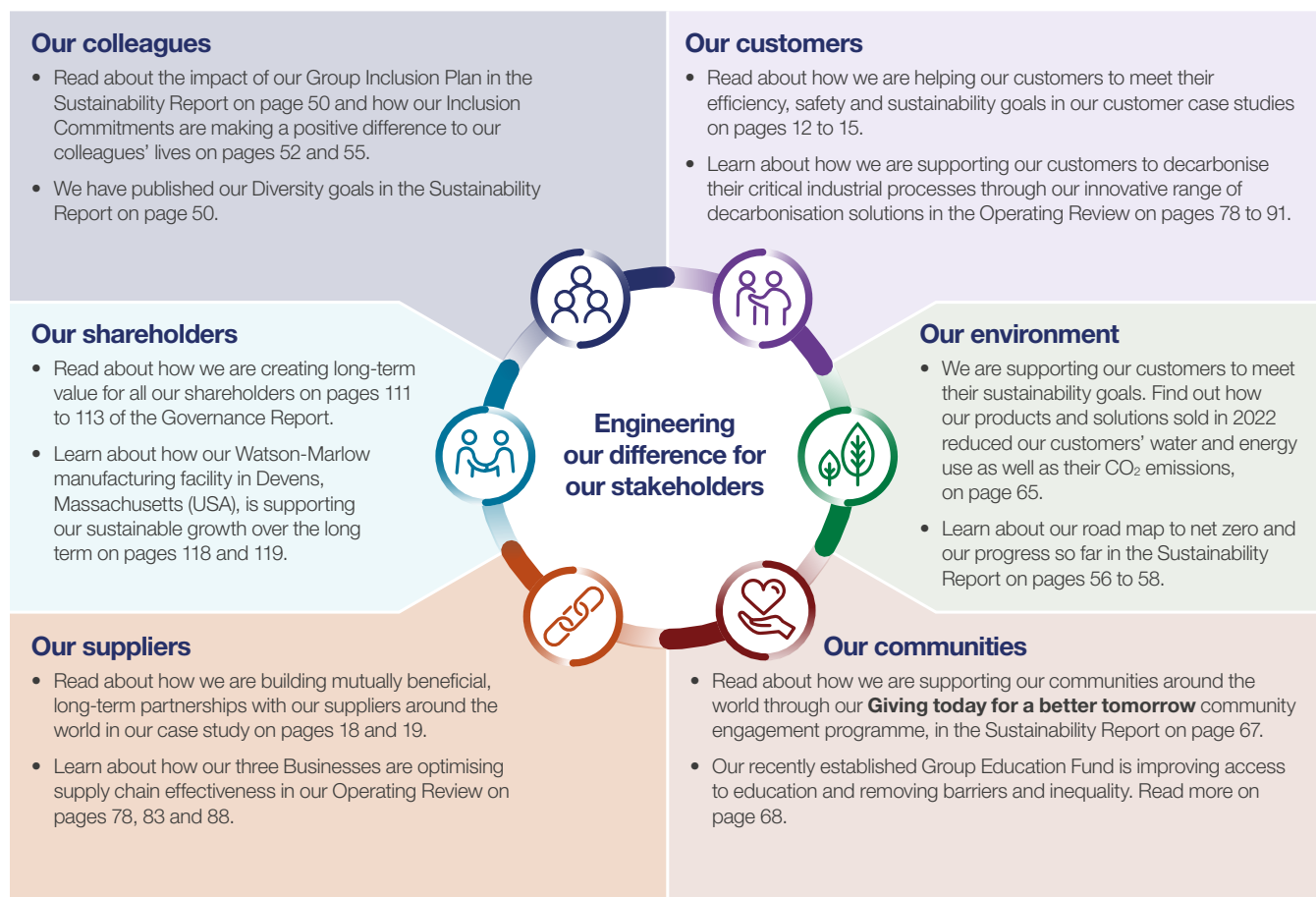
The Board has overseen a year of significant investment to support the Group's sustainable growth over the long term.

In addition to delivering a very strong financial performance, we are pleased with the progress made by Executive Management in advancing the Group's strategic agenda across different dimensions, creating significant value for all our stakeholders in ways that are meaningful to them.

In addition to three acquisitions designed to create sustainable, long-term value for **shareholders**, the Group also closed its loss-making Chromalox facility in Soissons (France) and fully exited Russia. Investments in additional supply capacity, factory modernisation, IT systems and Digital are helping our Businesses do even better what they already do well. Our collaborative and proactive approach has created mutual benefit across our global **supplier** networks during these more challenging times.

The launch of new-to-world decarbonisation solutions, created through a cross-Business collaboration between Steam Specialties and Electric Thermal Solutions (ETS), will support our **customers** to achieve their sustainability goals and protect our **environment**. The Group launched its Inclusion Plan and global commitments to ensure all 10,400 **colleagues** across the globe can thrive by feeling included and supported. The outstanding efforts of our teams working in support of our community engagement framework **Giving today for a better tomorrow**, continue making a positive difference to the local **communities** in which they operate.

Engineering our difference for all our stakeholders



Board changes

On 31st January 2023, we reported that, for personal reasons, Olivia Qiu stepped down as a Non-Executive Director. On behalf of our shareholders the Board acknowledges with gratitude Olivia's significant contribution since her appointment. We have initiated the process to appoint another Non-Executive Director with the skills and experience required to support the implementation of our strategies and our commitments to inclusion and diversity.

Board effectiveness

In 2022, we conducted a Board effectiveness review with our external advisers Egon Zehnder, which enabled us to evaluate progress on the recommendations made in the 2021 review. The conclusions were positive and showed an improvement across all the key dimensions. The review highlighted the need for the Board to allow more time for keeping up with industry trends and competitor activity to better evaluate potential future risks and opportunities.

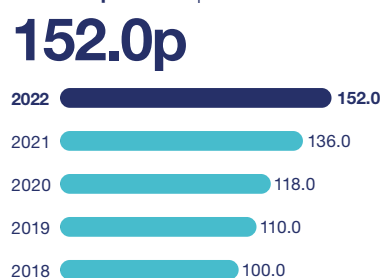
Section 172 Statement

In accordance with the Companies Act 2006 (the Act) (as amended by the Companies (Miscellaneous Reporting) Regulations 2018), the Directors have prepared a statement describing how they have had regard to the matters set out in section 172(1) of the Act, when performing their duty to promote the success of the Company, under section 172. The statement can be found on page 111 of the Governance Report.

Dividends

The Directors are proposing the payment of a final dividend of 109.5 pence per share, an increase of 12% (2021: 97.5 pence). Subject to approval of the final dividend by shareholders at the Annual General Meeting on Wednesday 10th May 2023, the total Ordinary dividend for the year will be 152.0 pence per share, an increase of 12% over the 136.0 pence per share for the prior year.

Dividend per share p



Signed by:
Jamie Pike
 Chair
 on behalf of the Board of Directors

8th March 2023

Engineering our difference for customers

Innovative solutions for our customers...





...which meet their safety, efficiency and sustainability needs, today and tomorrow.

Serving a diverse range of industries globally, we provide the engineered solutions that sit behind the production of items that people around the world rely on every day.

In sectors ranging from Food & Beverage, Pharmaceutical & Biotechnology to Healthcare, Power Generation and Semiconductors, our products play an essential role in our customers' critical industrial processes, including solutions to help them decarbonise those processes to meet their sustainability goals.

Whether through the control and management of steam, electric thermal or fluid technology solutions, as well as a new range of decarbonisation solutions, we are supporting the efficiency, safety and sustainability of our customers' operations in line with our Group Purpose.

Our customer closeness and ability to self-generate growth has become even stronger through harnessing the power of digital, as we develop digital insights and strengthen our ability to provide a total customer solution.

Read on to find out how we are engineering our difference across our Group and delivering differentiated value for our customers.

110,000
Direct buying customers
around the world.

Engineering our difference for customers continued

Steam Specialties



Digital insights and pre-emptive action improve sustainability.

Cotopaxi and Spirax Sarco worked together with Kraft Heinz, to design and install our connected energy and sustainability platform, STRATA, at its Shanghai facility.

The digital insights generated by the system, which examined how Kraft Heinz was managing its use of water, air, gas, energy and steam (WAGES), combined with Spirax Sarco's efficiency and sustainability solutions, quickly delivered value.

Through the installation of 23 utility meters the WAGES data was collected and sent to STRATA every minute, generating real time analysis. A number of issues were identified, including significant steam leakage detected during a factory 'shutdown' subsequently addressed by the Spirax Sarco team.

Through monitoring the water meters and using the insights generated, the team also identified evaporation and heat loss to the atmosphere from the process cooling towers. To provide a more sustainable and efficient solution, we have designed a new heat recovery system, including an industrial heat pump, to capture the heat that would otherwise have been lost and re-use it within the factory's production processes.

The way in which Cotopaxi technology and Spirax Sarco know-how have come together is helping Kraft Heinz achieve its Environmental Stewardship Goals, through greater efficiency in steam use, as well as reductions in carbon emissions.

>4,000
tonnes equivalent steam-saving
potential per year.

*when supplied with renewable electricity

Electric Thermal Solutions



Reducing CO₂ emissions in oil and gas production.

Through our innovative Medium Voltage technology and suite of sustainability solutions, our Group is leading the way in helping our customers to decarbonise their critical industrial processes.

The concept of converting heating systems to electric enables the in-situ replacement of fossil-fuel-fired burners in boilers and other heating systems, with minimal disruption to operations.

Chromalox, part of ETS, has been working with a major energy company in the USA to help reduce carbon emissions from their exploration and production facilities.

Gas-fired Heater Treaters are separator vessels used extensively in the customer's production operations. They are heated up to support the process of separating water from the oil or gas before it passes into the pipeline for processing and are essential to the efficient operation of oil and gas facilities.

Recognising the importance of minimising expensive asset downtime, Chromalox worked with our customer to design a retrofit solution to replace the burner assembly inside each Heater Treater with custom-designed flanged electric immersion heaters.

The retrofit solution is conducted at site and the refurbished electric Heater Treaters have zero emissions*. The solution also contributed to energy efficiency, as heat loss from the flue stack was eliminated, along with the open flame.

Gas-fired Heater Treaters are used extensively throughout the global energy industry and Chromalox is already working with other customers in the sector to help decarbonise their oil and gas operations.

1,500
tonnes of CO₂ eliminated by conversion
to electric heating per year.

Watson-Marlow



Technology that is good for the planet.

Authorities around the world are tightening environmental regulations governing chemical usage and disposal in wastewater treatment, because we only have one planet.

Watson-Marlow's Qdos Conveying Wave Technology (CWT) pump, launched in 2021, is already helping customers to achieve better environmental performance. With all the benefits of peristaltic action, a Qdos CWT pump incorporates a flexible element which is compressed against a track, reducing material stresses and providing significantly longer service life in many chemical metering applications. As with all Qdos pumps, the sealed CWT pump head minimises operator exposure to chemicals and can be safely changed in less than a minute.

At Fürstenhagen wastewater treatment plant in Germany, our customer was able to meet the strict environmental discharge limits by accurate and reliable ferric chloride dosing delivered by the Qdos CWT.

Controlling phosphorus discharge from municipal and industrial wastewater treatment plants is a key factor in preventing eutrophication, which can lead to algae blooms in lakes and reservoirs. These blooms can make the water dangerous if consumed and blocks sunlight, which depletes oxygen levels leading to the death of fish and aquatic plants.

Due to the overall reliability and functionality of the Qdos CWT pumphead, the Fürstenhagen plant has achieved a 97.5% reduction rate in phosphorus load over the year. The Qdos CWT is efficient and reliable and it saves on chemical usage too, making it good for business as well as for our planet.

97.5%

reduction rate in phosphorus load with the help of Qdos CWT pump.

“The Qdos CWT has been in operation for more than 15,500 hours and dosed a total of almost 186,000 litres of precipitating agent and hasn't needed any maintenance.”

Marco Quehl
Wastewater Operations Manager
Fürstenhagen WWTP



Engineering our difference for the environment

By creating a more
sustainable future we are...



...helping customers to meet their sustainability goals.

17.7 million tonnes

of greenhouse gas emissions saved annually from 20 product categories sold in 2022.

We are supporting our customers on their sustainability journey by helping them to make savings in energy, water and emissions through our deep knowledge, solutions focus, innovative technology and evolving product range.

Our exciting new range of **TargetZero** solutions, created through a collaboration between Steam Specialties and ETS, came to market in the second half of 2022.

Through these solutions, we are uniquely positioned to help make our customers' businesses more sustainable by decarbonising the generation of heat for their critical industrial processes, including the raising of steam. You can read more about **TargetZero** and how we are helping our customers to operate sustainably in our Operating Review on page 80.

ONE PLANET
ENGINEERING WITH PURPOSE



...powering ahead towards net zero.

57%

of our Group electricity came from verified renewable energy sources in 2022.

We are working to reduce our own energy and water use, greenhouse gas emissions and waste production at our facilities around the world as we engineer our difference for our planet. Our roadmap to net zero on page 56 of the Sustainability Report outlines the steps we are taking to eliminate scope 1 and 2 emissions from our operations by 2030.

We are focused on moving to renewable sources or green energy contracts for our electricity supply across the Group, with many of our largest energy-consuming sites having transferred to renewable or green electricity sources.

In 2022, 57% of our Group electricity came from verified renewable energy sources.

In addition to switching to green energy contracts, we are self-generating renewable electricity at our facilities. We have installed 2.4GWh at our Electric Thermal Solutions sites in Nuevo Laredo (Mexico), Normandy (France), Heidelberg (Germany) and at our new Watson-Marlow site in Devens, Massachusetts (USA). This is equivalent to the average annual energy consumption of 110 people in the UK.



Engineering our difference for suppliers

Creating mutual value...





In 2022, our global supply chains faced some of their toughest challenges.

...by meeting the challenges together.

In February 2022, the Russian invasion of Ukraine put significant, additional stress on our already challenged global supply chains.

In identifying the increased risks, our teams responded with agility and care to help suppliers meet the challenges they faced, while also securing our own supply needs. An example of this in action was when the cost of nickel spiked more than 250% in just 24 hours after the start of the war, leading the London Metal Exchange to temporarily suspend nickel trading.

Metal castings are a key component in our steam products and we rely on the foundry industry across the world to produce stainless steel components for the castings of which nickel is a constituent. With 10%** of the world's nickel supply originating from Russia, the war created huge uncertainty for this industry and prompted the Institute of Indian Foundrymen to encourage its foundry members to protect themselves through significant price increases.

Recognising the potential serious impact, our teams stepped in with a different solution, engaging 20 key foundry suppliers in a win-win agreement. By flexing our pricing contracts and shortening payment terms we helped the foundry members maintain their cash flow liquidity and stabilise their businesses.

Working together, our approach protected our valued partnership and we secured essential supply on behalf of our customers.

>2,500+
key direct suppliers in 2022*.

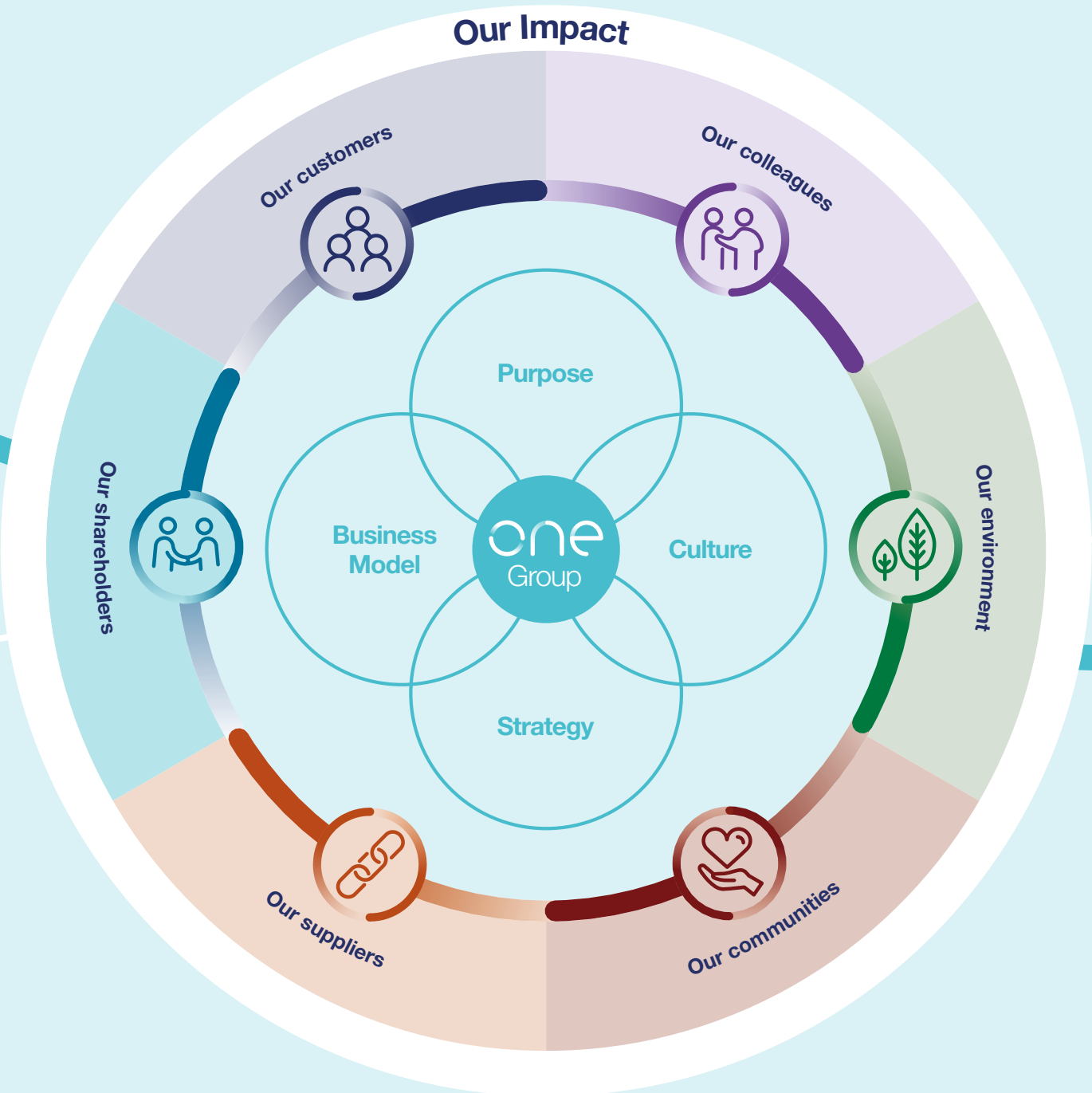


*The total for key direct suppliers in 2022 excluding Cotopaxi, Vulcanic and Durex Industries.

**www.reuters.com 6 September 2022.

Making our difference

Our ONE Group approach



Our Purpose

To create sustainable value for all our stakeholders as we engineer a more efficient, safer and sustainable world.

In living our Purpose, our Group is united by a strong culture, a common strategic framework, and a consistent business model which enables us to create outcomes with lasting impact for all our stakeholders across a breadth of geographies and diverse end market sectors.

Engineering our difference

All the Businesses in our Group provide products and solutions which are essential to the efficient operation of the critical industrial processes responsible for essential products used in everyday life. In this way, our customers' needs drive all that we do and to meet their needs effectively, we leverage our culture, strategic framework and business model to inform the way we work.

+ Read more about what we do on page 23.

Our Culture

Achieving our Purpose depends on our culture, what we do in our workplaces and how we operate.

Our culture is shaped by our shared Values. They guide our decisions and behaviours wherever we work in the world.



Safety



Excellence



Collaboration



Respect



Customer Focus



Integrity

As part of this culture based on Values, we promise our colleagues challenging work with real impact and the chance for development every day. That's best achieved in supportive teams with strong relationships. It's those types of teams and relationships that enable our colleagues to better understand and help each other, to learn and to grow.

Inclusion is present in all of this. It runs through every one of our Values. It's central to the promises we make to our colleagues. It's critical to achieving our Purpose.

That's why we created **Everyone is Included**. It's our Group Inclusion Plan through which we are committed to empowering an inclusive and equitable working culture where all our colleagues can be themselves and achieve their full potential.

+ Find out more on pages 50, 52 to 55.



Making our difference continued

Our Strategy

Our Strategy is designed to help us do better what we already do well. Our Business strategies, which are refreshed from time to time, drive our Group's organic performance.

Steam Specialties	Customer first ²
Electric Thermal Solutions	Engineering Premium Solutions
Watson-Marlow	Strategy25

+ You can read about progress in the Business strategies on pages 78 to 91 of the Operating Review.

Our Corporate Strategy drives inorganic revenue growth and during 2022 this was evidenced through the successful acquisitions of Cotopaxi, Vulcanic and Durex Industries, see page 31.

Our Sustainability Strategy, **One Planet: Engineering with Purpose**, drives our Environmental, Social and Governance performance.

+ You can see the overall progress we are making in our Businesses across our six strategic themes on pages 32 and 33.

+ You can read about the progress of our six strategic initiatives in the Sustainability report on pages 46 to 73.

+ To understand more, read about our strategy in action and the performance of our Businesses on pages 78 to 91.

Our Business Model

Customer focus

At the heart of our value creation is our deep engagement with and understanding of our customers and their processes.

This closeness enables us to meet our customers' needs as we combine our specialist knowledge and locally available, industry-leading products and services to deliver value-adding engineered solutions.



Customer closeness

Our direct sales business model creates a unique understanding of our customers' needs. We build deep, long-term relationships as we help our customers solve their difficult productivity, control and energy efficiency problems and improve their operational performance, safety and sustainability.

Applied engineering

It is not our products alone that provide value to our customers, but also the application of our extensive knowledge of systems design, operations and maintenance. Our customers increasingly rely on our expertise to deliver unique engineering solutions to achieve enhanced and sustainable operating efficiencies.

Wide product range

The breadth of our product offering is unmatched by our competitors and our one-stop-shop approach simplifies the procurement process for our customers who are increasingly seeking partnerships with competent full-service suppliers. We are committed to research and development (R&D) to further widen our range of products and pre-fabricated engineered packages.

Regional manufacturing

Local availability of a wide range of products, which meet applicable regional design codes, is critical to our business model and enhances top-line revenue growth. We have strategically located our major manufacturing plants across the world in Europe, North America, Latin America and Asia and are continuing to invest in new and upgraded manufacturing facilities across our Group.

What we do

Our core activities are those things we do that enable us to meet the needs of our customers and achieve our Company Purpose.

Innovate and design

Through innovative R&D and collaboration across our Group, we develop and enhance our already broad range of products, pre-fabricated packages and site services, ensuring that we meet customers' changing needs.

1,700+
core product lines

Manufacture

We manufacture industrial and commercial steam system products, electrical process heating and temperature management products and peristaltic and niche pumps and associated fluid path technologies.

40
manufacturing sites

Sell

With a resident direct sales presence in 67 countries and non-resident direct sales or distributors in a further 98 countries, we serve customers in 165 countries worldwide.

67
countries with
direct sales presence

Monitor and measure

We offer a comprehensive range of site audits, maintenance services and digital monitoring solutions, to keep our customers' systems operating efficiently.

45%
revenue from
maintenance activities

Apply and solve

We combine our specialist knowledge and digital capabilities with our industry-leading products and services to deliver value-adding engineered solutions to customers, who increasingly rely on our service, solutions and expertise.

2,100+
sales and service engineers

Educate

We help our customers to identify in-house engineering knowledge skill gaps and offer a wide range of training courses, delivered in our 62 training centres worldwide, to help plug those knowledge gaps.

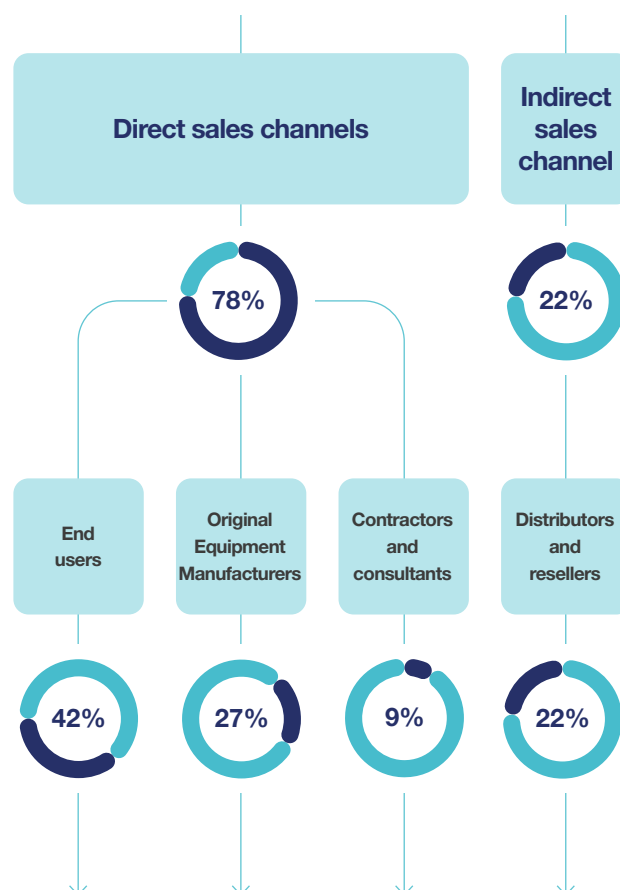
62
training centres

Our routes to market

Our direct sales approach is instrumental in delivering on our Purpose and creating value-adding opportunities for self-generated growth.

Sales companies

We have over 100 sales companies, mostly holding local inventories, which are supplied by our manufacturing companies. Our direct sales approach plays an important role in all routes to market – whether direct or indirect – as our engineers engage with end users to highlight the benefits of our products, solutions and services. End users can then purchase from us directly, specify our products in OEM equipment, request that contractors specify our products, or purchase from a distributor.



End users of our products and services

Industrial and commercial steam, electrical process heating and peristaltic and niche pump users, across a wide range of markets, purchasing from us directly, specifying our products, or buying from distributors.

Making our difference continued

Creating value for all our stakeholders

We operate in a way that aims to deliver long-term sustainable value for our six stakeholder groups. We engineer our difference by managing our stakeholder relationships in a way that reflects our Values. Our aim is to create a positive impact in everything that we do by effectively managing financial, human and natural resources, as well as understanding our associated risks and opportunities and implementing our strategy for growth.



Our colleagues

We focus on what matters to colleagues wherever in the world they work.

In February 2022, we launched our global Inclusion Plan, **Everyone is Included**, and our ten Group Inclusion Commitments which aim to make a positive difference to the lives of colleagues globally. You can read about the Commitments and the impact they are having on pages 50 and 52 to 55.

The Group Inclusion Commitments have become our minimum global standards on important matters such as parental leave, caregiving and support for colleagues experiencing pregnancy loss, domestic violence or abuse. The Commitments are designed to help all our colleagues feel safe, supported and able to be themselves at work.

During the year, we also recognised the impact of the cost-of-living crisis on our colleagues and brought forward our global pay review, setting increments country-by-country, designed to materially replace eroded purchasing power from higher inflation. As an example, colleagues in the UK received a 7.1% pay increase at the start of 2023, except for some Executive leaders who received a reduced increment.

10,400+

colleagues have access to support from our Group Inclusion Plan Commitments.



Our customers

We support our customers' mission critical industrial processes and sustainability goals.

Our long track record of helping customers maintain the efficiency, safety and sustainability of their mission critical industrial processes, through our products, direct sales model and solutions focus, became even more important in 2022 amidst swiftly rising energy prices and demand for decarbonisation solutions. The increasing commitments to net zero targets globally will

have a profound effect on industrial activity over the coming decades and is an additional source of growth for our Group for at least the next 30 years. To continue to meet the needs of our customers, we have invested significantly in the development of sustainable products and solutions that help customers meet their own sustainability goals without changing their operational processes.

In 2022, we launched new-to-world **TargetZero** decarbonisation solutions, created through an internal collaboration between Steam Specialties and Electric Thermal Solutions (ETS). You can read more about the benefits of the three **TargetZero** solutions, branded 'ElectroFit', 'Steam Battery' and 'SteamVolt', on pages 80 and 85 of the Operating Review.

£20m

invested in Research & Development across the Group in 2022.



Our suppliers

We build mutually beneficial, long-term partnerships.

As we progress towards our ambition of becoming a leader in industrial sustainability, we recognise the importance of achieving sustainable supply chains. That's why we work closely with our suppliers, providing education and awareness to help them on their sustainability journeys and to build mutually beneficial, long-term partnerships.

In 2022, we refreshed our Supplier Sustainability Code to reflect the way in which we are evolving in line with our **One Planet:**

Engineering with Purpose Sustainability Strategy and set out the minimum standards we expect. The new Code for direct suppliers was translated into 17 languages and was provided to suppliers via our procurement colleagues working at our manufacturing sites in each area of our Group. Suppliers who already have access to our Supply Chain Sustainability Portal, that we began rolling out to suppliers in 2022, are able to sign the Code in the Portal and provide evidence of the ways in which they are meeting our requirements. Other suppliers will continue to sign the Code outside of the Portal. Once fully deployed the Portal will form the foundation of our supplier sustainability practices and will contain all our strategic suppliers.

500+

suppliers had signed our Supplier Sustainability Code by the end of 2022.



Our environment

We are on target to achieve net zero scope 1 and 2 emissions by 2030.

We have made very strong progress reducing our operating carbon footprint since setting our baseline emissions for 2019. While our business has experienced significant organic growth over the period, the development and implementation of: net zero roadmaps since the launch of our Sustainability Strategy in 2021 has helped to reduce emissions on an intensity basis by nearly 50% since 2019 versus sales volume growth. This reduction was facilitated by the emission reduction measures that we implemented in 2022, including the decommissioning of our natural gas-powered Combined Heat & Power (CHP) plant at our manufacturing facility in Cheltenham, (UK) and transitioning 57% of our consumed electricity to renewable sources. In total these measures delivered an absolute reduction in our scope 1 and scope 2 emissions of 41% since 2019 to 27,175t CO₂ in 2022.

41%

reduction in Group CO₂ emissions in 2022 compared to 2019.

We take care of all forms of life on our planet.

Through our **One Planet: Engineering with Purpose** Sustainability Strategy we have an unprecedented opportunity to engage our colleagues and our communities to better understand and protect biodiversity. To minimise our impact on the planet and to create a biodiversity net gain, we committed to offset equivalent to five times our global operational footprint by 2025. Through our partnership with the World Land Trust, which began in 2021, we funded the protection of 567 acres of vulnerable wildlife habitat in 2022. In our own operations, during 2022, we completed 78 biodiversity initiatives at our sites around the world. Examples include our teams at Spirax Sarco Spain establishing a long-term collaboration project with Collserola National Park to help restore a water habitat in this drought-prone area. This partnership involves financial sponsorship of conservation as well as colleagues volunteering their time in the Park. Other projects undertaken by our teams include the installation of beehives in Italy, a roof garden in China, a wildlife pond in the UK, as well as mangrove protection and tree planting in Indonesia and Argentina.

78

biodiversity projects across the Group completed by our teams in 2022.



Our shareholders

We invest in our sustainable, future growth.

To support the Group's sustainable growth over the long-term, we invested in three important acquisitions to accelerate the implementation of our Digital Strategy and expand our ETS Business. The acquisition of Cotopaxi, a digitally enabled global energy consulting and optimisation company, is enabling Steam Specialties to digitally enhance its customer bonding through Cotopaxi's proprietary STRATA platform.

To grow our ETS Business, Vulcanic and Durex Industries became part of our Group in 2022 and have rebalanced the geographic footprint of ETS between the USA and Europe.

As the lead brands within ETS for electric process heating, Chromalox and Vulcanic will support the effective deployment of our industry-leading decarbonisation solutions alongside Steam Specialties. Thermocoax and Durex Industries are the lead brands for ultra-critical heating solutions for industrial equipment, being well positioned to capitalise on the growing demand for increasingly stringent thermal energy requirements in high-technology equipment within market sectors with high barriers to entry.

The acquisitions of Vulcanic and Durex Industries added over 1,100 colleagues and have significantly grown ETS which now accounts for 22% of Group revenues on a pro-forma basis (14% in 2021). Steam Specialties and Watson-Marlow's share of Group revenues fell to 50% and 28% respectively.

£540m

invested in acquisitions during 2022 to support long-term sustainable growth.



Our communities

We help build stronger communities.

In the 67 countries where we operate globally, we aim to make life better for the people in our communities. In support of our community engagement programme **Giving today for a better tomorrow**, our colleagues can use their volunteering

22,000+

volunteering hours recorded by colleagues in 2022.

leave to make a difference in their local community. In 2022, this amounted to 22,000+ hours of company time used by colleagues for volunteering, a record level for the Group since we established our Group Volunteering Policy in 2019, which entitled all colleagues to three days of paid volunteering leave annually. Following the COVID-19 pandemic and increasing global food prices, it was predicted that 860 million* people would be living in extreme poverty by the end of 2022. That's why our Group focus for the 2022 International Day of Charity on 5th September was on reducing poverty. Colleagues across the Group recognised the day by volunteering at foodbanks, cooking at homeless shelters, raising money through sponsored events and donating care packages of everyday essentials to people in need in their local communities.

*United Nations Department of Economic and Social Affairs Sustainable Development
www.sdg.un.org/goals/goal1

Making our difference continued

Delivering sustainable value to shareholders through economic cycles

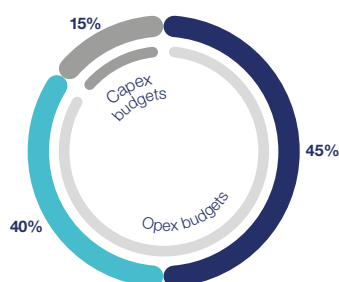
Our understanding of customers and markets, allows us to see where and how our revenues are generated and where best to invest for future returns.

With the majority of our revenues coming from our customers' maintenance activities and small improvement projects...

85%* of Group revenue is generated from annual maintenance and operational (Opex) budgets, rather than from capital (Capex) budgets.

Why is this important?

Capex budgets are more likely to be cut during periods of slower growth or recession. Therefore, the high proportion of revenue deriving from Opex budgets gives us resilience during economic downturns. Additionally, through our direct sales approach, we are able to self-generate business by providing bespoke engineered solutions, typically with better margins.



- **Maintenance and repair sales** that **maintain existing systems**, supported by the end users' Opex budgets, with a typical invoice value of around £1.4k
- **Small project sales** that **improve existing systems**, supported by the end users' Opex budgets, with a typical invoice value of £10k-£50k
- **Large project sales** that **build new systems**, supported by the end users' Capex budgets, with a typical invoice value of over >£100k

...and over a third of sales coming from self-generated opportunities...

40%* of revenue is derived from self-generated opportunities. This reflects our overall strategic objective to deliver growth that outperforms our markets. We achieve this by staying close to our customers – through our direct sales approach – understanding their system requirements and providing them with innovative products and solutions to solve their process challenges.

Why is this important?

By focusing on self-generated growth we identify problems and design solutions that deliver significant operational benefits for customers. Typically, these bespoke, engineered projects have higher margins and relatively short sign-off timeframes as they are funded by maintenance and operational budgets at plant level. As we deliver engineered solutions, we self-generate growth, reinforce our customers' trust in our engineering expertise and forge sustainable business relationships.

Further reading

Our direct sales approach is our greatest competitive advantage and is covered in more detail in our business model.

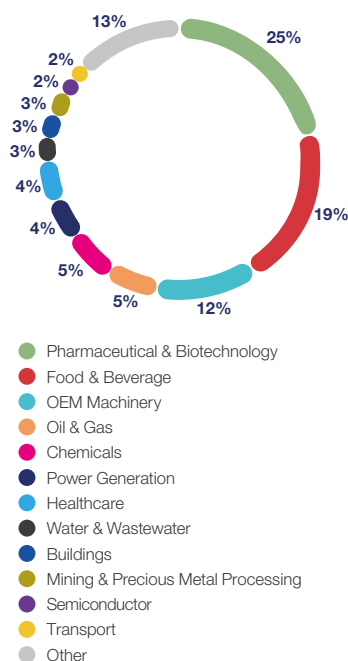
➤ See pages 22 to 23

...our revenue is balanced across multiple less-cyclical industries...

60+%* of Group revenue is derived from defensive, less cyclical end markets, including: Food & Beverage, Pharmaceutical & Biotechnology, Healthcare and Power Generation.

Why is this important?

Not only do we derive revenue from a diverse range of industry sectors, we also have an excellent balance between higher-growth end markets and those that are more defensive and resilient.



*Based on internal estimates. Where there is little visibility of end user industry sector (primarily in sales via distributors), sales have been allocated across industries on a pro-rata basis. In 2022 these 'unknown' sales accounted for 17% of total revenue. OEM sales to identifiable industries have been allocated to those industries. Sales to OEM customers accounted for 27% of Group revenue in 2022.

...and our long-term market drivers remain positive.

14%* is our share of addressable market, which is valued at £12.5bn at the end of 2022.

Our markets have significant growth potential due to a number of positive long-term market drivers (see the list below) at a macroeconomic and sector level.

Long-term market growth drivers

Population growth

Increased consumption and demand in all our major industry sectors.

Economic development in emerging markets

New markets and increased consumption.

Ageing population

Increased demand for healthcare and pharmaceutical products.

National and international climate change mitigation strategies

Requirements for companies to manage energy more efficiently, increasing demand for energy management products and services.

Increase in global energy consumption

Increased investment in renewable and non-renewable energy and power generation industries, with increased demand for energy management solutions.

Industrial production

Our markets reflect changes in industrial production growth rates but our sales have consistently outperformed them as we have expanded our addressable markets, extended our geographic penetration and grown our market share.

*Based on internal estimates. The increase in market size in 2022 reflects underlying changes in market segment sizes, expansion of the addressable market as a result of product development and the impact of exchange movements.

Our competitive landscape

As the global market leader in steam systems and peristaltic pumping and a significant player in the electric thermal solutions market, we have a strong competitive position in relatively fragmented markets.

Our competitors generally fall into two categories: system specialists that supply a wide range of products and services, and product specialists that compete on a small part of our product range. Most system specialists are relatively small, privately owned, regional players, while product specialists lack the whole system expertise and application knowledge offered by our direct sales force. Our broad product range, global presence, applications knowledge and direct sales business model give us a strong competitive advantage in our markets.

Why is this important?

Our long-term growth prospects are promising. Although we are the market leaders in steam specialties as well as pumps and fluid path technologies, we have a relatively small market share of these large addressable markets**, at 17% and 14% for Watson-Marlow respectively and at just 10% for Electric Thermal Solutions' share of the electric thermal solutions market, we have good opportunities for growth. We can grow by targeting self-generated sales, extending our geographical reach and increasing the size of our addressable market through innovative product development. In addition, our addressable markets and sectors continue to demonstrate headroom for long-term growth.



**market share on a pro-forma basis

Chief Executive's Review

Engineering our difference – for a stronger, more balanced and more sustainable Group that is well positioned for the future.

Outperforming our markets in a challenging year

A war in Europe, global supply chain disruptions, COVID-19-related economic slowdown in China, rising energy prices and heightened inflationary pressures turned 2022 into a very challenging year, contributing to a significant weakening in global Industrial Production Growth (IP). I am, therefore, extremely proud of the way in which our teams successfully navigated these challenges to deliver strong financial results, as well as advancing the implementation of our strategies to benefit all our stakeholders.

We entered 2022 fully prepared for a softening in IP after the very strong 7.7% expansion of 2021. However, Russia's attack on Ukraine resulted in tragic consequences for the people of that country, with the

economic shock reverberating immediately around the globe. The combined impact of further global supply chain disruptions, as well as significantly higher energy costs, raised inflation to levels the world has not seen in 40 years and progressively weakened the global economic outlook throughout the year. For the full year 2022, IP at 2.7% was materially lower than the 4.4% forecasted in February 2022 ahead of our 2021 Full Year Results.

Against this backdrop, all three Businesses outperformed their markets to deliver strong double-digit organic sales growth. This follows our Group's resilient performance during the COVID-19 pandemic in 2020, when we outperformed the IP decline, as well as our subsequent double-digit growth in 2021 when the world began recovering from the effects of the pandemic.

**“We worked hard and in
challenging circumstances to
engineer our difference for all
our stakeholders in 2022.”**

Nicholas Anderson
Group Chief Executive



The Group adjusted operating profit margin of 23.6% in 2022, is comparable to the highest margins achieved in our Company's history, excluding the exceptional 25.3% adjusted operating profit margin achieved in 2021. The difference, in line with our guidance last year, is due to the full-year impact of the 2021 revenue investments, in addition to investments made in 2022 to support sustainable, future growth.

In what has been another incredibly busy year, we continued placing the health, safety and wellbeing of our colleagues at the centre of everything we do. This included expanding the role of the Group Health & Safety Director and launching a new Group Safety Framework. Disappointingly, our Lost Time Accident (LTA) rates (per 100,000 work hours) rose slightly to 0.12 in 2022, compared to the all-time low rate of 0.10 in 2021. However, these rates are materially lower than in prior years (0.23 in 2020 and 0.26 in 2019), which suggests the lower 2021 rate may have been a positive anomaly vis-a-vis the Group's general trend.

I'm grateful for the commitment, expertise and efforts of our teams across the world. Our colleagues, supported by our Company Purpose, strong culture and Values, robust business model and strategy, have once again demonstrated the resilience of our Group that remains well positioned to continue growing and adapting to economic cycles. In 2022, this resilience helped us deliver a strong financial performance, while creating benefits for all stakeholders through our sustainability and inclusion initiatives.

Self-generating growth

Our long track record of helping customers meet their efficiency, safety and sustainability goals, through our direct sales model and solutions focus, became even more critical in 2022 amidst swiftly rising energy prices, as well as the increasing demand from customers seeking to decarbonise their industrial processes in line with net zero commitments.

Our direct sales business model, which always involved 'walking our customers' sites' and now includes 'walking our customers' data', through the evolution of our digital capabilities, is highly effective at uncovering opportunities to improve the efficiency and effectiveness of our customers' processes.

These self-generated solutions are becoming a larger part of our sales mix and remain attractive even during challenging economic times, as they are typically paid for from customers' operating budgets and have a short payback period. Approximately 85% of Group sales continue to be funded from our customers' operational budgets.

The increasing commitments to net zero targets will have a profound effect on industrial activity over the coming decades and is an additional source of growth for our Group over at least the next 30 years. To address the opportunities arising from the decarbonisation of industrial processes, we have invested significantly in the development of sustainable products and solutions that help customers meet their own sustainability goals. In 2022, we launched new-to-world

TargetZero decarbonisation solutions, created through an internal collaboration between Steam Specialties and Electric Thermal Solutions (ETS). You can read more about the benefits of the three **TargetZero** solutions, branded **ElectroFit**, **Steam Battery** and **SteamVolt**, on pages 80 and 81 of the Operating Review.

The scale of the decarbonisation opportunity is unprecedented, as direct burning of fossil fuels is the most prevalent manner of transferring thermal energy into industrial processes and only 5% of industrial process heating is currently generated by electricity. There are, however, several factors that will influence the adoption rate of decarbonisation solutions. Most notably, the rates of progress towards net zero in different countries, the infrastructure requirements and the capacity to deliver that infrastructure quickly, as well as the relatively higher costs of electricity compared to hydrocarbon fuels. It is still too early in the cycle to predict the precise rate of adoption, which is why we anticipate this opportunity will play out globally for at least the next 30 years.

Delivering value to all our stakeholders

Our strategy seeks to achieve organic revenue growth that consistently outperforms our markets. In the Operating Review section, you can read more about how each of our three Businesses are advancing the implementation of their strategy in line with our six strategic themes.

“I'm grateful for the commitment, expertise and efforts of our teams across the world.”

Nicholas Anderson
Group Chief Executive

Chief Executive's Review continued

I am delighted with the progress made on all fronts during 2022, as we worked hard and in challenging circumstances to engineer our difference for all our stakeholders.



Colleagues

We continued to invest in the development and wellbeing of our colleagues to help them feel supported and included. We believe that diverse teams bring diversity of thought and experience, helping us become a better and higher performing business. Combined with an inclusive and equitable working culture, this fuels our continued growth, creating opportunities for everyone.

In February 2022, our Group Inclusion Plan, **Everyone is Included** became effective. This gives all colleagues, everywhere, the opportunity to benefit from our ten Group Inclusion Commitments. The impact of **Everyone is Included** has been far reaching and made a tangible difference to the lives of many colleagues who tell us they feel more welcomed, included and proud of our Group.

In September 2022, we recognised the impact of the cost-of-living crisis on colleagues worldwide and brought forward our annual pay review from March to January 2023. We set above-market pay increases country-by-country at levels designed to materially mitigate the purchasing power eroded by inflation, which for the UK meant a pay increase of 7.1% for the wider employee base, which excluded senior executive leaders who received a reduced pay increase. Following its success in 2022, we also awarded another paid Wellbeing Day in 2023 to all colleagues globally.

In December 2022, the Board approved a refreshed set of Diversity goals. Our focus on inclusion remains a priority and these Diversity goals will help accelerate our progress in support of sustainable growth.



Customers

To keep delivering for our customers, we strengthened our direct business model by investing in the expansion and training of our direct sales teams, in digital technology solutions and introduced multiple new products, including innovative new-to-world decarbonisation solutions.

To better serve our customers, we expanded our manufacturing capacity and increased our regional supply chain capabilities.

Our capital investments in 2022 included a significant proportion of our US\$106 million investment in a 14,000m² state-of-the-art, sustainable, multi-brand manufacturing facility for Watson-Marlow in Devens, Massachusetts (USA). In 13 months the project went from 'breaking ground' to 'first customer shipment' in December 2022. This facility, which will shorten supply chains and provide enhanced support for customers across the Americas, is scheduled to ramp-up during 2023.

A new facility for Watson-Marlow's BioPure brand was also completed in 2022 to support increased demand from customers in the Biotechnology & Pharmaceutical sector. The £37 million facility located in Portsmouth (UK), shipped its first customer deliveries at the end of the Q1 2022 and has enabled BioPure to double its previous output.

We are planning a US\$58 million investment in ETS to materially expand the existing manufacturing facility at Ogden, Utah (USA). The new 9,600m² extension will expand the current footprint by almost 60% and is scheduled to complete by the end of 2024.

Around the Group, we also invested significantly in equipment modernisation and process automation to support and expand our manufacturing capacity.



Environment

Since refreshing our sustainability goals in June 2021, including our commitment to achieve net zero emissions in scopes 1 and 2 by 2030, we made good progress in line with our targets. Through our **One Planet: Engineering with Purpose** Sustainability Strategy, we continued to build on our responsible business foundations and have successfully embedded across the Group our six sustainability initiatives. These focus on net zero greenhouse gas (GHG) emissions, biodiversity net gain, improved environmental performance of our operations, sustainable products, supply chain sustainability and community engagements, with good progress made in every area.

We are executing on our net zero roadmap for 2030. By the end of 2022, we reduced our GHG emissions by 41%, compared to our 2019 baseline. We also introduced a new electric vehicle leasing portal in the UK, as the first step towards a global transition to electric vehicles across the Group. Other highlights of our sustainability progress include the introduction of self-generation of renewable energy at four of our manufacturing sites and that 57% of our electricity use now comes from renewable sources, largely through green energy contracts. To protect biodiversity, we partnered with the World Land Trust for a second consecutive year to offset by 1x our global operating footprint, as well as our colleagues implementing a further 78 biodiversity projects across our Group operating companies in 2022.

During 2022, we saved our customers 17.7 million tonnes of CO₂, 235 million GJ of energy and 88.4 million m³ of water through a select range of product categories sold, as well as launching our new-to-world **TargetZero** decarbonisation solutions. You can read more about our commitment to sustainability, as well as the progress we are making, on pages 46 to 73 of the Sustainability Report.



Communities

Through our community engagement programme **Giving today for a better tomorrow**, our teams have gone above and beyond in our local communities, using their paid volunteering leave to deliver more than 22,000 volunteering hours while our Group-wide charitable giving (cash and in-kind) exceeded £900,000. In addition, we supported 51 community projects nominated by colleagues across the Group, through donations of over £1 million by our new Group Education Fund. The Fund, which aims to provide equitable access to education, is particularly focused on helping women and girls achieve their potential and encouraging pathways to careers in science and engineering through a variety of grass roots initiatives.



Suppliers

During the year, we relaunched our Supplier Sustainability Code in 17 languages and started to roll out a new Supplier Sustainability Portal to support our collaborative journey towards a more sustainable supply chain. Double-digit inflation in certain raw materials led to challenges for our suppliers too, as some companies struggled to manage the impacts of such sharp price increases. Recognising this, we supported our suppliers through these challenging and uncertain times, de-risking their businesses by flexing our pricing agreements while maintaining our supply of raw materials and components.



Shareholders

We invested close to £540 million in three important acquisitions to accelerate the implementation of our Digital Strategy and expand our ETS Business.

The acquisition of Cotopaxi, a digitally-enabled global energy consulting and optimisation company, is enabling Steam Specialties to digitally enhance its customer bonding through the provision of physical and digital connections to customers' infrastructure and equipment, using Cotopaxi's proprietary STRATA platform. STRATA generates critical insights that are used to better understand industrial customers' management and use of Water, Air, Gas, Energy and Steam (WAGES). We are also installing Cotopaxi's solutions across our Group manufacturing sites to improve our own WAGES efficiency, in line with our sustainability targets.

To support the growth of ETS, Vulcanix and Durex Industries became part of our Group on 29th September and 30th November, respectively. Vulcanix is a European leader in industrial process heating solutions and Durex Industries, based in the USA, is a specialist in custom electric thermal solutions for ultra-critical applications of industrial equipment. Vulcanix and Durex Industries have rebalanced the geographic footprint of ETS between the USA and Europe, adding an additional 11 manufacturing sites.

The acquisitions also support a more effective deployment of the ETS strategy, **Engineering Premium Solutions**.

The introduction of dual brand strategies, which has proven to be highly successful for the Steam Specialties Business with Spirax Sarco and Gestra, aligns each brand with their chosen strategic market sectors for growth.

As the lead brands within ETS for electric process heating, Chromalox and Vulcanix will support the effective deployment of our industry-leading decarbonisation solutions alongside Steam Specialties. Thermocoax and Durex Industries are the lead brands for ultra-critical heating solutions for industrial equipment, being well positioned to capitalise on the growing demand for increasingly stringent thermal energy requirements in high-technology equipment within market sectors with high barriers to entry.

The acquisitions of Vulcanix and Durex Industries added over 1,100 colleagues. The integration of both companies mirrors the successful integration processes deployed on previous acquisitions and builds upon lessons learnt. Integration began immediately following completion and we are very encouraged by the positive engagement by new colleagues, as well as constructive collaborations already unfolding. These acquisitions have significantly grown ETS which now accounts for 22% of Group revenues on a pro-forma basis. Steam Specialties and Watson-Marlow's share of Group revenues accordingly reduced to 50% and 28% respectively.

More details on Cotopaxi are provided on page 80 of the Operating Review and on pages 14, 31 and 33. We have set out more details about Vulcanix and Durex Industries on page 31 and 85.

The role of digital technologies for our Group is to enhance our existing business model across the four main adaptive processes of customer targeting, operational effectiveness, innovation and people management. During 2022 we completed the development of our Digital Strategy, as well as its implementation framework. We also recruited an experienced Digital leader who joined in early March 2023 to accelerate the implementation of our Digital Strategy across the Group.

We also invested in new technologies, systems and controls to improve efficiencies, communications and collaboration, as well as strengthen our resilience. This includes ERP, BI and CRM systems, product configurators, a new colleague engagement platform, smart manufacturing capabilities and enhanced internal controls capabilities. We also strengthened cyber defences and operational IT, as well as laying the foundations for the IT integration of Vulcanix and Durex Industries.

All of these initiatives contributed to a stronger, more balanced and more sustainable Group that delivered differentiated financial returns to shareholders in 2022 and is well positioned for the future.



Signed by:
Nicholas Anderson
Group Chief Executive
on behalf of the Board of Directors

8th March 2023

Chief Executive's Review continued

We have made strong progress against our six strategic themes during the year.

	Steam Specialties	Electric Thermal Solutions	Watson-Marlow
Business Strategy	Customer first ²	Engineering Premium Solutions	Strategy25
Increase direct sales effectiveness through market sector focus. 	<p>The dual brand strategy between Spirax Sarco and Gestra aligns market sectors that offer the best opportunities with the strong brand in that sector, ensuring the Business is well-positioned to grow sales above IP. In 2022, Gestra grew sales to the Chemicals sector by 40% compared to 2021, while Spirax Sarco generated growth of 7% in the Healthcare sector over the same period.</p>	<p>Since reshaping its strategy, ETS continues to focus on strategic sectors that together represent over 50% of its addressable market opportunities. In 2022, the Business realised higher growth in these targeted sectors and increased its proportion of direct sales.</p>	<p>Watson-Marlow increased its direct sales workforce and continued embedding its sector driven approach to understand customers' processes and propose solutions. This included working with lithium battery customers to accurately dose, meter and transfer the liquids required for automotive battery production and enabling water treatment sector customers to reduce chemical use and improve sustainability.</p>
Develop the knowledge and skills of our expert sales and service teams. 	<p>Steam Specialties continue to invest in its direct sales force and self-generated sales capability through Sales Excellence training delivered through the Steam Specialties Academy, which has been expanded to include modules on evolving digital capabilities following the acquisition of Cotopaxi.</p>	<p>ETS has invested further in its self-generated sales capability by continuing to develop the skills and knowledge of its direct sales engineers through the recently established ETS Academy.</p>	<p>Watson-Marlow invested in more than 40,000 hours of learning and development, including a global training programme for direct sales engineers as part of its evolution towards providing a total solutions approach.</p>
Broaden our global presence. 	<p>Steam Specialties has direct sales capabilities in 66 countries. In 2022, the Business increased its sales presence in places where it has been under-represented, including parts of Africa and the Middle East.</p>	<p>The acquisitions of Vulcanic and Durex Industries in 2022 have created an improved geographical balance of the ETS Business globally and will support organic growth by leveraging customer bases, products and technologies.</p>	<p>In North America, construction was completed at Watson-Marlow's first multi-brand manufacturing facility. First customer deliveries were shipped, as planned from the state-of-the-art, highly-sustainable facility, in 13 months from breaking ground. Manufacturing will ramp-up throughout 2023.</p>
Leverage our R&D investments. 	<p>We continued to invest in new product development across Steam Specialties and released new products in 2022, including, TargetZero decarbonisation solutions, developed in collaboration with ETS, to support the decarbonisation of critical industrial processes, including the raising of steam.</p>	<p>ETS is evolving its electrification solutions for decarbonisation and sustainability which remain important growth drivers as it continues to build a significant pipeline of opportunities. In addition to developing TargetZero with Steam Specialties, ETS is also collaborating with Watson-Marlow on a new product for its Aflex Hose brand.</p>	<p>Watson-Marlow launched multiple new products during the year, including an expansion of digital capability across its core pump range with a communication protocol used to collect data and control equipment over Ethernet systems. BioPure branded hose assemblies, which can be completely customer-specified, were also launched during the year.</p>

	Steam Specialties	Electric Thermal Solutions	Watson-Marlow
Business Strategy	Customer first ²	Engineering Premium Solutions	Strategy25
Optimise our supply chain effectiveness. 	<p>A Global Supply Chain (GSC) organisation, responsible for all 11 Steam Specialties' manufacturing sites around the world, was created in 2021. In 2022, GSC has gone on to further improve the efficiency of supply operations through enabling the adoption of consistent supply chain methodologies and flexing operations to better meet demand.</p>	<p>During the year, ETS continued to invest in further operational improvements, as well as investing in additional capacity at its Ogden, Utah (USA) manufacturing facility. The Business also closed the loss making plant in Soissons (France) during the year.</p>	<p>Production began at the new BioPure Facility in Portsmouth (UK), which enabled the brand to double its previous output for in-demand single-use products for the Pharmaceutical & Biotechnology sectors.</p>
Operate sustainably and help improve our customers' sustainability. 	<p>Steam Specialties worked closely with our customers to understand their sustainability goals and provide solutions to reduce their energy requirements and decarbonise steam generation. We also continued our journey to meet the Group's ambitious target of achieving net zero in scope 1 and 2 greenhouse gas emissions by 2030.</p>	<p>In addition to launching net zero roadmaps at its manufacturing facilities and rolling out an environmental compliance calendar, ETS also made huge progress in supporting its customers' sustainability goals. In addition to the TargetZero solutions launched with Steam Specialties, ETS is also decarbonising other industrial heating applications, as you can read about on page 85.</p>	<p>Watson-Marlow identified that 50% of annual oil consumption used as lubricant in the braiding process by its Aflex Hose brand, and ending up as a waste by-product, could be filtered, recycled and re-used in the site's braiding machines. This large reduction in volume of waste oil will support the Business to achieve its goal of 10% waste reduction by 2025, as well as reducing costs.</p>

Strategy in Action

Translating our data into savings.

The acquisition of digitally enabled energy consulting and optimisation specialist Cotopaxi is helping our Steam Specialties Business analyse how we are using water, air, gas, energy and steam at our own manufacturing sites. Cotopaxi's proprietary system, STRATA, has already been installed at two of Steam Specialties' 11 manufacturing sites, with the rest due for completion in the first half of 2023.

STRATA's web-based energy management software works alongside our telemetry systems to continuously monitor and analyse performance data.

The data is generated in real time and has so far provided invaluable insights. For example, at our manufacturing facility in Cheltenham (UK), STRATA highlighted there was inefficient consumption of power from machinery during a site shutdown. In a similar plant shutdown at our Blythwood manufacturing facility in the USA, the data identified an opportunity to optimise

the consumption rate of a compressed air system.

In both cases our teams were able to act upon the real-time data insights generated by STRATA to make operational improvements and efficiencies, demonstrating the system's capability to identify ways in which 15-20% savings can be achieved from a site's typical energy and utilities consumption.

STRATA Advanced Digital IIoT Enterprise Application



Key performance indicators

Our key performance indicators are used to measure the successful implementation of our strategy.

1. Organic revenue growth[†] %



Definition

Organic revenue growth measures the change in revenue in the current year compared with the prior year from continuing Group operations. The effects of currency movements, acquisitions and disposals have been removed.

Progress in 2022

Organic sales increased by 12% in Steam Specialties, 14% in Electric Thermal Solutions and 16% in Watson-Marlow. Read about the progress we have made in 2022 in our three Businesses in the Operating Review on pages 74 to 91.

Link to remuneration

Revenue growth is a key driver of profit generation and a central element in the annual planning process. Bonus targets are driven off annual plans and therefore revenue growth drives a key measure of variable remuneration.

Link to Principal Risk [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#)

3. Adjusted operating profit margin^{*} %



Definition

Adjusted operating profit margin is defined as adjusted operating profit expressed as a percentage of revenue.

Progress in 2022

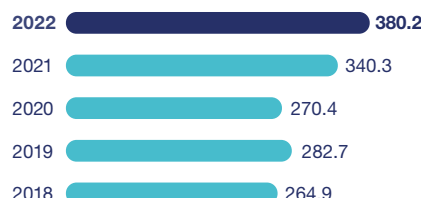
Decreased by 170 bps to 23.6%. On an organic basis the adjusted operating profit margin decreased by 160 bps. Read about the progress we have made in 2022 in our three Businesses in the Operating Review on pages 74 to 91.

Link to remuneration

Executive Directors' variable remuneration is measured on two main indicators: profit and cash generation. Adjusted operating profit margin is a key driver of both.

Link to Principal Risk [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#)

2. Adjusted operating profit^{*} £m



Definition

Adjusted operating profit is the profit earned from our business operations before interest, taxes, the share of profit of associate companies and certain other items.

Progress in 2022

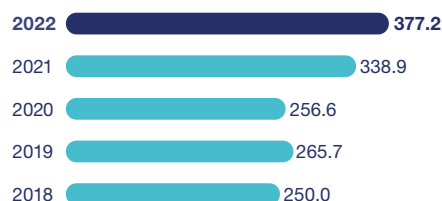
Increased by 12%. The reported figure reflects a 7% organic increase, a 4% increase due to exchange and a 1% increase from acquisitions and disposals. Read about the progress we have made in 2022 in our three Businesses in the Operating Review on pages 74 to 91.

Link to remuneration

Executive Directors' variable remuneration is based on two financial components: adjusted operating profit and cash generation. Adjusted operating profit margin is a key driver of both bonus measures.

Link to Principal Risk [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#)

4. Adjusted earnings per share (EPS)^{*} p



Definition

Earnings per share is a measure of the profit performance of the Group, taking into account the equity structure. EPS is defined as the adjusted after-tax profit attributable to equity shareholders divided by the weighted average number of shares in issue.

Progress in 2022

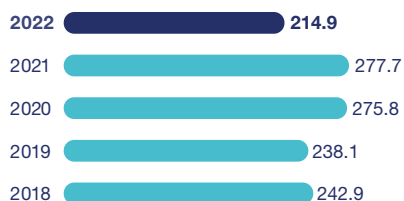
Increased by 11% to 377.2 pence in line with the increase in adjusted operating profit. Read about the progress we have made in 2022 in our three Businesses in the Operating Review on pages 74 to 91.

Link to remuneration

EPS measured over three-year periods is one of the three components of the Performance Share Plan.

Link to Principal Risk [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#)

5. Cash generation* £m



Definition

Cash generation is adjusted operating profit after adding back depreciation and amortisation, less cash payments to pension schemes in excess of the charge to operating profit, equity settled share plans, net capital expenditure excluding acquired intangibles, working capital changes and repayment of principal under lease liabilities.

Progress in 2022

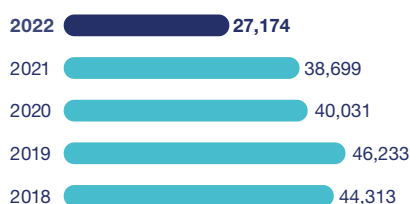
Cash generation decreased by 23%, driven by planned record capital expenditure and investment in inventory as global supply chain constraints eased. Read about the progress we have made in 2022 in our three Businesses in the Operating Review on pages 74 to 91.

Link to remuneration

Cash generation is one of two financial measures on which Executive Directors' variable remuneration is based.

Link to Principal Risk 1 2 3 4 5 6 7 8

7. Group greenhouse gas emissions (scope 1 and 2) tonnes CO₂e (market-based)



Definition

Scope 1 greenhouse gas (GHG) emissions arise directly from company-owned or -controlled sources, such as company vehicles or fuel combustion. Scope 2 GHG emissions are indirect emissions, primarily from the generation of purchased electricity. Market-based emissions take into account contractual and supplier-specific GHG emissions factors.

Progress in 2022

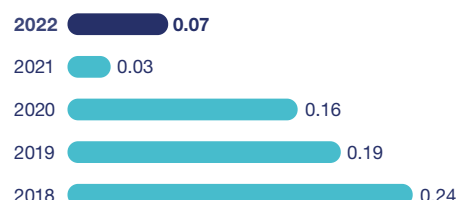
GHG (scope 1 and 2) decreased by 30% compared to 2021 and by 41% against our 2019 baseline due to the commencement of decarbonisation initiatives, an increase in operational efficiency and transition to renewable electricity supply.

Link to remuneration

GHG emission reductions over three-year periods accounts for 20% of the Performance Share Plan opportunity.

Link to Principal Risk 1 2 3 4 5 6 7 8

6. Health and Safety over three-day lost time injury rate per 100,000 hours worked



Definition

The number of workplace injuries that resulted in over three days of absence per 100,000 hours worked. The workplace is any location in which an employee is present as a requirement of employment. Employees include all permanent and temporary staff and contractors. All injuries that occur in workplaces, regardless of cause, are included, as are road traffic accidents.

Progress in 2022

Our over three day lost time injury rate increased during 2022, rising from 0.03 per 100,000 hours in 2021 to 0.07 per 100,000 hours in 2022 due to 2021 being an anomalously low year.

Link to remuneration

The safety of our colleagues is central to the sustainability of our business and has an impact on the financial success and profitability of the Group. Improving the health, safety and sustainability of our Group is one of the personal strategic objectives of each Executive Director, creating a direct link with remuneration.

Link to Principal Risk 1 2 3 4 5 6 7 8

Principal Risks

- | | |
|---|--|
| 1 | Economic and political instability |
| 2 | Significant exchange rate movement |
| 3 | Cybersecurity |
| 4 | Loss of manufacturing output at any Group factory |
| 5 | Failure to realise acquisition objectives |
| 6 | Loss of critical supplier |
| 7 | Breach of legal and regulatory requirements (including ABC laws) |
| 8 | Inability to identify and respond to changes in customer needs |

Link to Principal Risk key:

● Direct link ○ Indirect link ○ No link

+ See our Principal Risks on pages 95-99 of our Risk Management report

+ More information about remuneration. see pages 143-168

† Organic growth is at constant currency and excludes contributions from acquisitions and disposals, see Note 2 to the Financial Statements.

* Based on adjusted operating profit. Adjusted operating profit excludes certain items as set out and explained in the Financial Review and in Note 2 to the Financial Statements.

Ten-year financial summary

Our financial performance demonstrates a strong trajectory of growth and shareholder value creation.

	2013 £m	2014 £m	2015 £m	2016 £m	2017 £m	2018 £m	2019 £m	2020 £m	2021 £m	2022 £m
Revenue	689.4	678.3	667.2	757.4	998.7	1,153.3	1,242.4	1,193.4	1,344.5	1,610.6
Operating profit	147.0	148.1	142.8	174.1	198.9	299.1	245.0	249.0	320.9	318.8
Adjusted operating profit*	151.6	153.0	152.4	180.6	235.5	264.9	282.7	270.4	340.3	380.2
Adjusted operating profit margin*	22.0%	22.5%	22.8%	23.8%	23.6%	23.0%	22.8%	22.7%	25.3%	23.6%
Profit before taxation	145.7	144.8	139.7	171.4	192.5	288.8	236.8	240.1	314.5	308.1
Adjusted profit before taxation*	151.1	151.1	151.1	177.9	229.1	254.6	274.5	261.5	333.9	370.6
Profit after taxation	102.3	100.6	96.7	121.3	157.9	223.4	167.0	173.9	234.9	225.0
Adjusted cash from operations	143.0	131.5	146.2	185.0	203.8	242.9	238.1	275.8	277.7	214.9
Cash conversion	94.3%	85.9%	95.9%	102.4%	86.5%	91.7%	84.2%	102.0%	82.0%	56.5%
Capital expenditure to sales ^{††}	4.3%	5.0%	5.0%	5.7%	3.8%	3.8%	5.0%	4.2%	4.8%	7.3%
Basic earnings per share	133.4p	132.8p	129.9p	165.0p	214.4p	303.1p	226.2p	235.5p	318.3p	305.1p
Adjusted earnings per share*	138.8p	140.4p	142.6p	171.5p	220.5p	250.0p	265.7p	256.6p	338.9p	377.2p
Dividends in respect of the year	44.5	139.9	50.6	55.8	64.4	73.6	81.1	87.0	100.2	112.0
Dividends in respect of the year (per share)	59.0p	64.5p	69.0p	76.0p	87.5p	100.0p	110.0p	118.0p	136.0p	152.0p
Special dividend (per share)	–	120.0p	–	–	–	–	–	–	–	–
Net assets	403.5	441.9	398.3	524.4	609.5	766.9	826.3	852.3**	1,010.0	1,169.8
Return on capital employed [†]	41.8%	41.4%	41.1%	44.8%	49.8%	51.6%	52.5%	48.9%**	59.3%	53.3%
Return on invested capital [†]	27.6%	27.4%	27.1%	28.7%	22.6%	19.3%	19.0%	17.8%**	22.9%	19.0%

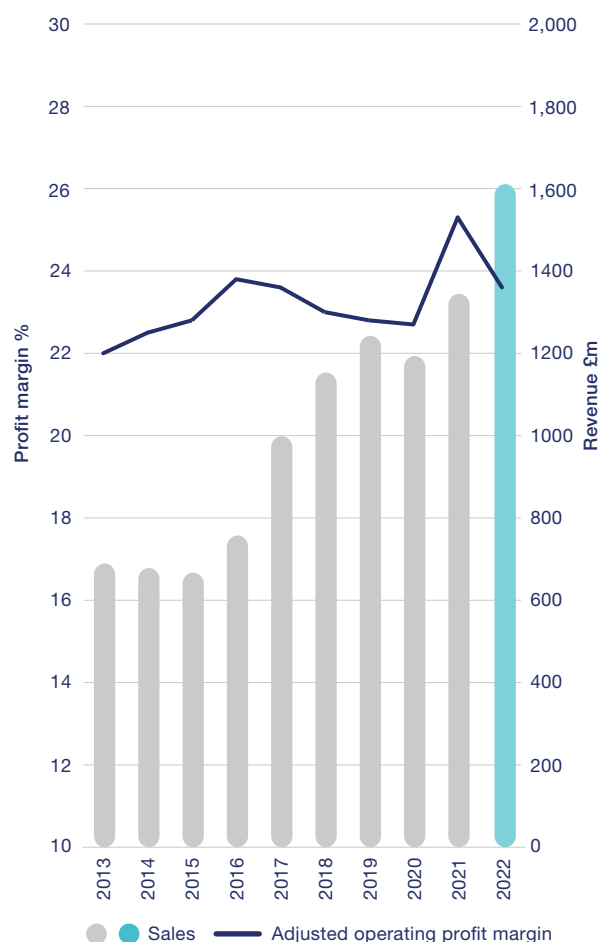
* All adjusted profit measures exclude certain items as set out and explained in the Financial Review and in Note 2 to the Financial Statements.

** 2020 has been restated following the IFRS Interpretations Committee agenda decision on configuration and customisation costs in cloud computing arrangements (Software as a Service (SaaS)), see Note 1 to the Financial Statements for further details.

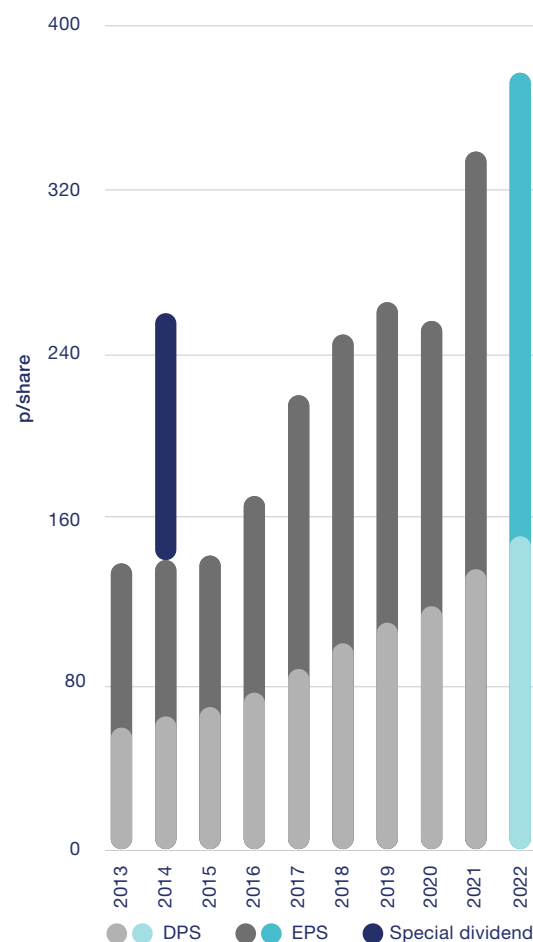
† The results for 2019 to 2022 exclude the impacts of IFRS 16, which was adopted in 2019.

†† Capital expenditure excludes IFRS 16 Lease repayments.

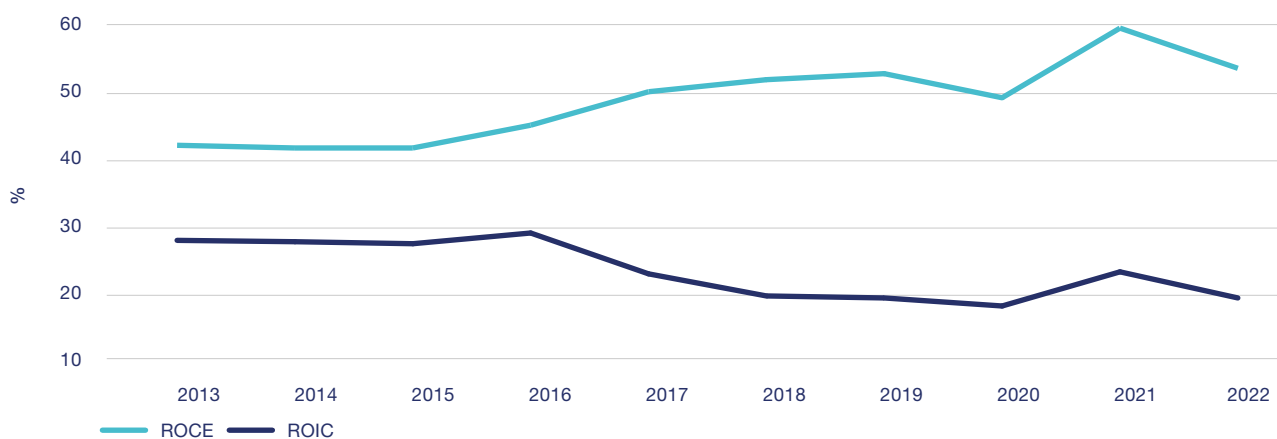
Revenue and adjusted operating profit margin £m / %



Dividends and adjusted earnings per share p



Return on capital employed and return on invested capital %



* All adjusted profit measures exclude certain items as set out and explained in the Financial Review and in Note 2 to the Financial Statements.

** 2020 has been restated following the IFRS Interpretations Committee agenda decision on configuration and customisation costs in cloud computing arrangements (Software as a Service (SaaS)).

† The results for 2019 to 2022 exclude the impacts of IFRS 16, which was adopted in 2019.

†† Capital expenditure excludes lease repayments.

Financial Review

Strong financial performance achieved against a weakening macroeconomic backdrop in 2022.

The Group reports under International Financial Reporting Standards (IFRS) and references 'adjusted' and 'organic' alternative performance measures where the Board believes that they help to effectively monitor the performance of the Group and support readers of the Financial Statements in drawing comparisons with past performance.

Certain alternative performance measures are also relevant in calculating a meaningful element of Executive Directors' variable remuneration and our debt covenants. Alternative performance measures referenced in the text below are further explained in Note 2 to the Financial Statements. The term 'adjusted' is not defined under IFRS and may

therefore not be comparable with similarly titled measures reported by other companies. Alternative performance measures are not considered to be a substitute for, or superior to, IFRS measures.

As a multi-national Group of companies, we trade in a large number of currencies and occasionally acquire or dispose of companies. Therefore, we also refer to 'organic' alternative performance measures, which strip out the effects of the movement of currency exchange rates and of acquisitions and disposals not included in the prior year. The Board believes that these measures allow readers of the Financial Statements to gain a further understanding of how the Group has performed.

Summary of performance in 2022

Sales

Group sales increased by 20% to £1,610.6 million (2021: £1,344.5 million), up 14% organically. Currency movements and acquisitions (net of the disposal of our Russian operations) both had a positive effect on sales of 4% and 2%, respectively.

“In a challenging year, all three Businesses delivered strong double-digit organic sales growth and an operating profit margin which is comparable to the highest margins achieved in our history before the exceptional performance of 2021.”

Nimesh Patel
Chief Financial Officer



	2021	Exchange	Organic	Acquisitions & disposals*	2022	Organic	Reported
Revenue	£1,344.5m	£52.5m	£191.6m	£22.0m	£1,610.6m	+14%	+20%
Adjusted operating profit	£340.3m	£13.0m	£23.5m	£3.4m	£380.2m	+7%	+12%
Adjusted operating profit margin	25.3%				23.6%	-160 bps	-170 bps
Statutory operating profit	£320.9m				£318.8m		-1%
Statutory operating margin	23.9%				19.8%		-410 bps

*Results include the impact of (i) the acquisition of Cotopaxi, Durex Industries and Vulcanic and (ii) the treatment of our Russian operating companies as disposals from the date at which the Group suspended all trading with and within Russia.

Organic sales growth was significantly ahead of global IP of 2.7% across all three Businesses as we successfully navigated global supply chain disruptions and a weakening macroeconomic environment to deliver a strong increase in volumes. Our proactive price management practices also allowed us to offset significant inflation in raw material costs, protecting our adjusted operating profit margin.

Steam Specialties sales of £866.0 million (54% of Group revenue) grew 15% in 2022 or 12% organically. This very strong performance, significantly ahead of IP, was delivered despite the challenging macroeconomic environment. Demand growth exceeded sales growth across all Divisions, with a higher proportion of larger orders compared to 2021, as customers' capital expenditure continued to recover from pandemic-driven reductions.

Electric Thermal Solutions (ETS) sales of £256.1 million (16% of Group revenue) grew 41% or 14% on an organic basis, with the difference due to currency movements and acquisitions that had a positive effect of 7% and 18%, respectively. Strong organic growth in both Thermocoax (driven by the Semiconductor and Aerospace & Defence sectors) and Chromalox (led by decarbonisation solutions) was achieved despite continuing disruptions in the global supply chain, although these constraints began to ease in the second half of 2022.

Chromalox's manufacturing facility in Ogden, Utah (USA) remained capacity constrained as it transitions to focus on more complex and bespoke industrial heating solutions, supporting the decarbonisation of buildings and industrial processes. During the year, we continued investing in further operational improvements as well as increasing capacity in Ogden. These factors, together with strong demand growth, resulted in ETS carrying a record order book into 2023, underpinning sales in the year ahead.

We completed the acquisitions of Vulcanic and Durex Industries towards the end of the year with both companies delivering strong double-digit sales growth in 2022, driven by the same decarbonisation trend and Semiconductor sector growth benefiting Chromalox and Thermocoax. Including the acquisitions of Vulcanic and Durex Industries on a twelve-month pro-forma basis, ETS sales would be £382.9 million.

Watson-Marlow sales of £488.5 million (30% of Group revenue) grew 20% or 16% organically supported by our strong order book. Sales to the Pharmaceutical & Biotechnology sector grew close to 15% organically, while sales to Process Industries sectors grew 19%, significantly ahead of global IP. In the second half of 2022, as expected, COVID-19 vaccine-related demand began to normalise as effects of the pandemic moderated and our customers began to work through their existing stocks, repurposing COVID-19 vaccine production to meet the continued strong underlying demand for cell and gene therapy medications. As a result, Watson-Marlow saw a reduction in overall demand in 2022 and Pharmaceutical & Biotechnology customers also rescheduled some deliveries from our order book into 2023.

During the fourth quarter of 2022, steps were taken to appropriately right-size capacity and overhead support costs in Watson-Marlow, which included factory labour reductions. Further actions are underway in early 2023, ensuring Watson-Marlow is able to both meet customers' needs and protect our adjusted operating profit margin.

Adjusted operating profit

Group adjusted operating profit of £380.2 million (2021: £340.3 million) grew 12%, or 7% organically, the difference being due to 4% favourable currency movements and a net 1% contribution from acquisitions less the impact of the disposal of our

Russian operations. Adjusted operating profit in Steam Specialties, ETS and Watson-Marlow grew organically by 8%, 23% and 3% respectively.

Adjusted operating profit margin

Group adjusted operating profit margin in 2022 was 23.6%, down 170 bps from the exceptional 25.3% of 2021. Organically the margin was down 160 bps, driven by the full year impact of revenue investments made during 2021 and the additional revenue investments of 2022 to support future growth, partially offset by the benefits of operational gearing from higher sales. To note, the 2021 Group adjusted operating profit margin of 25.3% would have been approximately 200 bps lower, had we incurred the full-year cost of revenue investments made during that year.

Steam Specialties adjusted operating margin of 23.8% was down 120 bps or 90 bps organically. Our lower margin, compared to the exceptionally high level of 2021, reflects the full year impact of prior year revenue investments, partially offset by the benefits of operational gearing from higher sales. During 2022, we continued investing in support of future revenue growth, with an expansion in sales-related headcount and new product development, as well as digital and sustainability initiatives.

ETS adjusted operating profit margin was 15.6%, up 240 bps or 100 bps on an organic basis, with the difference due to the positive impact from the acquisitions of Vulcanic and Durex Industries, which have a combined margin similar to the overall Group margin. Strong sales growth, supported by increased volumes, resulted in operational gearing benefits with positive effects on organic margin progression.

Financial Review continued

During 2022, both Chromalox and Thermocoax shipped a high proportion of orders from their existing order book that were booked in 2021 or earlier, when future inflation expectations were lower. These orders did not benefit from price increases in 2022 and their margin was adversely impacted by higher raw material cost inflation, as well as higher freight costs. In 2023, we anticipate margin improvements as we increase the shipment of orders taken in 2022 and 2023.

Thermocoax, which has a higher proportion of sales to OEMs on medium-term contracts and was impacted by one-off costs associated with the ramp-up of our new manufacturing facility in Normandy (France), experienced a contraction in 2022 adjusted operating profit margin. Chromalox adjusted operating profit margin increased in 2022, with overhead reductions from the closure of the Soissons (France) facility having a positive effect in the fourth quarter. The full year impact of this plant closure will contribute to further margin progression in 2023.

Including the acquisitions of Vulcanic and Durex Industries on a twelve-month pro-forma basis, ETS adjusted operating profit margin would have exceeded 18.0%.

Watson-Marlow's 32.8% adjusted operating profit margin was down 390 bps against the exceptional margin of 2021 and 400 bps down on an organic basis. However, Watson-Marlow's adjusted operating profit margin in 2022 was still 100 bps higher than its 2019 pre-pandemic margin. The lower adjusted operating profit margin was driven by the full year impact of 2021 revenue investments, which had an impact of over 200bps, as well as costs associated with the transition of BioPure to a new facility in Portsmouth (UK) and the ramp-up of our new facility in Devens, Massachusetts (USA), which together had an impact of over 150 bps.

Currency movements

The Group's Income Statement and Statement of Financial Position are exposed to movements in a wide range of different currencies. This stems from our direct sales business model, with a large number of local operating companies. These currency exposures and risks are managed through a rigorously applied Treasury Policy, typically using centrally managed and approved simple forward contracts to mitigate exposures to forecast future cash flows and avoiding the use of complex derivative transactions. The largest exposures are to the euro, US dollar, Chinese renminbi and Korean won. While currency effects can be significant, the structure of the Group

provides some mitigation through our regional manufacturing presence, diverse spread of geographic locations and through the natural hedge of having a high proportion of our overhead costs in the local currencies of our operating companies.

Currency movements positively impacted adjusted operating profit by close to 4% with a translational benefit of £12.2 million and an additional transactional benefit of £0.8 million. The translation benefit reflects the impact of the weakening of sterling during 2022 against the currencies in which the Group generated its adjusted operating profit. The main transactional exposure flow affecting the Group is the export of products from our factories in the UK, invoiced in sterling, less the import of goods from overseas Group factories and third parties priced predominately in euros and US dollars. The net exposure to transactional currency movements is approximately £150 million.

Statutory operating profit and margin

Statutory operating profit was down 1% to £318.8 million (2021: £320.9 million) and the statutory operating profit margin of 19.8% was down 410 bps (2021: 23.9%). Statutory operating profit and statutory operating profit margin are impacted by the same drivers as explained in the adjusted operating profit sections above, as well as the reconciling items detailed below:

- A charge of £23.7 million (2021: £21.4 million) for the amortisation of acquisition-related intangible assets
- Accelerated depreciation and other associated one-off costs of £4.2 million relating to the Group Head Office building in Cheltenham (UK), which is being comprehensively re-developed
- A restructuring charge of £15.5 million, primarily relating to Chromalox's manufacturing operation in Soissons (France)
- A loss on disposal of £7.1 million relating to the Group's Russian operating companies, including associated disposal costs
- A charge of £9.1 million for costs related to the acquisitions of Cotopaxi, Vulcanic and Durex Industries
- A charge of £1.8 million from the reversal of fair value adjustments to inventory on the acquisition of Vulcanic

Net financing expense

During the fourth quarter of 2022, the Group raised new euro and US dollar denominated debt, which in aggregate amounted to £509 million. The weighted average interest

rate on these new debt facilities is 4.8%. As a result, net bank interest increased to £8.4 million (2021: £4.0 million).

Net costs under IAS 19 in respect of Group defined benefit pension schemes decreased to £0.8 million (2021: £1.3 million) and lease interest charges for the year increased to £1.5 million (2021: £1.1 million).

As a result, adjusted net financing expenses increased to £9.6 million (2021: £6.4 million) and on a statutory basis net financing expenses increased to £10.7 million (2021: £6.4 million), with the difference being the costs of arranging the acquisition debt financing.

Net financing expenses are expected to increase in 2023 as a result of the full-year effect of the acquisition-related debt.

Profit before tax

Adjusted profit before tax was up 11% to £370.6 million (2021: £333.9 million). Statutory profit before tax was down 2% to £308.1 million (2021: £314.5 million). The reconciling items between adjusted profit before tax and statutory profit before tax are shown above and in Note 2 to the Financial Statements.

Taxation

The Group tax rate reflects the blended average of rates in tax jurisdictions around the world in which the Group trades and generates profit. The Group adjusted effective tax rate decreased by 10 bps to 25.0% (2021: 25.1%) and on a statutory basis the Group effective tax rate was 27.0% (2021: 25.3%).

The Group adjusted effective tax rate is lower than our forecast for 2022 by close to 100 bps due to initiatives that delivered both one-off benefits and structural changes, reducing the rate in 2022 and on an ongoing basis. For 2023, we currently anticipate that, based on a forecast mix of profits, including the effect of the Vulcanic and Durex Industries acquisitions, the Group adjusted effective tax rate will be marginally higher than the 2022 rate.

On 8th June 2022, the European Union (EU) General Court published its decision on the appeals for annulment made against the European Commission's (EC) 2019 decision that certain aspects of the UK's Controlled Foreign Company regime constituted State Aid, finding in favour of the EC. The UK Government has appealed the decision of the EU General Court.

Whilst the EU General Court ruling was in favour of the EC, our assessment is that there are grounds for successful appeal. As a result, we have continued to recognise a receivable of £4.9 million in the Consolidated Statement of Financial Position. This relates to the full amount paid to HM Revenue & Customs for Charging Notices received in 2021. The Group has not received a Charging Notice for either the benefit received prior to 2017, which is estimated to be £2.8 million, or the benefit received during 2019 of £1.0 million. No provisions have currently been recognised relating to these amounts and therefore they remain a contingent liability at 31st December 2022. Further details are included in Note 5 to the Financial Statements.

Earnings per share

Adjusted basic earnings per share increased by 11% to 377.2 pence (2021: 338.9 pence), consistent with the increase in adjusted operating profit. Statutory basic earnings per share were 305.1 pence (2021: 318.3 pence). The statutory fully diluted earnings per share were not materially different to the statutory basic earnings per share per share in either year.

Dividends

The Group has a progressive dividend policy under which dividend payments follow underlying earnings per share growth while maintaining prudent levels of dividend cover. The aim is to provide sustainable, affordable dividend growth, building on our 55-year record of dividend progress, with a compound annual increase of 11% over that period and over the last ten years. The Board is proposing a final dividend of 109.5 pence per share for 2022 (2021: 97.5 pence) payable on 19th May 2023 to shareholders on the register at 21st April 2023. Together with the interim dividend of 42.5 pence per share (2021: 38.5 pence), the total Ordinary dividend for the year is 152.0 pence per share, an increase of 12% on the Ordinary dividend of 136.0 pence per share in 2021.

The total amount paid in dividends during the year was £103.6 million, 14% above the £91.0 million paid in 2021.

Capital employed

Capital employed increased by £233.3 million to £892.5 million, including £68.6 million from acquisitions. On an organic basis,

excluding the impact of currency movements, acquisitions and disposals, capital employed increased by £136.9 million. Tangible fixed assets (PPE and right-of-use-assets) increased by £111.4 million to £451.7 million, principally as a result of acquisitions and expenditure on new manufacturing capacity for Watson-Marlow.

The capital intensity of our business is low with capital expenditure typically amounting to between 4% and 6% of sales. Record capital expenditure of £117.5 million in 2022 was equivalent to 7% of sales, delivering new manufacturing capacity for Watson-Marlow, including the BioPure facility in Portsmouth (UK) and new facility in Devens, Massachusetts (USA), as well as other significant projects to advance our **One Planet: Engineering with Purpose** Sustainability Strategy and development of our digital capabilities. Excluding our investment in new construction projects, capital expenditure, as a percentage of sales, would have been at the low end of our typical range.

	2022 £m	2021 £m
Capital employed		
Property, plant and equipment	384.5	277.4
Right-of-use assets	67.2	62.9
Software & Development costs	44.5	38.9
Inventories	290.0	201.3
Trade receivables	341.1	272.3
Prepayments and other current assets	100.6	61.7
Trade, other payables, current provisions and current tax payable	(335.4)	(255.3)
Capital employed	892.5	659.2
Acquired intangibles including goodwill	1,159.1	628.0
Investment in Associate	–	–
Post-retirement benefits	(52.1)	(44.7)
Net deferred tax	(59.1)	(35.7)
Non-current provisions and long-term payables	(15.0)	(6.2)
Lease liabilities	(65.2)	(60.1)
Net debt	(690.4)	(130.5)
Net assets	1,169.8	1,010.0
Adjusted operating profit	380.2	340.3
Adjusted operating profit (excluding acquisitions, disposals and leases)	369.9	339.2
Average capital employed	775.9	621.5
Average capital employed (excluding acquisitions, disposals and leases)	677.5	571.9
Return on capital employed	49.0%	54.7%
Return on capital employed (excluding acquisitions, disposals and leases)	54.6%	59.3%

Financial Review continued

We are expecting capital expenditure in 2023 to be similar, as a percentage of sales, to 2022 and above the top end of our historical range. In 2023, we will begin the expansion of our ETS manufacturing facility in Ogden, Utah (USA), to meet customer demand for our decarbonisation solutions. We anticipate capital investment in 2024 will remain above historical levels while we complete new construction projects.

Total working capital increased by £91.9 million and the ratio of working capital to sales was 24.6% (2021: 21.3% on a constant currency basis), including the impact of acquisitions. Adjusting for the full year effect of acquisitions and disposals on a twelve-month pro-forma basis, the ratio of working capital to sales was 22.8%. The increase in working capital was driven by a recovery in the level of inventory as global supply chain constraints eased, alongside a net cash outflow across trade receivables and trade payables, largely due to business growth. Going forward, we anticipate maintaining a similar percentage of working capital to sales.

Return on capital employed (ROCE)

ROCE reduced by 570 bps to 49.0% (2021: 54.7%, 2020: 48.9%). Excluding the impacts of acquisitions, disposals and leases,

ROCE decreased by 470 bps to 54.6% (2021: 59.3%, 2020: 48.9%), driven by an increase in both capital investment and working capital that more than offset growth in adjusted operating profit. ROCE is defined in Note 2 to the Financial Statements.

Return on invested capital (ROIC)

ROIC decreased by 370 bps to 18.3% (2021: 22.0%, 2020: 17.8%), primarily as a result of the acquisitions of Vulcanic and Durex Industries. Excluding the impacts of acquisitions, disposals and leases, ROIC decreased by 90 bps to 22.0% (2021: 22.9%, 2020: 17.8%). ROIC is defined in Note 2 to the Financial Statements.

Post-retirement benefits

The net post-retirement benefit liability under IAS 19 increased to £52.1 million (2021: £44.7 million). Assets decreased by 39% to £341.6 million (2021: £560.7 million), primarily due to the impact of interest rate increases on fixed income investments. Liabilities decreased by 35% to £393.7 million (2021: £605.4 million), largely due to an increase in AA corporate bond rates used to discount future cash flows.

The main UK schemes, which constitute 83% of assets, were closed to new members in 2001 and closed to future accrual in 2020.

These schemes continue to be managed under a de-risking strategy whereby asset and liability values are closely monitored by our asset manager with appropriate asset allocation decisions taken as the funding level improves.

Cash flow and treasury

A reconciliation between adjusted cash from operations and statutory operating cash flow can be found in Note 2 to the Financial Statements.

As expected, adjusted cash from operations was lower than previous years, decreasing by £62.8 million to £214.9 million (2021: £277.7 million) with 57% cash conversion (2021: 82%), due to planned record capital expenditure of £117.5 million (2021: £64.1 million) and an increase in total working capital of £91.9 million (2021: £39.5 million). Excluding our investment in new construction projects and the rebuilding of inventory, 2022 cash conversion would have been higher than the prior year and in line with the Group's historical performance.

Tax paid in the year increased by £11.9 million to £90.0 million as a result of the increase in profit before tax in 2022. Free cash flow for the year was £116.1 million (2021: £194.5 million).

	2022 £m	2021 £m
Cash flow		
Adjusted operating profit	380.2	340.3
Depreciation and amortisation	36.0	35.7
Depreciation of leased assets	13.4	11.4
Cash payments to pension schemes more than the charge to adjusted operating profit	(5.3)	(5.6)
Equity settled share plans	8.9	9.2
Working capital changes	(91.9)	(39.5)
Repayments of principal under lease liabilities	(12.9)	(11.7)
Capital expenditure (including software and development)	(117.5)	(64.1)
Capital disposals	4.0	2.0
Adjusted cash from operations	214.9	277.7
Net interest	(8.8)	(5.1)
Income taxes paid	(90.0)	(78.1)
Free cash flow	116.1	194.5
Net dividends paid	(103.6)	(91.0)
Purchase of employee benefit trust shares/Proceeds from issue of shares	(19.0)	(24.6)
(Acquisitions)/Disposals of subsidiaries	(538.3)	–
Restructuring costs	(3.2)	–
Cash flow for the year	(548.0)	78.9
Exchange movements	(11.9)	19.4
Opening net debt	(130.5)	(228.8)
Net debt at 31st December	(690.4)	(130.5)
Lease liability	(65.2)	(60.1)
Net debt and lease liability at 31st December	(755.6)	(190.6)

Dividend payments, including payments to minorities, were £103.6 million (2021: £91.0 million), and reflect the final dividend for 2021, as well as the interim dividend for 2022. Share purchases net of new shares issued for the Group's various employee share schemes resulted in a cash outflow of £19.0 million (2021: £24.6 million). Acquisitions (net of disposals) during the year amounted to £538.3 million (2021: £nil), primarily driven by the purchase consideration for Vulcanic and Durex Industries. Restructuring spend during the year was £3.2 million due to the closure of Chromalox's manufacturing operations in Soissons (France).

Financing and liquidity

Net debt at the end of the year was £690.4 million (2021: £130.5 million), including debt raised to finance the acquisitions of Vulcanic and Durex Industries, with a net debt to EBITDA ratio of 1.7 times (2021: 0.35 times). On a pro-forma basis, including a full-year of EBITDA for companies acquired during the year, the net debt to EBITDA ratio is 1.5 times. At the end of the year total committed and undrawn debt facilities amounted to £285.3 million alongside a net cash balance of £243.8 million. The average tenor of our debt is over four years with the next contractual repayment maturity in September 2023. Since the end of the year the Group has successfully exercised the first of two options to extend the maturity of our £400 million revolving credit facility by an additional year to April 2028.

Capital structure

The Board keeps the capital requirements of the Group under regular review, maintaining a strong financial position to protect the business against risks that could impact trading while providing flexibility to invest for future growth. The Group earns a high return on capital, which is reflected in strong cash generation over time. Our capital allocation policy remains unchanged. Our first priority is to maximise organic investment in the business to drive future growth. Next, we prioritise investing in acquisitions that can expand our addressable market through increasing our geographic reach, deepening our market penetration, or broadening our product range. Acquisition targets are required to exhibit a strong strategic fit whilst meeting strict commercial, economic and return on investment criteria. When cash resources significantly exceed expected future requirements, we would look to return capital to shareholders, as evidenced by special dividends declared in respect of 2010, 2012 and 2014. In the near term, we will look to reduce our financial leverage, which

increased during the year as a result of the acquisitions of Vulcanic and Durex Industries, prior to considering one-off returns of capital to shareholders.

The fundamentals of our financial resilience

The strong operational and financial performance of the Group during 2022 continues to reflect the resilience of our business model. Alongside completing the acquisitions of Vulcanic and Durex Industries, we have continued to focus on organic opportunities with significant investments made in new manufacturing capacity, sustainability initiatives and building additional digital capability. The Group's longstanding track record of increasing returns to shareholders has continued with a proposed year-on-year increase of 12% in ordinary dividends.

Our products and solutions support critical industrial processes across a broad range of industries and geographical markets, which links our business performance to movements in global IP. As in previous years, our business model supported our outperformance against global IP due to our ability to self-generate sales (accounting for 40% of sales) and a significant base business in maintenance and repair sales (accounting for 45% of sales). These sales are funded from our customers' operating budgets. The remaining 15% of sales are related to large projects, funded from customers' capital expenditure budgets, which are more heavily influenced by economic cycles. Over 60% of our sales are to defensive, less cyclical sectors and no single customer accounts for more than 1.5% of Group sales.

Resilience over the short, medium and long term

Our business model and the investments we have continued to make in our business, combined with our strong cash generation, position us well to adapt to economic cycles. Our Going Concern and Viability analysis gives us confidence in the robust nature of our business and our capital structure, even when analysed under a number of downside scenarios.

We have undertaken scenario-based modelling of our key risks, the results of which underpin our confidence in our short and medium-term resilience. The continued implementation of our strategy supports our longer-term resilience and we continue to closely monitor and respond to the changing external economic, environmental and social factors that will impact our Businesses in the future.

Going Concern statement

The Group's principal objective when managing liquidity is to safeguard the Group's ability to continue as a going concern for at least 12 months from the date of signing the 2022 Annual Report. The Group retains sufficient resources to remain in compliance with all the required terms and conditions within its borrowing facilities with material headroom and no material uncertainties have been identified. The Group continues to conduct ongoing risk assessments on its business operations and liquidity. Consideration has also been given to reverse stress tests, which seek to identify factors that might cause the Group to require additional liquidity and form a view as to the probability of these occurring.

Our financial position remains robust, with the next maturity of our committed debt facilities being €225 million of Private Placement notes which mature in September 2023 and which are included within the cashflow forecast that underpins our scenario modelling. The Group's debt facilities contain a leverage ratio (net debt/EBITDA) covenant with a limit of up to 3.5x. Certain debt facilities also contain an interest cover (EBITDA/net finance expense) covenant of a minimum of 3.0x. The Group closely monitors its financial position to ensure that it remains within the terms of these debt covenants. At 31st December 2022 the Group's reported leverage ratio was 1.7x (31st December 2021: 0.4x), the year-on-year increase resulting from the debt-financed acquisitions of Vulcanic and Durex Industries. It should be noted that including a full year of EBITDA for acquired businesses results in a pro-forma leverage ratio of 1.5x. Interest cover on a pro-forma basis was 62x at 31st December 2022 (31st December 2021: 93x).

Reverse 'stress testing' was also performed to assess what level of business under-performance would be required for a breach of the financial covenants to occur, the results of which evidenced that no reasonably possible change in future forecast cash flows would cause a breach of the Group's covenants. In addition, the reverse stress tests undertaken did not require us to take into account any mitigating actions which the Group would implement in the event of a severe and extended revenue and profitability decline. Such actions would serve to further increase covenant headroom.

Having assessed the relevant business risks as discussed in our Principal Risks on pages 95 to 99 and considered the liquidity and covenant headroom available under several alternative scenarios as set out in

Financial Review continued

the viability assessment below, the Directors consider it appropriate to continue to adopt the going concern basis in preparing the financial statements.

Assessment of Viability

In accordance with provision 31 of the UK Corporate Governance Code 2018, the Board has assessed the viability of the Group, taking into account the Group's current financial position, business strategy, the Board's risk appetite and the potential impacts of the Group's Principal Risks. We set out the eight Principal Risks we have identified on page 95.

The Board has adopted a five-year viability assessment, which it believes to be appropriate as this timeframe is covered by the Group's forecasts; takes into account the nature of the Group's Principal Risks, a number of which are external and have the potential to impact over short time periods; and is aligned with the maturity of the Group's principal committed bank credit facility. While the Board has no reason to believe that the Group will not be viable over a longer period, given the inherent uncertainty involved, the Board believes that a five-year period provides an appropriate degree of confidence whilst covering a sufficiently longer-term perspective.

In making their assessment, the Board completed a robust assessment, supported by detailed modelling, of the Principal Risks facing the Group, including those that would threaten its business model, future performance, solvency, or liquidity. In addition to completing an impact assessment of the Principal Risks, the Board considered the probability of the occurrence of the Principal Risks, the Group's ability to control them and the effectiveness of mitigating actions available. In every modelled scenario the Group is able to demonstrate that it continues to remain viable. The scenarios modelled to support this process were as follows:

Scenarios modelled

Scenario 1: Revenue Fall

We considered a combination of forward-looking scenarios in which sales were adversely impacted in all years of the assessment period. The reductions reflected the combined impact of economic political instability on global Industrial Production output, material currency exchange rate fluctuations and a loss of manufacturing output at a significant Group manufacturing site.

We assumed a reduction of 17% in sales and no mitigating actions were taken by the Group. Despite these impacts the Group continued to trade profitably and always remained comfortably within the financial covenants in the external financing facilities.

Links to Principal Risks

- Risk 1:** Economic and political instability
- Risk 2:** Significant exchange rate movement
- Risk 4:** Loss of manufacturing output at any Group factory
- Risk 6:** Loss of critical supplier
- Risk 8:** Inability to identify or respond to changes in customer needs

Scenario 2: Exceptional Charge

We considered the impact of a potential large, one-off expense as could be required in the case of a legal or regulatory fine or a compensation payment. An expense equivalent to 10% of the 2022 adjusted group operating profit was assumed alongside a negative impact of 10% on revenue resulting from the associated reputational damage.

Despite these impacts the Group continued to trade profitably and always remained comfortably within the financial covenants in the external financing facilities.

- Risk 7:** Breach of legal and regulatory requirements (including ABC laws)

Scenario 3: Cyber Attack

We considered the occurrence of a cyber-attack that succeeds in severely impacting Group systems. We assumed an immediate disruption to trading followed by a fall in sales in subsequent years resulting from the associated negative reputational impact, the combined effect being a loss of 5% of sales in each year over the period. A significant initial cost was also included to rectify the immediate impact of the attack followed by increased investment in all subsequent years to strengthen our cyber-security.

Despite these impacts the Group continued to trade profitably and always remained comfortably within the financial covenants in the external financing facilities.

- Risk 3:** Cybersecurity

Scenario 4: Acquisition Failure

We considered a scenario whereby a large acquisition has failed to achieve the acquisition business case. We assumed a 20% shortfall in sales in the acquired business and disposal for a lower cash consideration than the original consideration.

Despite these impacts the Group continued to trade profitably and remained comfortably within the financial covenants contained within the external financing facilities at all times.

- Risk 5:** Failure to realise acquisition objectives

A further scenario was modelled to ascertain what level of revenue or adjusted operating profit margin reduction would be required to cause a breach of the Group's debt covenants. The reductions in revenue and adjusted operating profit margin were significantly higher than those shown in the above scenarios. While linked to the Group's Principal Risks, the scenarios detailed above are hypothetical and designed to test the ability of the Group to withstand such severe outcomes. In practice, the Group has an established series of risk control measures in place that are designed to both prevent and mitigate the impact of any such occurrences from taking place. The results of the stress testing undertaken showed that the Group would be able to absorb the impact of the scenarios considered should they occur within the assessment time period. In all the scenarios considered, the Group was not required to implement any mitigating actions in relation to reductions in forecast expenditure in order to remain within its debt covenants.

Viability statement

Based on the outcomes of the scenarios and considering the Group's financial position, strategic plans and Principal Risks, the Directors 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 of their assessment. The Directors' statement regarding the adoption of the going concern basis for the preparation of the financial statements can be found on pages 43 and 44.

Long-term resilience

The Group has a long track record, over 130 years, of consistently adapting to changing macroeconomic, environmental and social factors supported by our business model. While our strategy and business model lessen any material impact from our Principal Risk factors, we nevertheless continuously review our markets, listen to our customers and adapt our solutions, while working responsibly and in line with our Values to build long-term sustainability.

We have a highly resilient business and strategy that will remain relevant across different climate-related scenarios.

We recognise the need to anticipate and mitigate the impact of climate-related change.

In 2021 we launched our **One Planet: Engineering with Purpose** Sustainability Strategy covered in more detail on page 46 of the Sustainability Report. Although not classed as a Principal Risk for our Group, the TCFD disclosures on pages 59 to 61 detail the anticipated impact of climate-change on the Group's longer-term resilience.

The increasing commitments to net zero targets will have a profound effect on industrial activity over the coming decades and is an additional source of growth for our Group over at least the next 30 years. To address the opportunities arising from the decarbonisation of industrial processes, we have invested significantly in the development of sustainable products and solutions that help customers meet their own sustainability goals. In 2022, we launched new-to-world **TargetZero** decarbonisation solutions, created through an internal collaboration between Steam Specialties and Electric Thermal Solutions (ETS). You can read more about the benefits of the three **TargetZero** solutions, branded **ElectroFit**, **Steam Battery** and **SteamVolt**, on page 80 of the Operating Review.

Group Outlook

Forecasts for 2023 IP have trended steadily downwards since February 2022 and are now at 0.7%, reflecting the likelihood of recession in developed markets and low growth in emerging markets. Against this uncertain macroeconomic backdrop, our resilient business model, ability to self-generate sales and significant proportion of demand from maintenance and repairs, underpins our confidence in another year of progress for the Group.

If exchange rates at the end of February were to prevail for the remainder of the year, there would be a tailwind impact of between approximately 1% and 2% on sales and adjusted operating profit. Movements in exchange rates are often volatile and unpredictable so the actual impact could be significantly different. Therefore, our guidance excludes any impact from currency movements.

The full year effect of the acquisitions of Vulcanic and Durex Industries on a twelve-month pro-forma basis, net of the disposal of our Russian operations, would have expanded Group revenues by almost 8% to £1,734 million in 2022.

During the second half of 2022, COVID-19 related demand from Watson-Marlow's Pharmaceutical & Biotechnology customers began to normalise and, in the first two months of 2023, we have continued to see a level of demand consistent with the fourth quarter of 2022, which still ended with untypically strong order book levels. In the first half of 2023, we expect these customers to continue utilising their existing stocks and reschedule deliveries from our order book. However, with strong underlying demand for cell and gene therapy applications in the Pharmaceutical & Biotechnology sector, as well as Process Industry applications, we anticipate significantly higher demand in the second half of 2023 as excess customer stocks are depleted, although defining the precise timing and scale of any recovery remains difficult. Therefore, excluding any impact from currency movements for the full-year 2023, we anticipate Watson-Marlow's overall sales for 2023, to be slightly below 2022, as lower sales to the Pharmaceutical & Biotechnology sector will be largely offset by strong growth of its Process Industry sectors.

The Steam Specialties and ETS Businesses also opened 2023 supported by record order books, so we anticipate mid-to-high single-digit growth over 2022 pro-forma sales, driven by volume growth above IP and proactive price management practices that offset inflation of wages, energy and materials to protect margins.

Assuming no material deterioration in forecasted IP and excluding any impacts from currency movements, we anticipate mid-single-digit growth over 2022 Group pro-forma sales, together with a small progression to the Group's adjusted operating profit margin. As Watson-Marlow's sales will be strongly weighted to the second half of the year, we anticipate the Group's sales phasing in 2023 will also be more weighted to the second half than the typical 48% : 52% phasing of previous years. Based on increased operational gearing in the second half, as well as the full benefit in the second half of first half cost saving initiatives in Watson-Marlow to right-size capacity and overhead support costs, we anticipate the Group's adjusted operating profit phasing in 2023 will be more weighted to the second half than the 44% : 56% phasing of 2020.

Cash conversion of 57% in 2022 was impacted by a rebuilding of inventory as global supply chain disruptions eased, as well as a step-up in capital investment as we expanded our manufacturing capacity to support future growth. In 2023, we anticipate cash conversion will improve to above 70% with capital investment remaining at approximately 7% of sales driven by project completions and the expansion of Chromalox's manufacturing facility in Ogden, Utah (USA).

Therefore, we look forward to delivering another year of overall double-digit sales growth, together with a small progression in the Group's adjusted operating profit margin and improved cash conversion.

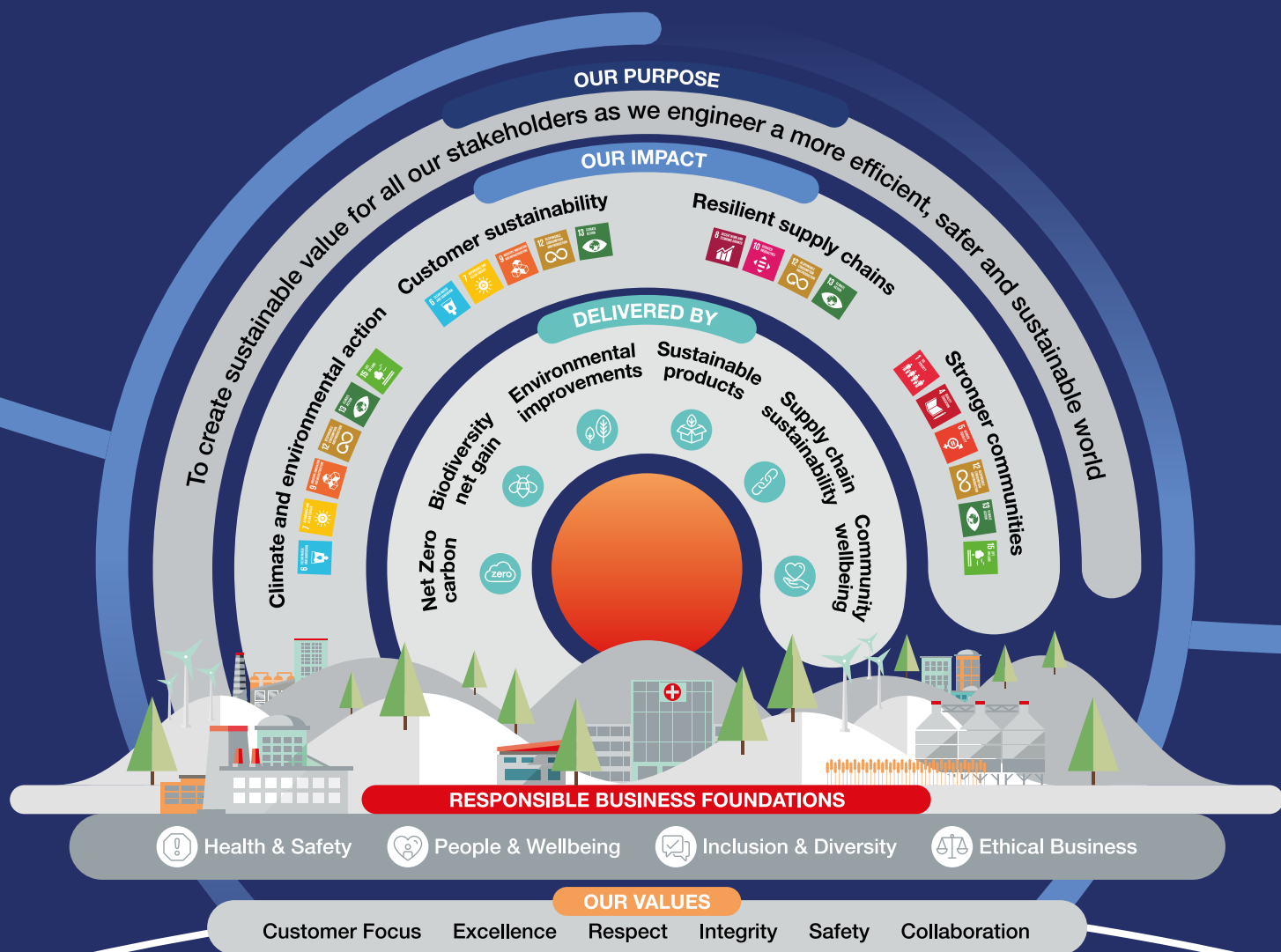
Nimesh Patel
Chief Financial Officer

8th March 2023

Sustainability Report

One Planet: Engineering with Purpose

Our One Planet Strategy is our mechanism to create sustainable value for all our stakeholders, as we engineer a more efficient, safer and sustainable world.



One Planet: Engineering with Purpose

is our commitment to sustainability, as well as our roadmap to building a more sustainable future. 2022 saw the first full year of our strategy implementation and we made important progress in our sustainable business operations, including:

- Became a participant of the UN Global Compact
- Launched **Everyone is Included**
- Reduced GHG emissions (scope 1 and 2 market-based) by 30% vs 2021
- Reduced Group energy consumption by 4% vs 2021
- Electricity consumed from certified renewable sources increased to 57%
- Delivered at least one biodiversity initiative by 47% of our operating companies since the strategy launch in 2021
- Reduced waste to landfill to 10% from 12% in 2021
- Doubled volunteering hours to over 22,000

Across all initiatives we have put the foundations in place to achieve or make strong progress against our 2025 targets, with planning, roadmaps and new systems implemented in order to measure our progress and facilitate the changes required.

In October 2022, we were accepted as a participant of the UN Global Compact. This is our commitment to align our operations and strategies with ten universally accepted principles in the areas of human rights, labour, environment and anti-corruption and to take action in support of business-relevant issues embodied in the UN Sustainable Development Goals (SDGs).

Our strategy

One Planet: Engineering with Purpose is implemented by each of our three Businesses, with central oversight from the Group Executive Committee. In 2022, Sarah Peers, Group Director of Sustainability, joined the Group Executive Committee and the Risk Management Committee, demonstrating our commitment to placing sustainability at the heart of our Company decision-making, strategy and risk management processes. For more information please see page 125.

“In our first full year of strategy implementation we have made good progress in a number of areas.”

Sarah Peers
Group Director of Sustainability

The strategy is delivered through six strategic initiatives, which are:



1. Net zero carbon

Achieve net zero greenhouse gas emissions



2. Biodiversity net gain

Deliver biodiversity net gain



3. Environment improvements

Implement environmental improvements in our operations



4. Sustainable products

Grow sales of products with quantified sustainability benefits



5. Supply chain sustainability

Embed sustainability criteria in supply chain management



6. Community wellbeing

Support the wellbeing of people in our communities

Additionally, the Sustainability Strategy is supported by two strategic projects that are critical to our ability to deliver the strategy and assess progress:



1. Knowledge

Develop our colleagues' sustainability knowledge



2. Data

Improve the availability and quality of sustainability data

This framework gives us a way to manage and measure sustainability progress consistently across our diverse Group.

The initiatives and projects encourage investment in sustainable technology both within our own operations and for our customers, with a strong focus on the ways in which our products and solutions can help our customers to meet their own sustainability targets.

By prioritising the environment and people in our plans for sustainable business growth, we can work with stakeholders to leave a better world for tomorrow, because we only have one planet.

Watch our one planet video:
www.spiraxsarcoengineering.com



Sustainability Report continued

Responsible business foundations



Health and Safety

We are an organisation which places Health and Safety (H&S) at the centre of everything we do. H&S continues to be an important priority for the Group Chief Executive, Board of Directors, and Executive management teams. H&S is a standing agenda item at every Board meeting and Group Executive Committee meeting. We continue to have robust H&S management systems across the Group and at the time of publishing, 51 of our Group Companies are certified to ISO 45001 or equivalent. We have also continued to cautiously review our approach to the management of COVID-19, steadily evolving our minimum standards in line with international consensus, whilst ensuring local decision-making is fully supported.

As part of our commitment to continually improve, we expanded the role of the Group Health and Safety Director in March 2022. This role builds on the significant progress made to date, by championing an evolution in our global approach.

Progress

Our new safety management platform (EcoOnline) has now been deployed globally and is primarily used to report, manage and investigate H&S events. We continue to evolve this tool to support our continual improvement in H&S management across the Group, such as Behavioural Based Safety observations (BBS) and colleague concerns.

We have continued to focus on BBS training, with phases 1, 2 and 3 now fully deployed within Steam Specialties and Watson-Marlow, with over 6,000 colleagues trained globally. In Electric Thermal Solutions (ETS), phase 1 was implemented across the Business in 2022, and this phase will be extended to Vulcanic and Durex Industries in 2023.

In this reporting period there were five more lost time accidents (LTA) than the previous year (increased from 15 to 20), which represents an increase to our Group LTA frequency rate* to 0.12 (0.10 in 2021). A one to three-day absence was recorded for 40% LTAs (67% in 2021). The remaining 60% resulted in three days or more off work (33% in 2021). However, in the last two months of 2022 there were no LTA reports. Our all-accident frequency rate* increased to 2.43 from 2.22 which we consider to be a reflection of improvement to our reporting culture. Overall, whilst there was no general correlative trend between each incident, a higher level of hand and arm incidents was evident in 2022 and preventing these became an enhanced focus throughout the year.

Whilst it is disappointing that our LTA rate increased, these figures continue to represent a low rate, with 1.1 LTAs occurring every 1 million hours worked. The relative increase in 2022 may also have been due to 2021 being an anomalous year when compared to the general trend of previous years.

When compared to 2020, 2022 figures represent a 48% drop in LTAs and a 7.2% decrease for the all-accident frequency rate.

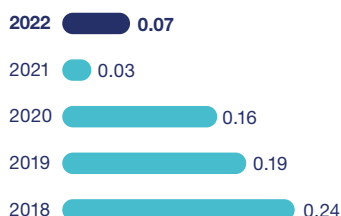
The frequency rate of both near miss incidents (27.38*) and safety concerns (271.06*) continued to increase when compared to the previous year, 16.5% and 11% respectively. This was in line with our expectations and is a further demonstration of our reporting maturation throughout the Group, reflecting the impact of our BBS programmes where we have an active H&S culture that addresses risks before they become accidents. In 2022, we again saw no work-related fatalities among our colleagues or contractors.

Inter-business learning and sharing of best-practice has been at the heart of our approach throughout the year, with our global monthly H&S forum being well attended across the Group. This regular cadence and engagement has been invaluable as we have matured and advanced our approach to team collaboration.

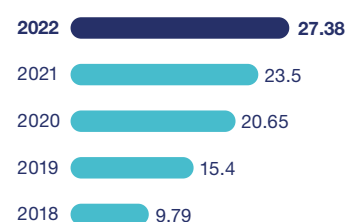
A reassessment of the H&S strategy resulted in the introduction of a new Group H&S framework, fully supported by our Group Executive Committee. The framework provides a more holistic, consolidated and tiered approach to validate, enhance and continually improve H&S excellence over the next five years. This approach is bespoke to our Group and will be achieved by focusing on broader goals covering our culture, risk-control and further enabling our colleagues to prioritise H&S. Our starting point, foundation level, will build on the solid progress we have already achieved.

To further support this Group-wide initiative and to continue our investment in technological solutions, we have also identified a global compliance solution to support a risk-based approach for demonstrating a consistent legal compliance baseline across our larger locations.

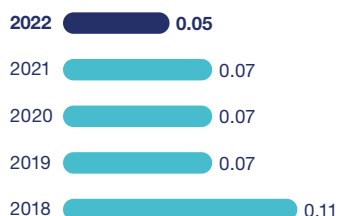
Over three-day lost time injury rate per 100,000 hours worked



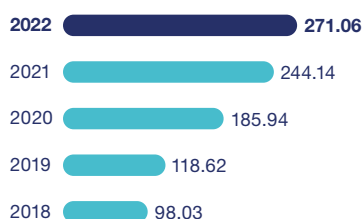
Near misses per 100,000 hours worked



One to three-day lost time injury rate per 100,000 hours worked



Health and Safety concerns raised per 100,000 hours worked



*per 100,000 hours worked

Focus for 2023

- Implement our Group-wide H&S excellence framework
- Onboard new global compliance tool
- Relaunch our customised approach to BBS across the Group



People and wellbeing

The wellbeing and safety of our colleagues has always been of primary importance and is reflected in our Company Values of Safety, Respect, Integrity, Customer Focus, Excellence and Collaboration. These are the guiding principles used across the Group to steer our conduct, underpin decision-making and define our culture. Our HR policies and systems support us in protecting the rights of our colleagues and ensuring their fair and equitable treatment.

We believe that diverse teams bring diversity of thought and experience, helping us to become a better and higher performing business. Combined with an inclusive and equitable working culture where all of our colleagues can be themselves and achieve their potential, this fuels our continued growth, creating more opportunities for our colleagues and all of our stakeholders.

Progress

Following the completion of our biennial Engagement Survey in 2021, a number of actions were implemented in 2022 to increase engagement across the Group. We developed a Purpose Guide to help teams connect their personal purpose with the Group Purpose, which will be further supported with facilitated workshops in 2023. We increased Employee Engagement Committee involvement with colleagues in a series of focus groups across the Group. We also developed an Employee Value Proposition managers' guide and launched a new leadership development programme based on the principles of the Followership framework.

In 2022, we launched our first Development Everyday festival, giving our colleagues access to a wealth of resources and webinars to support their growth and development journeys. This two-week festival focused on a range of topics which covered life inside and outside of work, with a theme of 'Make the best of ME!'. Over 1,600 colleagues engaged actively with this event, with the most popular sessions being about financial wellbeing and career strategies that really work. Feedback from our colleagues was very positive, with sessions being described as 'insightful and interesting' with 'a lot of useful information'.

As part of our Group Inclusion Commitment on menopause and positive menstrual health, we introduced free, eco-friendly menstrual health care products across our Steam

Specialties sites and Group headquarters in the UK this year, through a project led by one of our graduates. Working with the company TOTM to provide these products for our colleagues is a significant step towards normalising menstrual health, whilst supporting the wellbeing and dignity of colleagues and visitors to our sites and being kinder to the planet. You can read about this case study on page 54.

In July 2022, we launched our inaugural Group-wide Values-based colleague recognition programme called the Spirit Awards. The Awards shine a light on the way our colleagues 'elevate their everyday' activities to create value for all our stakeholders by embracing our Values. As a new and underpinning element of a stronger recognition culture throughout the Group, we were delighted to receive 633 applications from colleagues in our first year. It was a difficult task, but our team of category judges shortlisted 32 applications which were then presented to our Group Executive Committee (GEC) in a second round of judging. The GEC then selected 20 applications to become 'finalists'. In early 2023, around 40 colleagues from across our Group travelled to the UK to meet with leaders and discuss their achievements, as part of the Group's biennial leadership conference. During a special Awards Ceremony, the winners were announced. You can find out more about our winners and their stories on our Group website and more about our Values on page 21 of the Strategic Report.

In 2022, we signed the Leadership Pledge of the Global Business Collaboration for Better Workplace Mental Health as part of our commitment to an ongoing focus on colleague wellbeing. Supporting this, we launched our Wellbeing Day, an extra day of paid leave to enable every colleague across our Group to spend an extra day doing what they love.

Wellbeing continued as a theme in colleague engagement throughout 2022. This included menopause awareness webinars to raise awareness of symptoms and support, and a World Mental Health Day resource pack for our colleagues. To mark International Men's Day, we partnered with Prostate Cancer UK, running global webinars on understanding prostate cancer risk. We additionally marked International Day of Persons with Disabilities and Black History Month.



Our commitment to health and safety extends to the mental health of our colleagues and promoting the importance of self-care.

In 2022, our colleagues around the world were able to spend a Wellbeing Day doing more of the things they love. The extra day of paid leave has helped colleagues support their wellbeing in different ways.

Bridie Easton from Watson-Marlow chose to spend this day completing a long bike ride. On a bright and soggy autumn day in the UK, she enjoyed being outside in the local countryside, taking in the scenery and the fresh air and feeling energised and happy.

Focus for 2023

- Undertake biennial colleague engagement survey
- Encourage all colleagues to use their Wellbeing Day in 2023
- Embed mental health in updated Group Health and Safety Policy
- Launch 2023 Spirit Awards
- Ongoing focus on colleague support through global webinars and local initiatives

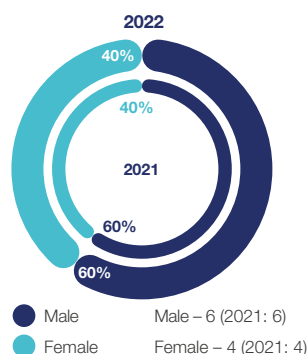
Sustainability Report continued

Responsible business foundations continued

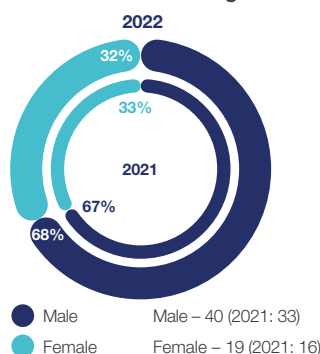


Inclusion and diversity

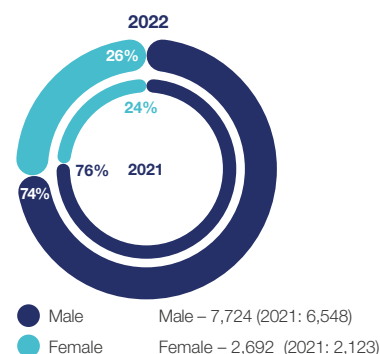
Gender – Board of Directors*



Gender – Senior Managers*



Gender – Total Workforce*



By operating in accordance with our Company Values and Group Policies we establish and maintain a culture of ethical behaviour throughout our global operations.

Across the Spirax-Sarco Engineering Group, we're committed to creating a truly inclusive and equitable working culture where all of our colleagues can be themselves and achieve their full potential.

This emphasis on inclusion is central to our culture and runs through every one of our Values. An inclusive, equitable and wellbeing-focussed culture makes us stronger as individuals, as teams and as a Group.

Progress

In February 2022, we launched our first global Inclusion Plan, **Everyone is Included** and ten Group Inclusion Commitments as a tangible way to make a positive difference to the lives of our colleagues around the world. The commitments can be found on page 53.

In Q1 of 2022, the FTSE Women Leaders Review report ranked us 38th in the FTSE 100 for gender diversity in Board and senior leadership roles. We met the Review's target of 40% women on the Board. During 2022, our senior leadership** (Group Executive Committee and their direct reports) reached 34% female representation by October. Normal employment changes reduced this to 32% at the year-end. We anticipate female representation in our senior leadership will return to 34% by April 2023 and we remain committed to reaching at least 40% female representation across our senior leadership. In Q1, the Parker Review was also published. We continued to meet the Review's goal of having at least one ethnically diverse Director on our Board.

Diversity goals

To build on our progress so far, we developed new diversity goals in Q4 of 2022, with the ambition of achieving the following by the end of 2025:

- Minimum 40% female participation in each of our Board, GEC and GEC direct reports
- Having a female Chair, Senior Independent Director, CEO or CFO
- Double the number of women in commercial leadership roles
- A 30% female workforce globally
- Increased ethnic diversity of our Board and GEC
- Double the ethnic diversity of our GEC direct reports community

For our global graduate programme, we will continue to aim for 50% female intake annually, as well as to grow participation from under-represented ethnic groups in the UK and USA.

Our Chief Financial Officer, Nimesh Patel, was appointed Co-Chair of the FTSE Women Leaders' Review in 2022, which seeks to increase the representation of women in senior leadership roles in the FTSE 350. In November, our Group Chief Executive, Nicholas Anderson, became a Lead Ambassador for the 25x25 campaign which aims to achieve 25 female CEOs in the FTSE 100 by 2025.

In January 2022, we signed the UN Women's Empowerment Principles and the UN LGBTI Standards of Conduct for Business as part of our Group Inclusion Commitments. We also joined the Women's Engineering Society (WES) and Women in Science and

Engineering (WISE) to help further advance our gender equity journey.

This year we placed our first major focus on celebrating LGBTQ+ Pride, providing sponsorship and attendance at Cornwall Pride, as well as hosting webinars for our colleagues, running an LGBTQ+ session at our global Steam Specialties leadership conference and displaying pride flags and benches at various UK sites.

In Q2, we began building a learning series of guides and ready-made Safety Moments, which are available for all our colleagues to access internally. So far, the series includes content on personal pronouns, recognising and managing loneliness, happiness at work and responding to micro-aggressions at work. We will continue to add to this library of resources.



Focus for 2023

- Embed Diversity goals across the Group
- Embed **Everyone is Included** within Vulcanic and Durex Industries
- Establish race equity focus groups and action plan
- Launch new colleague engagement platform and app

*At 31st December 2022

**Definition of senior managers aligned with FTSE Women Leaders Review



Ethical business

By operating in accordance with our Company Values and Group Policies we establish and maintain a culture of ethical behaviour throughout our global operations.

Progress

All colleagues with an email address are required to complete our Group Essentials training programme when joining the Company and annually thereafter. In 2022, we began the process of migrating our Group Essentials modules to a new authoring environment, which will facilitate easier and quicker maintenance going forwards, as well as giving each course a design refresh to ensure that they remain current and engaging for our colleagues.

Our Group Essentials training covers topics including Anti-Bribery and Corruption (ABC), Corporate Criminal Offences (CCO), Health and Safety (H&S) and Sustainability. We are currently developing a version of each Group Essentials module for our desk-free colleagues working in our manufacturing sites. These versions are being written specifically with a desk-free audience in mind and will be available as both digital and paper-based training options.

In May 2022, we launched a new Leadership for Sustainability course for our leaders, to help them to understand their role as a leader in delivering our sustainability goals. This optional training explains why we need an evolution of our leadership to address a wider range of considerations and what this looks like in practice. At the end of the year it had been completed by 211 of our leaders.

Following the acquisitions of Cotopaxi, Vulcanic and Durex Industries, we introduced the Group Essentials training to these new colleagues, as well as continuing the process started in 2021 to roll out the programme to factory-based colleagues. By the end of the year, 6,351 colleagues had completed ABC training and 5,934 completed CCO training. Introduction to Sustainability has now been launched in all Group languages and by the end of 2022 had been completed by 5,497 colleagues.

Whistle-blowing

Any colleague with a concern about potentially unethical behaviour is able to raise it confidentially through a local, independent third-party whistle-blowing hotline, hosted by Safecall. In 2022, 26 calls were raised globally



via this hotline, 10 of which involved one single case.

All calls were investigated by senior management and action taken if necessary, with summaries of calls and related actions reviewed by the Audit Committee.

Governance

In 2022, Sarah Peers, Group Director of Sustainability, joined the Group Executive Committee and the Risk Management Committee, demonstrating our commitment to placing sustainability decision-making at the heart of Company strategy and risk management processes.

The **One Planet: Engineering with Purpose** Sustainability Strategy has central strategic oversight and is sponsorship by the Group Executive Committee (GEC) with day-to-day oversight by the Group Sustainability Management Committee (GSMC), comprising the Group Director of Sustainability, the business Heads of Sustainability, Strategic Initiative and Strategic Project leads and other relevant individuals. Implementation is supported at a Group level through the six strategic initiatives and two strategic projects, which each have an Executive sponsor, an initiative lead and a cross-business working group. The GSMC meets regularly to discuss the initiatives and support each other where required and in turn informs the GEC on their progress. The Group Chief Executive is the overall Executive sponsor for the strategy.

Responsibility for implementing the strategy sits at a Business level, with the strategy embedded into the core business strategies of Steam Specialties, Electric Thermal Solutions and Watson-Marlow. Each Business and operating company is responsible for implementing the One Planet Strategy through their own Business strategy; ensuring that all colleagues have the opportunity to get involved; meeting and, where possible, exceeding minimum expectations; delivering timely and accurate data and collaborating to share learning across the Group.

The Board receives regular updates throughout the year. The One Planet Steering Committee, comprising the GEC, meets quarterly to receive detailed progress updates from each strategic initiative and project lead, in addition to receiving shorter sustainability updates at most GEC meetings.

This combination of Board and Executive Committee oversight ensures that the One Planet Strategy is a key focus area for the Group.

Focus for 2023

- Migrate to new authoring environment and design refresh of Group Essential Training modules
- Launch Group Essentials training to desk-free colleagues

Engineering our difference for colleagues

Providing a progressive, supportive and inclusive culture...





...for colleagues to thrive at work and beyond.

We are passionate about creating a truly inclusive and equitable working culture where everyone can be themselves and achieve their full potential. This means supportive teams and strong relationships where everyone's contribution is valued and where we all look out for each other. To support this, we launched our Group-wide Inclusion

Plan, **Everyone is Included** in February 2022. Our plan includes ten Group Inclusion Commitments.

The impact of **Everyone is Included** has been far reaching and made a tangible difference to the lives of many colleagues, enabling them to bond with their new babies, or step away from work to support loved

ones in times of need with paid caregiver leave. Through hybrid working, colleagues are better able to balance all aspects of life, while our Wellbeing Day has introduced an extra day of paid leave to focus on any aspect of personal wellness. Since launching **Everyone is Included**, colleagues tell us they feel more welcomed, included and proud of our Group.

Our inclusion commitments



Ensuring the best start for new families by giving every colleague who becomes a parent a minimum of 16 weeks paid parental leave.



Helping every colleague who is a caregiver to support their loved ones or take time for self-care.



Supporting every colleague who experiences pregnancy loss of any kind.



Standing up for colleagues who experience domestic violence or abuse.



Becoming an increasingly gender-balanced, ethnically diverse, disability confident and faith-aware employer.



Being a safe place for all lesbian, gay, bi, trans and queer or questioning (LGBTQ+) people, wherever we operate.



Creating menopause-friendly workplaces.



Proactively promoting better wellbeing, balance and mental health.



Enabling our hybrid workforce to be at their best wherever and whenever they are working.



Empowering our colleagues to grow their knowledge, skills and confidence as active advocates of inclusion and wellbeing.

Engineering our difference continued

A progressive, supportive and inclusive culture



Ensuring the best start for every family.



Every colleague who becomes a parent receives a minimum of 16 weeks' paid parental leave, wherever they are, whomever they are and however they become a parent. Will Stacey works for Spirax Sarco in the UK. Our parental leave policy meant that as a new father, he was able to make the most of those important early weeks, developing a strong bond with his baby son George. With time to learn about the baby's feeding and sleeping patterns he was better able to share the care with his wife Lauren.

"I was extremely grateful to be able to spend precious time bonding with my son during his first weeks and to support my wife."

Will Stacey
Divisional Sales Manager at Spirax Sarco,
UK, part of our Steam Specialties Business



Inspiring allyship for positive menstrual health.



Our commitment to creating inclusive and equitable workplaces includes supporting menopause and positive menstrual health at work. Áine Loughran joined our Group through our Global Graduate Development Programme. Her third rotation was at Watson-Marlow's Cornwall facility in the (UK) and while working there she noted the free provision of eco-friendly, menstrual products at work. When Áine had carried out her first two rotations with the Steam Specialties Business in Cheltenham (UK) Áine noted that products were not available. She was inspired by the Group Inclusion Commitments and set out to self-initiate a project to make these products available to everyone working across the three sites that comprise the Cheltenham campus.

Áine engaged with the providers TOTM to arrange for the products to be available in every location. Áine's initiative was so inspiring she was shortlisted as a Finalist in the Group's inaugural Spirit Awards programme, which celebrates colleagues living our Values to elevate the everyday things that we do. The judges recognised her efforts as signifying a positive step towards normalising menstrual health challenges at work, as well as helping the planet.

"It's about ensuring positive wellbeing for colleagues and supporting menstrual health dignity at work."

Áine Loughran
Commercial Manager, Global Business Development,
Watson-Marlow, UK



Wellbeing matters.



We're committed to doing all we can through a positive approach to mental health to promote wellbeing and self-care.

A team from our Watson-Marlow Business in Japan, decided to spend their wellbeing day together and hiked up Mount Takao, which is almost 600m high at the summit. The mountain owes its popularity to its ease of access from several cities including Tokyo, its funicular railway, Buddhist temple and abundance of nature trails. Our colleagues set a goal to reach the summit of the mountain creating a sense of wellbeing by focusing on their collective achievement, while enjoying being outdoors, surrounded by nature. The team has inspired other colleagues in Japan to come forward with more suggestions of activities they can do together to promote wellbeing, including a golf driving contest and a walk around the town while stopping at local sightseeing spots.

“Connecting with nature and achieving our goals brings spiritual fulfilment.”

Watanabe Hirotoshi
Engineering Manager, Watson-Marlow, Japan



A helping hand, when it's needed most.



We're helping every colleague who is a caregiver, to support their loved ones or take time out for self-care with a minimum of 15 days of paid caregiver leave every year. This leave is often a lifeline for colleagues when their loved ones are facing significant challenges. Knowing they can step away from work with the full support of their line manager, to focus on the people who need them, is a positive contributor to our colleagues' physical and mental wellbeing at a stressful time.

When Chantalee's mother lost her life partner, her health deteriorated. She had a major surgical procedure and needed Chantalee's help and care during her recovery.

“Mom's recovery was prolonged and caregiver leave was a saving grace! I was able to be there for my mom when she needed me most.”

Chantalee Hiles
HR Manager, Spirax Sarco,
South Africa



Sustainability Report continued



Net zero carbon

Since the launch of **One Planet:**

Engineering with Purpose in June 2021 we have been working towards our targets of achieving net zero emissions for scopes 1 and 2 by 2030 and for scope 3 by 2050. It's one thing to promise the earth, but when it comes to climate change commitments, it's essential to deliver them credibly too. This is why we committed to the Science Based Targets Initiative (SBTi) in 2021 and in 2022 formally submitted these targets to the SBTi for approval.

In preparation for submitting our targets to SBTi to be independently assessed and approved, we quantified our scope 3 value chain emissions, in conjunction with a third-party consultant. In 2023, we will focus on improving scope 3 data quality and begin to target reductions in downstream air-freighting and emissions associated with the purchase of raw materials.

Our new sustainable solutions in our **TargetZero** range will help us and our customers in decarbonising industrial processes and thus reduce scope 1 emissions. It is innovative technology like this, which builds upon our history of delivering solutions, that leads to significant efficiency improvements for our customers. It reaffirms steam's role as a critical source of thermal energy for the future, and it underlines our drive to pioneer steam technology.

Key strategic targets

- Net zero scope 1 and 2 GHG emissions by 2030, with an interim target of a 50% reduction (compared to 2019) by 2025
- 20% reduction* in Group energy use from plant, equipment and building assets (compared to 2019) by 2025

*Target updated in 2022 based on analysis of available energy reduction opportunities across our Group

Progress

As a key part of our net zero roadmap, in 2022 we have secured green energy contracts at many Group sites, meaning that over the course of the year green energy accounted for 57% of our electricity consumption. In order to guarantee the credibility of renewable contracts, they are being independently verified on a quarterly basis to ensure they meet our strict requirements.

In our green energy strategy we are moving up the green energy hierarchy, focusing on self-generation where practical to do so. Investing in adding to the installed base of renewable energy where possible is essential for security of energy supply and greening of the grid in the countries where we operate.

During 2022, we installed new solar arrays at our manufacturing sites at Heidelberg (Germany), Normandy (France), Nuevo Laredo (Mexico) and our new Watson-Marlow site in Devens (USA). As part of the net zero roadmaps developed by all of our

manufacturing sites, we will be investing further in photovoltaic panels in 2023.

In August, we launched a new electric vehicle leasing portal in the UK, the first step in our transition to electric vehicles globally. Following the success of this rollout in the UK, we will move in 2023 to the next phase of the electric vehicle transition, focussing on Europe, China and South Korea. At the same time, we developed and rolled-out a Low Carbon Travel Policy and Guidelines to reinforce our commitment to electric vehicles and to guide our colleagues in their decisions when travelling for business and guiding them on how this can be done in a more sustainable way.

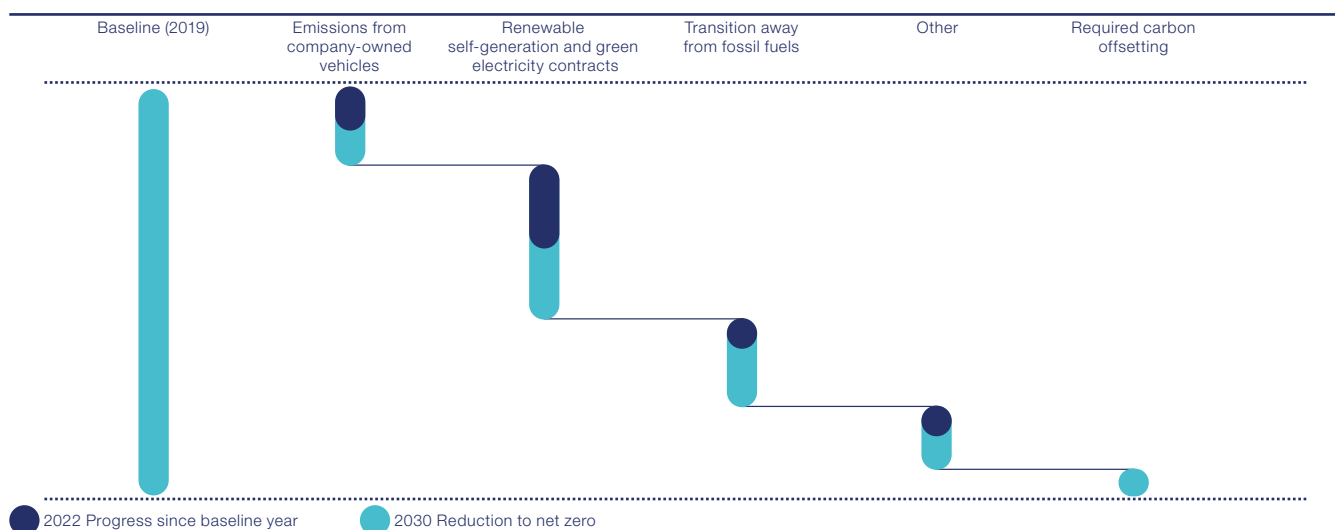
Greenhouse gas (GHG) emissions performance

The carbon footprint was verified by TÜV NORD CERT GmbH in accordance with DIN EN ISO 14064-3:2020 regarding its correctness and completeness for Spirax-Sarco Engineering plc, providing limited assurance as follows:

"Acting as an independent Certification Body TÜV NORD CERT GmbH has verified the carbon footprint, scope 1 and scope 2 (market-based) of the organisation for the reporting period 01.01.2022 – 31.12.2022 (inclusive) to be 27,175 tonnes CO₂e.

On the basis of the verification, there is no evidence that the greenhouse gas statement is not materially correct and is not a fair

Illustrative Net Zero Roadmap



representation of greenhouse data and information. Furthermore, no facts have become known that lead to the assumption that the greenhouse gas statement has not been prepared in accordance with the ISO 14064-1 and the GHG Protocol standard.

TÜV NORD CERT GmbH, February 2023.”

In 2022, on a market-basis, absolute Group CO₂e emissions fell 30% to 27,175 tonnes, compared to 2021 and were 41% lower than 2019. At 19.4 tonnes per million pounds of sales volume to third parties, on an intensity basis, our Group emissions fell by 34% compared with the prior year and were 49% lower than 2019. This has been facilitated by the switch to green energy contracts at key sites and also by the switch off of the Combined Heat and Power plant (CHP) at our manufacturing site in Cheltenham (UK), which led to a scope 1 emission reduction of around 2,000 tonnes CO₂e.

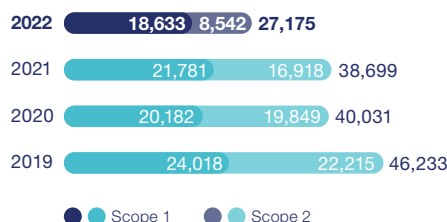
On a market basis, the UK accounted for 21% of our GHG emissions in 2022, with 5,763 tonnes being generated in total and an intensity of 16.2 tonnes per million pounds of inflation adjusted UK sales at constant currency. These emissions are comprised of 5,697 tonnes of scope 1 and 66 tonnes of scope 2 calculated using market-based emission factors. Our emissions in the UK decreased by 47% compared to 2021 due to the reasons outlined above for the Group as a whole.

Scope 3 emissions

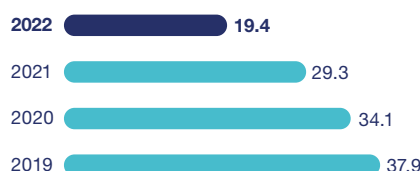
In 2022, we increased our capability in-house by employing a scope 3 carbon specialist and, together with a third-party consultant, we have been able to quantify our scope 3 value chain emissions at 27,300,000 tonnes CO₂e in 2021, which has become our scope 3 baseline year. This calculation relies heavily on estimations and assumptions due to the nature of scope 3 emissions and may be revised in the future as more accurate data becomes available. For more information about the assumptions made during this calculation see our Methodology Statement on page 58.

Our calculations found that the majority (over 98%) of our scope 3 emissions occur during the in-use phase of our sold products, with most of these coming from the Electric Thermal Solutions (ETS) Business, from products that are directly powered by electricity. As renewable energy production

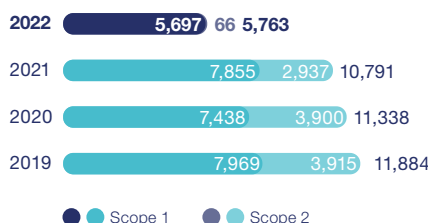
Group GHG emissions (scope 1 and 2) tonnes CO₂e (market-based)



Group GHG intensity tonnes CO₂e per £m of sales volume to third-parties (market-based)



UK GHG emissions (scope 1 and 2) tonnes CO₂e (market-based)



*From UK operations including inter-company sales, to reflect the fact that we manufacture in the UK for sale overseas into global markets.

increases globally our scope 3 emissions will decline. The greening of global electricity generation will therefore be critical for us to reach our 2050 scope 3 net zero target.

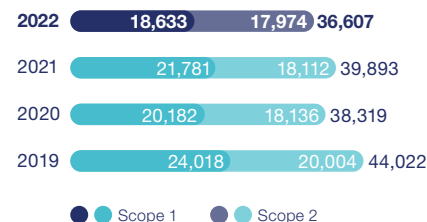
In December, we submitted our net zero targets to the SBTi and are awaiting approval of these targets.

Emission reduction initiatives

We completed a wide range of emission reduction initiatives across the Group in 2022. For example, our Spirax Sarco site in Blythwood (USA), relies on a natural gas boiler system to supply steam to the manufacturing floor for its operations. Historically, the boiler system has operated at full capacity during both work and non-work hours, resulting in unnecessary natural gas and water usage.

By ensuring that the boiler remains idle during non-work hours, including weekends, we are

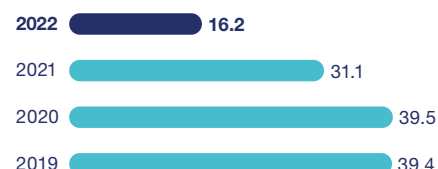
Group GHG emissions (scope 1 and 2) tonnes CO₂e (location-based)



Group GHG emissions (partial scope 3) tonnes CO₂e (well-to-tank and transmission and distribution)

9,893
2021: 10,927

UK GHG intensity tonnes CO₂e per £m of inflation adjusted sales at constant currency (market-based)*



able to save an estimated 460 tonnes CO₂e and 1,500 m³ of water per year.

Energy performance

In 2022, total Group energy use decreased by 4% against 2021 to 156,697MWh, and decreased by 10% on an intensity basis to 111.9MWh per million pounds of sales volume to third-parties (2021: 123.8). A large decrease in absolute energy for the Group is due to the switch off of the CHP at our Cheltenham manufacturing site. This has led to a decrease in stationary fuel use and an increase in electricity at that site, but increased efficiency has meant a significant reduction in Group energy due to this one site.

Energy use in the UK accounted for 33% of the Group's total usage in 2022, at 51,568MWh and decreased by 6% compared with 2021. On an intensity basis, UK energy use decreased 8% year-on-year,

Sustainability Report continued



Net zero carbon continued

to 145.3MWh per million pounds of inflation-adjusted UK sales at constant currency, including inter-company sales.

Energy management

An example of an energy management project undertaken in 2022 is at our Steam Specialties site in China. We have replaced all sodium street lights on the site with solar-powered LED alternatives, with an investment of nearly £20,000. This has led to a saving of more than 90% of energy used for this lighting, an estimated saving of over 50,000kWh annually. Activities in 2022 built on those reported in 2021 in the USA and the UK.

Following the acquisition of Cotopaxi, a global energy consulting and optimisation specialist in 2022, we commenced a project in Q4 2022 to install digital metering and monitoring across all of our Group manufacturing sites. Once complete, this will provide sites and the Group real-time data on electricity, gas and water consumption so that we can better understand where process efficiency can be improved and also more quickly react to potential anomalies.

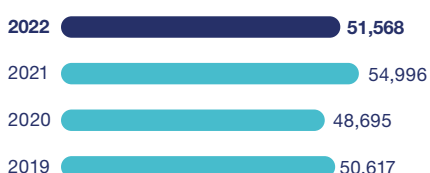
Alignment with UN SDGs



Group energy consumption MWh



UK energy consumption MWh



*From UK operations including inter-company sales, to reflect the fact that we manufacture in the UK for sale overseas into global markets

Group energy intensity MWh per £m of sales volume to third-parties



UK energy intensity MWh per £m of inflation adjusted sales at constant currency*



Focus for 2023

- Cheltenham (UK) manufacturing facility decarbonisation project to complete by end of 2023
- Investment in solar projects as per financial plan
- Energy reduction initiatives and process improvements planned
- Metering rollout as part of Cotopaxi partnership

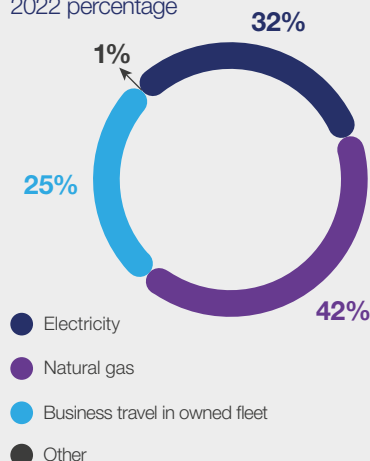
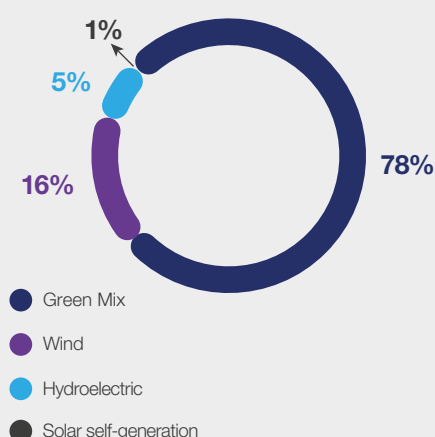
Methodology statement

We employ an 'operational control' definition to outline our carbon footprint boundary. Included within that boundary are manufacturing facilities, administrative and sales offices where we have authority to implement our operating policies. For all entities we have measured and reported on our relevant scope 1, scope 2 and partial scope 3 emissions for 2022.

We have used the GHG Protocol Corporate Accounting and Reporting Standard and emission factors from the UK Government's GHG Conversion Factors for Company Reporting 2019, 2020, 2021 and 2022 data from the International Energy Agency 2019, 2020, 2021 and 2022, ISO 140064-1, and regionally specific Environmental Reporting Guidelines to calculate our total CO₂e emissions figures on a location-basis.

To report under the market-based method we have used the GHG Protocol data hierarchy, striving for the highest precision possible. For sites with green energy contracts, we have obtained emissions factors for the relevant tariff and/or supplier in the first instance, using the residual mix where supplier-specific emissions factors (SSEFs) are not available. For sites without green energy contracts, we follow the data hierarchy and apply location-based factors only where SSEFs or residual mix are not available. When entering new green contracts, we apply SSEFs (where available) from the start of the year and do not restate prior years with SSEFs. No certified green energy contracts are included in our market-based figures for 2019 or 2020.

For more information please see our methodology statement on our website: www.spiraxsarcoengineering.com/sustainability/one-planet

Group energy source (scope 1 and 2)
2022 percentageRenewable electricity source
2022 percentage

Task Force on Climate-related Financial Disclosures (TCFD)

In accordance with Listing Rule 9.8.6R(8) we confirm that the following table contains disclosures consistent with the Task Force on Climate-related Financial Disclosures' recommendations and recommended disclosures. Our approach is fully aligned with seven of the 11 TCFD recommendations and partially aligned with four, which are:

Strategy b) describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning; and c) describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios.

Although we completed high-level, qualitative scenario analysis in 2021 for the Group, as well as a deeper dive assessment of physical climate-related risks to our Steam Specialties manufacturing sites in 2021 and 2022, we have identified scenario analysis as an area for further development. During 2023 we will undertake a quantitative climate risk assessment (under different warming scenarios) for both physical and transitional risks. After completion of this work we will have a quantified understanding of potential financial impacts on the Group, as well as by sector and geography.

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 process; and b) disclose scope 1, scope 2, and, if appropriate, scope 3 greenhouse gas (GHG) emissions, and the related risks.

We have reviewed the suggested cross-industry metrics and disclosed GHG emissions (scope 1 and 2) and link to remuneration. The remaining metrics are either not available or are deemed business-sensitive with the exception of internal carbon prices. Given the strong engagement with, and investments in, net zero initiatives across the Group, an internal carbon price is not needed. Throughout 2022, we used a third-party carbon accounting specialist to help us establish our scope 3 emissions for a baseline year of 2021. The work was completed in December and full scope 3 emissions for 2021 are reported on page 57. Scope 3 is highly complex and requires significant levels of estimations where data are not available. As we are still developing our data collection processes for scope 3, reliant on external support, it was not possible to calculate full scope 3 emissions for 2022 ahead of the reporting deadline. We have disclosed a partial scope 3 figure (category 3, B and C) for 2022, which can be found on page 57.

We will review our disclosures against the recommendations of TCFD on an annual basis, with the intention of further increasing alignment with these recommendations in 2023, following completion of quantitative scenario analysis, with full alignment anticipated by 2024.

Governance

Describe the Board's oversight of climate-related risks and opportunities

The Board is directly responsible for climate-change risk matters and is responsible for the overall stewardship of strategic risk management and internal control. The Audit Committee is also directly involved in the detailed review of risks, and reports back to the Board on its findings. During 2022 the Audit Committee received two risk management updates from the Risk Management Committee's Chair, and also reviewed the Principal Risks, as well as climate change's position on the Group Risk Register.

Our **One Planet: Engineering with Purpose** Sustainability Strategy is an important mechanism by which we seek to mitigate climate-related risks and maximise climate-related opportunities. The Board received five updates from the Group Director of Sustainability during 2022. This included updates on progress against metrics and targets and enabled the Board to be directly involved in climate-change matters.

Supporting customers on their decarbonisation journey is an important element of both our Steam Specialties and Electric Thermal Solutions business strategies. The Board also provides strategic oversight of these business strategies, ensuring that we are mitigating any market-based risks that could arise as a result of climate change.

Where sustainability, including carbon reduction investments, is part of a large CapEx proposal, these investments are directly approved by the Board.

Describe management's role in assessing and managing climate related risks and opportunities

The Risk Management Committee has responsibility for managing climate-related risks. Maurizio Preziosa, Managing Director, Steam Specialties and Andy Robson, Group General Counsel and Company Secretary had specific delegated responsibility for overseeing climate-related risks and mitigation activities in the first half of 2022. In May 2022, Sarah Peers, Group Director of Sustainability was invited to join the Risk Management Committee and assumed this delegated responsibility. In October, she also joined the Group Executive Committee to help to ensure that climate-related risks and opportunities are appropriately considered in management's day-to-day operational practices.

Under new responsibility within the Risk Management Committee and with the Group's additional focus on Sustainability, the risk was comprehensively reviewed and the Group Risk Register updated in 2022, resulting in the risk being further elevated in the Risk Register following similar rises in the previous two years. The Group Risk Register adopted the language of TCFD, recognising that climate change is not a singular risk, but a combination of physical and transitional risks that will emerge differently under different warming scenarios.

The updated risk was extensively discussed at Risk Management Committee meetings, to ensure Committee alignment and agreement on the definition and scope as well as the likelihood, impact, velocity and also the Group's appetite for the risk.

During 2022, the Risk Management Committee reviewed the Group's exposure to risk using a top-down approach, where the Committee sought views of Group companies on risks that the Committee considered may affect their businesses and to ensure that new or emerging risks were not missed. Following this process, the Committee reviewed and confirmed the robustness of the countermeasures that Group companies have in place to mitigate the risks contained in the Group Risk Register.

During 2022, management of the Group's climate change mitigation activities was overseen by the Board, the Group Executive Committee and the Group Sustainability Management Committee (GSMC) utilising the management structure outlined on page 51. The GSMC comprises the Group Director of Sustainability, the business Heads of Sustainability, Strategic Initiative and Strategic Project leads and other relevant individuals. Governance structures for risk management can be found on page 94.

Management oversight of climate-related risks and opportunities is embedded within the **One Planet: Engineering with Purpose** Sustainability Strategy and within our core business strategies. Through those strategies, the Group Executive Committee and Business Executive Committees consider climate-related risks, opportunities, strategic implementation and progress against targets.

Task Force on Climate-related Financial Disclosures (TCFD)

continued

Strategy

Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long-term

Acute physical risks

- Acute physical risks are event-driven and could arise in the short term (1-5 years) but could also materialise in the medium- (5-10 years) and long-term (10+ years)*. All businesses and many of the Group's operating locations are exposed to a degree of risk from extreme weather events, with no one geographical region at a materially higher risk than others within the Group's operations. The risk is believed to be low across most sites, based on the likelihood and impact of these risks. Examples of such risks at our sites include river flood and flash flood.
- The velocity of extreme weather events is high, but the likelihood is deemed to be relatively low. Under higher warming scenarios, the likelihood of an acute physical risk occurring may increase for some of our sites. The post-mitigation impacts are also deemed to be relatively low.
- Some suppliers could be at risk from an extreme weather event, which has the potential to disrupt our supply chain.
- Acute physical risks are managed through our Principal Risks 4 (Loss of manufacturing output at any Group factory) and 6 (Loss of a critical supplier). To mitigate risk, annual risk assessments are conducted by our insurance partner and we have appropriate insurance cover. Business continuity planning and capacity planning is in place to ensure we have spare capacity at alternative sites and stock is held locally in sales companies. For key commodities, where possible, we seek to maintain dual sourcing to negate the risk from the loss of a critical supplier. For more information about the management of these Principal Risks, see pages 97 to 98.

Chronic physical risk

- Chronic risks arise from longer-term changes in climate pattern. A very small number of our sites have been identified as having a potential risk from coastal flooding in the long term.
- Chronic physical risks are currently managed in a similar way to acute physical risks.

Market transition risks/opportunities

- Increasing availability of green energy could enable electric heating solutions to replace fossil-fuel derived steam generation where carbon emission concerns override cost differences in the medium- to long-term (5 years+). This will provide opportunities across all geographical regions and most customer sectors for our Electric Thermal Solutions and Steam Specialties Businesses as these businesses combine to electrify the generation of steam.
- As market-leaders in the provision of thermal energy solutions, mitigating this risk and maximising the opportunity is deeply embedded in the core business strategies of both our Steam Specialties and Electric Thermal Solutions Businesses. This risk is mitigated through Principal Risk 8 (Inability to identify and respond to changes in customer needs). Mitigation includes regular voice of customer research and Research & Development / New Product Innovation, to lead the way in providing innovative solutions to customers. For more information about the management of this Principal Risk, see page 99.

Technology transition risks/opportunities

- New low carbon technologies and energy mix for steam generation could impact the purchasing decisions of steam users who have previously raised steam using fossil-fuel fired boilers. However, this is largely deemed an opportunity for the Group as we are developing first-to-world technologies and innovative decarbonisation solutions.
- This risk is mitigated through Principal Risk 8 (Inability to identify and respond to changes in customer needs) and offering increasingly innovative decarbonisation and sustainable solutions to our customer, such as the new **TargetZero** range of products including SteamBattery, Electrofit and SteamVolt, which were released in 2022. More information can be found on page 80.

Reputation transition risks

- Risk of reputational loss of Spirax-Sarco Engineering as a top performing, environmentally sustainable business due to association with fossil-fuel reliant systems over the medium- to long-term (5 years+).
- This very low risk is mitigated by our strong reputation, innovative product developments, introduction of our Natural Technology marketing strategy that correctly positions steam as a sustainable technology and our own leading net zero commitments and progress against them.

Policy and legal transition risks

- Potential financial risk from carbon taxation, the low-carbon vehicle transition and low-carbon building efficiency requirements, over the medium- to long-term (5 years+)
- This risk is mitigated through our One Planet Strategy, which includes net zero targets, energy reduction commitments, major decarbonisation projects and conversion to an electric vehicle fleet.

Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning

Growing awareness of climate change and customer sustainability targets will continue to provide an impetus for business growth as we provide products, services and solutions that increase efficiency and reduce customers' energy use and carbon emissions. To mitigate the risks outlined above, our One Planet Sustainability Strategy informs our business strategies and provides focus to advance the development of products and services that help our customers to achieve their carbon reduction targets, with a focus on voice of customer and understanding customer needs. This, in turn, helps us to manage reputational risk by ensuring we're driving down our own emissions, in line with our commitments to the Science-Based Targets initiative (SBTi) and the UN Global Compact.

Each of our three businesses incorporates sustainability in their business strategies, Customer first², Engineering Premium Solutions and Strategy25. This has resulted in the **TargetZero** synergy projects between Steam Specialties and Electric Thermal Solutions.

As part of our financial planning process, we have an annual financial plan for sustainability. When considering sustainability investments, we prioritise initiatives that deliver the best value of £/t CO₂e saved. In 2022, we developed and commenced implementation of net zero roadmaps across our manufacturing sites.

In December 2022, we formally submitted our net zero targets for scopes 1 and 2 by 2030 and scope 3 by 2050 to the SBTi for approval. More information about our net zero roadmap can be found on page 56.

*1-5 years aligns with the Group's assessment of Going Concern and Viability, as well as strategic planning. 5-10 years aligns with our 2030 net zero commitments. 10+ allows for a longer-term view and the emergence of different warming scenarios.

<p>Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario</p>	<p>With customers in almost all industries worldwide and across 165 countries, steam remains the world's most efficient heat transfer medium for a wide range of applications, with multiple onsite uses from the production of foods, beverages and medicines, to the generation of power. Our steam solutions are complemented by our Electric Thermal Solutions product and service offering. We thus have a highly resilient business that will remain relevant across different climate-related scenarios.</p> <p>High-level Group-wide scenario analysis was completed in 2021, including a 2°C or lower scenario and a 4°C scenario, and a third-party climate risk resilience assessment was completed for Steam Specialties manufacturing sites in 2021. Building on that risk assessment, during 2022 two Spirax Sarco manufacturing sites underwent a more detailed physical risk assessment on-site.</p> <p>During 2022, we undertook a tender process to identify a third-party to support quantitative climate risk analysis (under different warming scenarios) for both physical and transitional risks. This will enable us to determine which risks and opportunities could have a material financial impact on the organisation. A partner was selected and a schedule of work agreed, to be undertaken in 2023.</p> <p>As part of our annual viability assessment, we undertake scenario risk modelling focussing on stress testing the Income Statement and Cashflow projections to determine the resulting impact on the Group's debt covenants and liquidity headroom, to ascertain the potential revenue or adjusted operating profit impacts that could arise from a single, or combination of, the Group's Principal Risks. The key risks associated with climate change are likely to manifest through three of our Principal Risks (Risks 4, 6 and 8). Modelling completed as part of our viability assessment suggests that our Principal Risks do not pose a significant threat to the viability of our Group, therefore management believes that this also applies to climate risk. For more information see pages 133 and 142</p>
<p>Risk management</p>	<p>Describe the organisation's processes for identifying and assessing climate-related risks.</p> <p>The Risk Management Committee holds annual top-down or bottom-up reviews, that provide information and evaluations that the Committee uses alongside our risk impact, likelihood, appetite and velocity ratings to create an effective system for assessing materiality, monitoring, planning and developing our Group-wide approach and culture regarding risk.</p> <p>The Risk Management Committee performs a scoring exercise each year against all our documented risks, assessing impact, likelihood, control, velocity and appetite for each risk. Each member of the Committee scores each risk and the scores are reviewed, discussed and assessed compared to the other risks. This process is used to assign the Principal Risks and position of each risk on the Register. Existing and emerging regulatory requirements related to climate change are considered as part of this review.</p> <p>Risk velocity was deliberated and approved as a further measure in our Group's risk management framework in 2022. Risk velocity ratings were assigned and validated for all Principal Risks, as set out on pages 95 to 99, and other risks on the Risk Register, including climate change.</p>
<p>Describe the organisation's processes for managing climate-related risks.</p>	<p>Climate change-related risks are currently deemed to be low for the Group (based on assessment of likelihood, velocity, impact and control) and climate change is not identified as a Principal Risk on the Group's Risk Register. However, a number of the key risks associated with climate change, such as physical risks – notably the impact of a climate-related event on our direct operations, specifically the loss of a manufacturing site, or on a critical supplier – and transition risks – such as failure to meet changing market needs, are already managed through other Principal Risks on the Group Risk Register. Thus, we believe that our risk management processes are adequate and appropriate for the level of risk as applicable to our Group.</p> <p>For more information about how we manage risk, see the Risk Management Committee report on pages 139 to 142.</p>
<p>Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management</p>	<p>In 2022, a top-down risk review was undertaken, the Committee received high quality input from its Group operating companies and determined that they have sufficiently robust measures in place to effectively mitigate the Group's Principal Risks (and the associated climate-related risks). The top-down risk review informed the annual review, validation and update of the Group Risk Register. For more information please see page 93.</p> <p>Climate change is a risk factor that influences other risks, so control of climate risk is embedded in and managed through other Principal Risks, particularly Risk 4 (Loss of manufacturing output at any Group facility), Risk 6 (Loss of a critical supplier) and Risk 8 (Inability to identify and respond to changes in customer needs).</p> <p>Climate change has risen in position in the Risk Register over the last few years to position 9 following similar rises in the previous two years. It is considered a serious, emerging risk though not currently one of the Group's Principal Risks.</p>
<p>Metrics and targets</p>	<p>Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process</p> <p>See the following pages for absolute and intensity metrics related to:</p> <ul style="list-style-type: none"> • Greenhouse gas emissions – 57 • Energy use – 58 • Waste and water – 63 to 64 • Customer environmental benefits – 65 <p>In 2022, Group greenhouse gas emissions (scope 1 and 2) were established as a Group Key Performance Indicator (KPI) to measure successful progress against our strategy. See page 35 for more information on our KPIs.</p> <p>In addition, internally we monitor a number of opportunity metrics, for example the customer decarbonisation opportunities' pipeline in the Electric Thermal Solutions Business and metrics related to the launch of our TargetZero products.</p>
<p>Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks</p>	<p>Scope 1, Scope 2 and Scope 3 disclosures can be found on pages 56 to 57.</p> <p>During 2022, we used a third-party to help us quantify a full scope 3 baseline figure for 2021. This figure was calculated using acceptable scope 3 methodologies, but is heavily reliant on estimates and may be changed in the future as data availability and accuracy improves.</p> <p>For more information about the methodology we use to calculate our scopes 1, 2 and 3 emissions and customer savings metrics, see page 58 and a more detailed methodology statement on our website: www.spiraxsarcoengineering.com/sustainability/one-planet.</p>
<p>Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets</p>	<p>See the following pages for targets related to:</p> <ul style="list-style-type: none"> • Net zero carbon and energy use – 56 • Biodiversity net gain – 62 • Environmental improvements in our own operations – 63 • Sustainable products – 65 • Sustainable supply chain – 66 <p>Reflecting the central importance of the Group-wide One Planet Sustainability Strategy to all of our forward-looking plans, the measures for the 2022 Performance Share Plan (PSP) changed to include a sustainability measure accounting for 20% of the PSP opportunity, dependent on reduction of greenhouse gas emissions (scope 1 and 2) over three-year periods. For more detail see page 147.</p>

Sustainability Report continued



Biodiversity net gain



Biodiversity initiative

At Watson-Marlow in Ireland, we are supporting the planting of native forests in the southwest of the country. In partnership with Veon Ltd and also partially funded by the Department of Agriculture, this project will create a long-term biodiverse habitat replacing ash woodlands that succumbed to ash dieback. The native trees, such as oak, birch, rowan and alder will create biodiverse habitats for native Irish species such as red squirrels, stoats and endangered bird species. The first phase of the project will plant 15,000 trees and 2,500 tonnes of CO₂ are predicted to be sequestered by the forest over its lifetime.

The global decline of biodiversity is something which will affect all of us. Biodiversity is essential to support all life on our planet, which depends on a network of complex interactions between plants, animals and micro-organisms to properly function. When we developed One Planet, we recognised that we have a responsibility to address this decline and use the strategy as an opportunity to engage our colleagues and our communities in this important objective.

Key strategic targets

- Deliver a biodiversity offset equivalent to five times our global operational footprint by 2025
- Deliver biodiversity net gain* of +10% for all new manufacturing sites and facilities
- Deliver at least one biodiversity initiative per operating company, on site or in the local community by 2025

Alignment with UN SDGs



Progress

In 2022, we continued our partnership with the World Land Trust that we began in 2021. We completed our second phase of investment, funding the protection of an extra 567 acres of land on the Somuncurá plateau in Argentinian Patagonia, equivalent to our operating footprint including the footprint of our new acquisitions, Cotopaxi, Vulcanic and Durex Industries.

We also increased our focus on our own operations, with the launch of our new in-house Biodiversity Portal, which enables us to track biodiversity initiatives implemented by our operating companies. By the end of the year, 97 initiatives had been completed on our sites, with 47% of operating companies delivering at least one biodiversity improvement on site or in the local community since the strategy launch in 2021.

During 2022 we partnered with a third-party ecologist to assess progress against our 10% biodiversity net gain target for our two new sites BioPure (UK) and Thermocoax (France). A wide range of biodiversity enhancement initiatives have been implemented at these sites, however, we haven't yet reached our 10% net gain target, so work will

continue in 2023 to ensure the delivery of 10% biodiversity net gain before 2025. We recognise that biodiversity impact doesn't only apply to our direct operations, so in 2022 we completed high-level hot spot analysis of biodiversity impacts in our supply chain and intend to build on this information in 2023 to increase our understanding of supply chain impacts and to inform future strategic planning.

Focus for 2023

- Make progress against our 10% biodiversity net gain target for recently completed and new or ongoing major site development projects
- Embed biodiversity questions into our assessment of suppliers via the Supplier Sustainability Portal
- Continue to strengthen our partnership with the World Land Trust

*Quantification of net gain will be focused on large development projects, where locally-specific net gain methodologies will be applied, similar in approach to the UK's DEFRA methodology



Environmental improvements

The way we manage resources in our own operations is one of the most direct ways through which we can lessen our impact on the environment. By ensuring that we are operating efficiently we can preserve resources, reduce our carbon footprint and minimise pollution of the natural world.

Our focus on water efficiency, waste reduction and elimination of solvent-based paints ensures that we are controlling how we use resources and dispose of waste responsibly to protect the environments where we live and work.

Key strategic targets

- Reduce water consumption by 15% (compared to 2019)
- Achieve zero waste to landfill
- Reduce waste generated by our sites by 10% (compared to 2019)
- Eliminate solvent-based paint (unless mandated by customer requirements and with Executive Committee approval)
- All manufacturing sites certified to ISO 14001 standard or equivalent

Progress

In 2022, we focused on accurately assessing current performance and identifying future actions to enable us to meet our 2025 targets. Waste and water actions plans have been rolled out across our sites globally, with 113 of 131 operating companies, excluding 2022 acquisitions, having initiated reduction plans in 2022. To effectively reduce water use, we must first be able to accurately monitor where it's being used. We have improved monitoring, with five smart water meters installed in 2022 in sites where we previously had no access to data.

Of our 30 manufacturing sites, excluding recent acquisitions in Cotopaxi, Vulcanic and Durex Industries, 21 are currently certified to ISO 14001. In 2022, we developed implementation plans for those locations still requiring certification and are confident in our ability to gain this at these sites by the end of 2025. None of the 11 new manufacturing sites acquired at the end of 2022 currently have ISO 14001. Achieving certification at these sites will also become a priority from 2023 onwards, but may not be completed by 2025.

Water

The water usage was verified by TÜV NORD CERT GmbH in accordance with International Standard on Assurance Engagements 3000 – 'Assurance engagements other than Audits or Review of Historical Financial Information' (ISAE 3000), regarding its correctness and completeness for Spirax-Sarco Engineering plc.

"Acting as an independent Certification Body TÜV NORD CERT GmbH has verified the water usage of the organisation, for the reporting period 01.01.2022 – 31.12.2022 (inclusive) to be 203,796,350 litres.

Based on the reasonable assurance procedures we have performed and the evidence we have obtained, the selected water consumption for the year ended 31st December 2022, is materially correct and a fair representation of the Selected Information for the reporting period.

TÜV NORD CERT GmbH, February 2023."

In 2022, disappointingly, we saw a material increase in water consumption compared to 2021 of 21% to 203,796m³. Five principal causes have been attributed to the increase in water use in 2022: business growth; significant water leaks at a small number of sites; the setting up of new manufacturing sites (BioPure, UK and Thermocoax, France) which required additional water use for cleaning and other start-up processes; the construction of our new global headquarters in Cheltenham, which required the use of water to damp down dust during demolition; and increased occupancy at our office buildings due to the post-COVID-19 return to the workplace. The largest increase occurred at our Cheltenham (UK) manufacturing site where we saw an increase of 30% in 2022 compared to 2021, due largely to an underground mains water leak.

This has reaffirmed our need for access to accurate, real-time usage data. We have committed to an investment working with Cotopaxi to install digital metering and monitoring at all of our Group manufacturing sites by the end of 2023.

Against our 2019 baseline, absolute water use increased by 12%. On an intensity basis, water use increased by 14% compared with 2021, with an overall reduction in intensity of 3% compared to our 2019 baseline.

Waste

Our global operations generated 6,513 tonnes of waste in 2022, which is an increase of 4% from the previous year. On an intensity basis, we saw a 2% decrease in waste generated at 4.7 tonnes per million pounds of sales volumes to third-parties. While initiatives to reduce waste production are being implemented, these take some time to show a positive effect in the volumes produced and currently waste increase as a result of production growth is outpacing these initiatives to reduce waste. Waste reduction will continue to be a focus in 2023. We have continued to increase the proportion of waste that is diverted from landfill globally, with 90% of our waste recovered, recycled or used to generate electricity in 2022 (2021: 88%).

We initiated a review of our global waste collection providers which has been completed in the UK. Over time, we aim to ensure that our waste vendors are better able to provide accurate and timely data.

Solvent-based paint

Working with an external consultant, we have developed an internal tracking method to measure progress and VOC emissions associated with the painting process. From this project we have been able to determine that 24 of our sites are currently using some solvent-based paint.

We have established a cross-business working group to share best practice and progress, and disseminate information about paints across the Group. During 2022, the group focussed on identifying aqueous-based paints available as an alternative. Each business has formed a dedicated team to manage transition at their locations.

Pilot transition projects in Watson-Marlow Bredel (Netherlands) and Spirax Sarco's Cheltenham (UK) site have helped us to understand the steps needed to transition to aqueous-based paint options. Representatives from these sites are part of our central working group.

Sustainability Report continued



Environmental improvements continued

Water reduction initiative

At our Chromolox site in Ogden, Utah (USA), we have taken actions to improve the efficiency of our hydro testing processes. This test involves filling a pressure vessel with water and pressurising it to check for leaks, which is water intensive.

Improvements implemented in this process have helped to contribute to a 7% reduction in water use at this site compared to 2021. We are now hoping to repeat this success across other manufacturing sites.

Alignment with UN SDGs

6 CLEAN WATER AND SANITATION

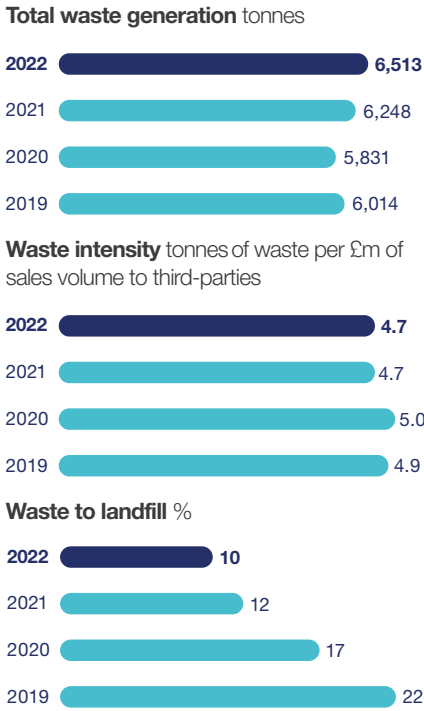
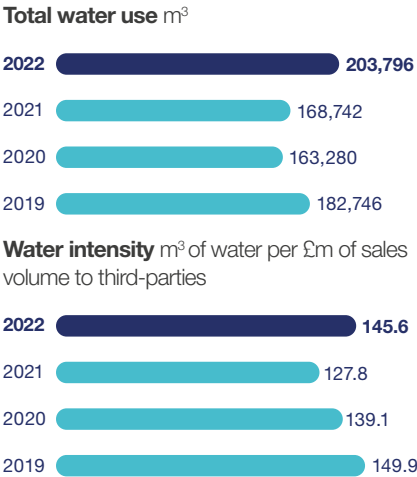
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

11 SUSTAINABLE CITIES AND COMMUNITIES

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Focus for 2023

- Roll out digital posters for waste and water reduction activities to be displayed at our manufacturing facilities to raise awareness
- Roll out automated water meters at all manufacturing sites in partnership with Cotopaxi
- Focus on internal education and awareness of colleagues on actions and initiatives to drive engagement





Sustainable products

To keep global temperature-rise to a level of 1.5°C or below, businesses must work together to lower carbon emissions in their own operations and wider value chain. The most important way we engineer our difference for our customers and the environment is through the products and solutions we provide that help our customers to increase the efficiency of their operations. Sustainability for our customers has always been central to our Company Purpose, as we work to engineer a more efficient, safer and sustainable world.

Many of the products and services we offer help our customers to manage their sustainability impacts and lower their energy and carbon use. However, as recognised in our scope 3 quantification project, as many of our Electric Thermal Solutions (ETS) Business products consume energy, use-phase emissions related to these products is the highest contributor to our scope 3 emissions. These emissions are derived from electricity use and will decrease over time as electricity grids become more green globally as the world transitions towards renewables.

We will continue to innovate in our product design and increase sales of products that have the greatest quantifiable sustainability benefits.

Key strategic targets

- Quantify the whole life cycle carbon footprint and sustainability benefits of selected existing and new products
- Grow sales of products with quantifiable sustainability benefits to customers
- Eliminate all virgin, non-recyclable or non-biodegradable packaging by 2025 at the latest, unless specified by customer requirement

Progress

Within the Steam Specialties Business, we are particularly focussed on improving efficiency and reducing energy use for our customers. We have been reporting quantified sustainability benefits from a small range of product categories in Steam Specialties for a number of years, using a methodology established in a partnership with Ricardo Energy & Environment. In 2022, we expanded this methodology to include boiler-level controls and heat exchangers and, for the first time, added products from Watson-Marlow and ETS. In Watson-Marlow,

Customer environment benefits

Annual estimated customer CO₂, energy and water savings from a select range of 20 product categories sold in 2022



17.7m
tonnes of CO₂
per year



235m
GJ per year
of energy



88.4m
m³ per year
of water

To put these savings into context, that is the equivalent of:



804m
mature trees
absorbing CO₂



3.00m
people's annual
average energy
consumption
(UK)



35,000
Olympic-sized
swimming
pools of water

we have developed the methodology to quantify the benefits for Certa Pumps and in ETS for our new **TargetZero** products SteamVolt, ElectroFit and SteamBattery. While sales of these new product ranges, and therefore measured impacts for our customers, are currently small they offer a significant potential for customer environmental benefits as they become more established.

While these innovative new products will help decarbonise steam generation, energy efficiency and improvements to customer operating efficiency have been at the core of our offering to customers for over a century and will continue to be so. Our ability to walk our customers' plants, identify efficiency opportunities and provide products or engineered solutions to improve operating efficiency and hence sustainability, remains at the core of what we do.

In 2022, we built on the screening exercise completed in 2021 to develop a life cycle assessment (LCA) model with a third-party specialist for our Steam Specialties and ETS Businesses, with initial LCAs being conducted in these businesses. In our Watson-Marlow business we recruited an LCA specialist and purchased LCA software to complete these analyses in house. In 2022, two LCAs were completed in Watson-Marlow and we expect this number to increase in 2023.

As part of our new product development (NPD), we have trialled a Group-wide eco-design template and started to tailor this for the NPD processes in the three Businesses, using existing frameworks and best practice to share learnings across the Group. We have also established a Group-wide working group for sustainable packaging, with representatives from each Business, utilising expertise from our 2021 pilot project in our Cheltenham (UK) manufacturing site.

Focus for 2023

- Continued expansion of our customer environmental benefits model
- Further embed LCA methodology with two LCAs targeted in each business
- Continue to embed eco-design methodology into product design and development processes, utilising LCA results

Alignment with UN SDGs



Sustainability Report continued



Sustainable supply chain

In our supply chains, we have a responsibility to develop and educate our suppliers on sustainability and to build mutually-beneficial, long-term partnerships. As we continue to progress in our ambition of becoming a leader in industrial sustainability, we aim to work with our suppliers to further raise standards.

We require our suppliers to meet these standards including committing to operate in accordance with law, conduct business in a way that is fair and adheres to human rights principles and encourage them to take steps to mitigate their environmental impact.

Key strategic target

- 80% of strategic and high-risk suppliers assessed and meeting or exceeding updated sustainability standards by 2025

Progress

In June 2022, we launched our new third-party Supply Chain Sustainability Portal (Portal), with an initial phase one rollout to 512 suppliers. The Portal will form the foundation of our supplier sustainability monitoring processes and, once fully deployed, will contain our high-risk and strategic suppliers and allow us to monitor their compliance with our Supplier Sustainability Code (Code) and our sustainability standards more broadly.

The Portal allows us to have greater transparency and evidence for sustainability standard compliance and a closer working relationship with these suppliers. It also affords us improved understanding of risk, improved visibility across the business and provides a basis to have focussed continuous improvement actions with our suppliers.

We will use the Portal to identify areas where the supply chain is performing well and also highlight opportunities for development. While still in an early phase of deployment, we have already seen responses from 20% of suppliers in the Portal on ESG topics.

The Portal allows for indirect monitoring of a wider number of our suppliers (currently over 1,200) and alerts us to potential breaches which we can then investigate. In 2022, issues of relevance that were identified included H&S concerns and environmental incidents. None of the potential breaches were deemed to be of material concern, but they have been identified as a risk with those suppliers and we will look for repeat incidences which could demonstrate a pattern of poor standards and trigger further action.

This year we have updated and relaunched our Code, to reflect a further increase in expected standards. The new Code for direct

suppliers was translated into 17 languages and communicated to procurement colleagues working at our manufacturing sites in each business. Suppliers using our Portal will be able to sign the Code in the Portal and provide evidence of the ways in which they are meeting our requirements. Suppliers outside of the Portal will be tracked through an in-house app which has been developed to improve oversight and reporting and to allow us to track Code signatures. Due to the introduction of these new systems, the number of suppliers that have signed our Code utilising the new processes was 30% at the end of the year (96% in 2021) as we work to transition our suppliers to this new way of working.

Our Portal also allows our colleagues and suppliers to access a library of training courses. This third-party content is available free-of-charge on a wide range of sustainability topics for suppliers to upskill their teams and use the knowledge to help improve their sustainability performance.

Occasionally, it is necessary that we cease working with suppliers if they are unwilling to sign the Code, or if their standards fall short of those required and they are unwilling or unable to improve. In 2022, we exited seven suppliers under these conditions.



Focus for 2023

- Incorporate the next phase of suppliers into our Supplier Sustainability Portal rollout
- Work with suppliers to improve response rates and begin to assess results
- Develop biodiversity, community engagement, diversity and inclusion modules for the Portal

Alignment with UN SDGs





Supporting our communities

As a Group, we have committed to increasing the wellbeing of people in our communities, while addressing global sustainability challenges such as poverty, hunger, access to education, inequality, climate change and biodiversity loss.

In the 67 countries in which we operate globally, we want to make life better for the people in our communities. Through charitable donations and colleague volunteering we are able to share our resources and expertise to meet local needs, improve access to education and support longer-term economic wellbeing so that our communities will be stronger and more resilient now and in the future.

Key strategic targets

- Deliver 150,000+ hours (cumulative) of colleague volunteering globally by 2025
- £2 million of cash or in-kind donations (cumulative) made by our Group Companies by 2025
- Establish a Group Education Fund and donate at least £5 million by 2030

Progress

Group Education Fund

Having established the Spirax-Sarco Engineering Group Education Fund in late 2021 and funded it with a £1 million donation, in 2022 we began accepting applications and making donations. Operating companies are able to identify local education needs and apply to the Group Education Fund for grants to support projects addressing these needs. The applications are reviewed by the Group Education Fund's trustees and the grants and projects are then administered locally by our operating companies.

In this first year of donations, we successfully funded 51 projects from 43 operating companies totalling over £1 million. Examples of the projects include supporting activities and programmes for disadvantaged

Ukraine

As a response to the conflict, Ukraine was a point of focus for charitable giving in 2022. After an initial donation of £100,000 from the Group Charitable Fund, we launched a colleague matched-giving appeal. As well as making direct cash donations, colleagues engaged in local collections for essential supplies and donated time to sort, pack and distribute these supplies. The total value of cash and in-kind donations raised locally by colleagues amounted to over £90,000 which we then matched, making the full amount donated through the matched giving appeal £183,815 and a total donation to the people of Ukraine of £283,815.



young people from favelas in Brazil, providing funding for a five-month training course for neurodiverse students to prepare them to enter the labour market in Italy, and funding interior contents and finishing for a new school for children from rural farming families in the Philippines. Read about how we engineered our difference in our communities in our case studies on pages 68 to 71.

Group charitable donations

Including the donations to the Ukraine Appeal during 2022, the Group Charitable Fund donated £572,000 to charitable causes, an increase of 66% from 2021. Some of these donations include: £13,000 to the

Kaleidoscope Trust to advance rights for LGBTQ+ people across the Commonwealth; £10,000 to Young Enterprise to equip young people with skills, knowledge and confidence to succeed in the world of work; and £15,000 to Cheltenham Open Door in the UK to provide food, shelter and essential services to people living in poverty and experiencing homelessness.

Operating company charitable donations and volunteering

In 2022, we developed and launched a new internal reporting platform to more accurately capture and record volunteering activities and cash and in-kind donations from our operating companies.

Colleague volunteering hours doubled in 2022 compared to 2021, totalling 22,000+ hours of company time spent volunteering. Our operating companies donated £349,600 to charitable causes, in cash or in-kind (non-cash) donations during 2022.

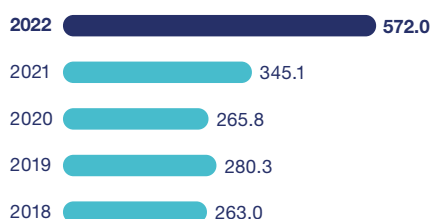
Focus for 2023

- Further increase volunteering hours and colleague participation
- Donate an additional £1 million through the Group Education Fund and continue to support additional projects
- Track impacts of Group Education Fund projects supported in 2022

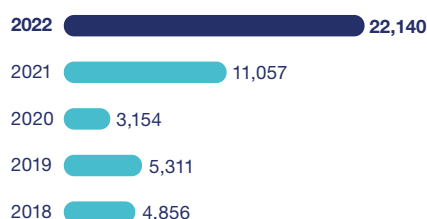
Alignment with UN SDGs



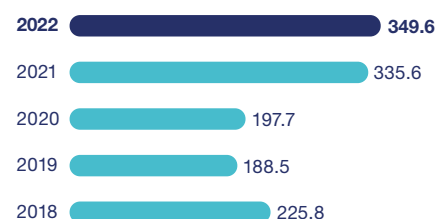
Group Charitable Fund donations £'000



Volunteering hours



Operating Company cash/in-kind donations £'000



Engineering our difference in local communities

We give our support...

A young girl with dark skin and short, curly hair is smiling broadly, looking towards the left. She is wearing a maroon sweater over a white collared shirt. She is sitting at a desk with a large stack of books in front of her. Her hands are resting on the books. The background is slightly blurred, showing other students in a classroom setting. A large, thick orange circular graphic is overlaid on the image, partially framing the girl. A white line also extends from the right side of the image towards the center.

51

projects were successfully nominated by our colleagues with over £1 million donated from our Group Education Fund in 2022.



...where it is needed the most.

Giving Today for a Better Tomorrow

Around the world, there are people living in poverty, people who are hungry, who lack access to education or suffer from inequality. People and nature are being impacted by climate change and biodiversity loss.

Our Group is united behind our **Giving Today for a Better Tomorrow** community engagement programme. Whether through the work of our colleagues using their paid volunteering days, locally

funded community initiatives or by nominating projects to benefit from our Group Education Fund, we are addressing local needs today, so that our communities will be stronger and more resilient tomorrow.

During 2022, our efforts helped underprivileged and disadvantaged young people, older people and people living with a disability. We helped the people of Ukraine through cash and in-kind donations and we initiated projects to improve biodiversity and the environment.

Group Education Fund

Our Group Education Fund was established at the end of 2021 to improve access to education, tackle poverty through education, remove barriers and inequality, and improve diversity in engineering. In its first year the Fund donated over £1 million to 51 projects identified by colleagues and managed by our local operating companies around the world. Read on to find out about some of the projects that have benefited so far.

Engineering our difference in local communities continued

Our Group Education Fund:

Brings schools closer to communities.



Our team from Spirax Sarco Egypt successfully secured a £50,000 donation from the Group Education Fund to build a new community school in Fayoum, helping improve access to education for children living in rural areas.

Working in partnership with the Man Ahyah organisation the donation will improve access to education for local children that drop out of school due to difficulties of getting to school because of the distance they have to travel.

“I feel proud to work for an organisation that provides me with the opportunity to give back to my community and local environment. It keeps me motivated and warms my heart.”

Rana Mohamed
Operation Leader for Spirax Sarco, Egypt

Serves up a hot meal before lessons.



Many children in East Africa must walk long distances to school and when they arrive they are often tired and hungry.

To tackle this challenge and to help children get the best out of their time at school, our team in Spirax Sarco East Africa applied to the Group Education Fund and received over £7,000 per year for three years to help local children in Nairobi living in extreme poverty. The funding created ‘the porridge programme’ which means 110 children will benefit from a hot breakfast every day for the next three years. For some children this will be the only meal they have in a day.

“Through our programme we want to restore hope and dignity.”

James Mburu
General Manager, Spirax Sarco, Kenya



Inspires the next generation.



Our Watson-Marlow Business is partnering with TECwomen, an organisation working to ignite a passion for Technology, Engineering and Creativity in girls and women, to deliver an annual programme of education events in Cornwall, UK. Events have included school workshops and the successful launch of a DigitalUPLIFT training course for a cohort of 35 women, helping them to access career opportunities in Science, Technology, Engineering and Maths (STEM).

After the 'Take Up Space' event that involved game design, coding, and stop-motion animation, 53% of attendees said they were now more interested in a career in space or engineering.

“The programme will help inspire more girls and women in Cornwall (UK), to embark on careers in technology and engineering, by improving access to education in these fields.”

Lauren Gill
Global PR Manager, Watson-Marlow, UK

Removes barriers to education.



Practical support for schools and colleges can make a real difference to the quality of education that pupils receive.

Recognising this, our Thermocoax team in France applied to our Group Education Fund for a grant to support an exchange project at the National Graduate School of Engineering of Caen and Research Center (ENSICAEN). Complementing what was already being done by the college to improve access to education, the project connected high school students from rural communities with students attending ENSICAEN.

The grant funded the purchase of portable scientific kits and equipment used to help the engineering students demonstrate their science-related projects to the high school pupils. Through the project students living outside the city are given an opportunity to learn more about science, with the aim of encouraging them to embark on a career in engineering.

“We wanted to give students living far from the cities more opportunities to embark on a career in engineering.”

Nadine Lauret
Marketing & Digital
Communication Manager,
Thermocoax, France

Non-financial information statement 2022

This Annual Report and in particular the Sustainability Report, contains the information required to comply with the Companies, Partnerships and Groups (and Non-Financial Reporting) Regulations 2016, as contained in sections 414CA and 414CB of the Companies Act 2006. The table below provides key references to information that, in conjunction with the Sustainability Report, comprises the Non-Financial Information Statement for 2022.*

Reporting requirement	Group Policies that guide our approach	Information and risk management, with page references
Environmental matters	<ul style="list-style-type: none"> Group Environmental, Health, Safety, Energy and Sustainability Policy Group Management Code Supplier Sustainability Code 	Sustainability Report, pages 46 to 47 and 56 to 66 Principal Risks, pages 95 to 99 Our business model, pages 22 to 23 Section 172 Statement, pages 11 and 111 to 113 Company Purpose, inside front cover and page 102
Employees	<ul style="list-style-type: none"> Group Diversity and Inclusion Policy Group Management Code Group Human Rights Policy Group Environmental, Health, Safety, Energy and Sustainability Policy 	Sustainability Report, pages 48 to 56 Our business model, pages 22 to 23 Colleague Engagement Committee Report, pages 114 to 117 Section 172 Statement, pages 11 and 111 to 113 Company Purpose, inside front cover and page 102
Social matters	<ul style="list-style-type: none"> Group Human Rights Policy Group Charitable Donations Policy Group Employee Volunteering Policy Supplier Sustainability Code 	Sustainability Report, page 67 to 71 Our business model, pages 22 to 23 Section 172 Statement, pages 11 and 111 to 113 Company Purpose, inside front cover and page 102
Respect for human rights	<ul style="list-style-type: none"> Group Human Rights Policy Modern Slavery Statement Supplier Sustainability Code 	Sustainability Report, page 66 Principal Risks, page 99 Risk Management Committee Report, page 140
Anti-corruption and anti-bribery matters	<ul style="list-style-type: none"> Group Anti-Bribery and Corruption Policy Group Gifts, Entertainment and Hospitality Policy Group Competition Law Compliance Policy Group Whistle-Blowing Policy Supplier Sustainability Code 	Sustainability Report, page 51 Principal Risks, page 99 Risk Management Committee Report, page 140
Description of the business model		Our business model, pages 22 to 23
Description of the Principal Risks in relation to the above matters, including business relationships, products and services likely to affect those areas of risk, and how the Company manages the risks		Risk management, pages 95 to 99 Risk Management Committee Report, pages 139 to 142 TCFD disclosures, pages 59 to 61
Non-financial key performance indicators		Sustainability Report, pages 48, 50, 56 to 58 and 62 to 67 Key performance indicators, page 35

*The policies listed above can be found on our website: www.spiraxsarcoengineering.com/our-approach/corporate-governance/governance-documents. Compliance with our policies is monitored through the implementation of our Sustainability Strategy, through our internal audit function and, locally, by our General Managers.

We have disclosed, to the fullest extent possible, against the requirements of the Industrial Machinery & Goods Standard of the Sustainability Accounting Standards Board (SASB), in respect of 2022, which can be found on our website www.spiraxsarcoengineering.com/investors/results-reports-and-presentations/year/2022.



Spirax-Sarco Engineering plc has been independently assessed according to the FTSE4Good criteria, and has satisfied the requirements to become a constituent of the FTSE4Good Index Series.



MSCI ESG Research provides MSCI ESG Ratings on global public and a few private companies on a scale of AAA (leader) to CCC (laggard), according to exposure to industry-specific ESG risks and the ability to manage those risks relative to peers.

The use by Spirax-Sarco Engineering plc of any MSCI ESG Research LLC or its affiliates (MSCI) data, and the use of MSCI logos, trademarks, service marks or index names herein, do not constitute a sponsorship, endorsement, recommendation, or promotion of Spirax-Sarco Engineering plc by MSCI. MSCI services and data are the property of MSCI or its information providers and are provided "as-is" and without warranty. MSCI names and logos are trademarks or service marks of MSCI.

Our Policies

Group Governance Policies

Group Management Code – This Code sets out the Group's policy on the operation of its Businesses and the procedures, controls and senior manager certification that provide the means to achieve compliance with the Code throughout the Group and to achieve continuous improvement in the Group's performance.

Anti-Bribery and Corruption Policy – It is Group policy to conduct its business free of any bribery or corruption. The Group will not enter into contractual relationships with third parties that are known to engage in corrupt practices and will not engage in the giving or receiving of bribes or favours that create a conflict of interest. Anti-bribery and corruption training forms part of our Group Essentials Training and must be completed by all new employees and annually thereafter.

Group Whistle-blowing Policy – We are committed to conducting our business with honesty and integrity and we expect all employees to maintain high standards in accordance with our Group Management Code and our Core Values. A culture of openness and accountability is essential to prevent any situations occurring and to address them when they do occur. This policy aims to encourage employees to report suspected wrongdoing as soon as possible, in the knowledge that their concerns will be taken seriously and investigated as appropriate and that their confidentiality will be respected.

Competition Law Compliance Policy – It is Group policy to conduct business in accordance with the competition laws of all the countries in which we operate. This policy outlines standards of conduct and integrity we expect from all colleagues and the potential consequences of breaching competition laws.

Gifts, Hospitality and Entertainment Policy – This policy sets out the Group's position on the giving and receiving of gifts, hospitality and entertainment, and our colleagues' responsibilities under this policy.

Charitable Donations Policy – This policy sets out the principles to be adopted in relation to charitable donations, both cash and in-kind, and applies to all charitable donations and community engagement activities across the Group.

Environment Policies

Environmental, Health, Safety, Energy and Sustainability Policy – We expect our colleagues to achieve Environmental, Health, Safety & Energy (EHS&E) excellence through engagement, empowerment and fostering good behaviours, while targeting zero accidents, zero environmental incidents and improved energy performance.

Supplier Sustainability Code – The Code represents the minimum standards that we ask our suppliers and their sub-tier suppliers to adhere to when conducting business with Spirax-Sarco Engineering plc. It covers expectations relating to human rights, health and safety, quality management, environmental sustainability and ethics.

Colleague and Human Rights Policies

Employee Volunteering Policy – All Group colleagues are entitled to up to three days of volunteering leave per year. This policy is intended to help and support colleagues wishing to volunteer and provides a framework for good practice.

Human Rights Policy – Human rights can be defined as basic rights that allow individuals the freedom to lead a dignified life, free from fear or want and free to express independent beliefs. The objective of this policy is to minimise risks to Spirax-Sarco Engineering plc from a breach of international human rights standards by the Company or by association with business partners and suppliers. It aims to protect the business by providing a framework of fundamental principles of human rights by which Spirax-Sarco Engineering plc will be guided in the conduct of its business.

Diversity and Inclusion Policy – Spirax-Sarco Engineering plc recognises its talented and diverse workforce as a key competitive advantage. We encourage equality, diversity and inclusion in the workplace because it is the right thing to do, it is in line with our Company values and makes good business sense. This policy's purpose is to formalise our commitment to: provide equality, fairness and respect for all in our employment practices, regardless of an individual's background; operate in accordance with the Equality Act 2010; and oppose and avoid all forms of unlawful discrimination.

Modern Slavery Statement – Our organisation is committed to maintaining effective policies and procedures to ensure that no individual within our organisation or supply chain is at risk of exploitation. This statement details our multi-faceted approach to raise awareness of modern slavery and human trafficking and the concrete actions taken to prevent and identify potential instances.

Operating Review

All three Businesses provide essential services to critical industrial processes and ultra-critical industrial equipment. In 2022, our teams stepped up once again to meet our customers' needs against a challenging macroeconomic backdrop.



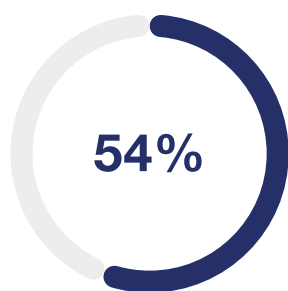
Operating Review

At a glance

Steam Specialties

Spirax Sarco and Gestra

Revenue



£866.0m

Reported **+15%** Organic **+12%**

Statutory operating profit £m

£196.2m

Adjusted operating profit £m

£206.1m

Statutory operating margin %

22.7%

Adjusted operating margin %

23.8%

No. of operating units at year end

61

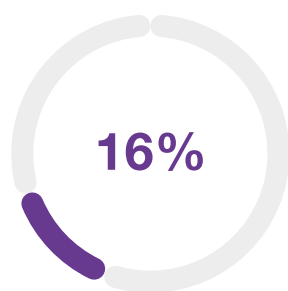
Key Industries



Electric Thermal Solutions

Chromalox, Vulcanic, Thermocoax and Durex Industries

Revenue



£256.1m

Reported **+41%** Organic **+14%**

Statutory operating profit £m

£7.3m

Adjusted operating profit £m

£39.9m

Statutory operating margin %

2.9%

Adjusted operating margin %

15.6%

No. of operating units at year end

36

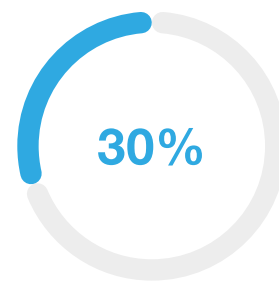
Key Industries



Watson-Marlow

Watson-Marlow

Revenue



£488.5m

Reported **+20%** Organic **+16%**

Statutory operating profit £m

£154.4m

Adjusted operating profit £m

£160.0m

Statutory operating margin %

31.6%

Adjusted operating margin %

32.8%

No. of operating units at year end

49

Key Industries



Operating Review continued

Market environment

Global industrial production growth¹ (IP) was 2.7% in 2022, compared to 7.7% in 2021. All regions recorded positive IP, although growth was below the level achieved in 2021 when the global economy bounced back strongly from the COVID-19 pandemic-related impacts of 2020.

IP was strongest in the first half of 2022 at 2.8%, despite a demanding comparator in 2021. IP slowed in the second half although at 2.6% industrial production remained higher than the second half of 2021. In the final quarter of 2022, sequential IP growth over the third quarter moved into negative territory, contracting 0.5%. For the full year 2022, IP of 2.7% was materially lower than the forecasted 4.4% at the time of our 2021 Full Year results in March 2022. Russia's

invasion of Ukraine on 24th February 2022 and the consequential impact on global supply chains and energy prices, as well as other inflationary pressures, dampened the global economic outlook that weakened progressively throughout 2022.

In Asia Pacific, IP was 3.1%, significantly lower when compared to the strong 8.3% expansion in 2021, reflecting the reintroduction of lockdowns in China,

- <-10%
- <-5% to -10%
- ≤0% to -5%
- >0% to 5%
- >5% to 10%
- >10% to 15%
- >15%
- not applicable



¹ Source for industrial production data:
Oxford Economics, 23rd February 2023

particularly in Shanghai. In the Americas, IP was 3.9% in North America but only 1.3% in Latin America, with Brazil registering a minor IP contraction over 2021. In EMEA, IP contracted 3.6% in the UK with Germany, France and Italy broadly flat.

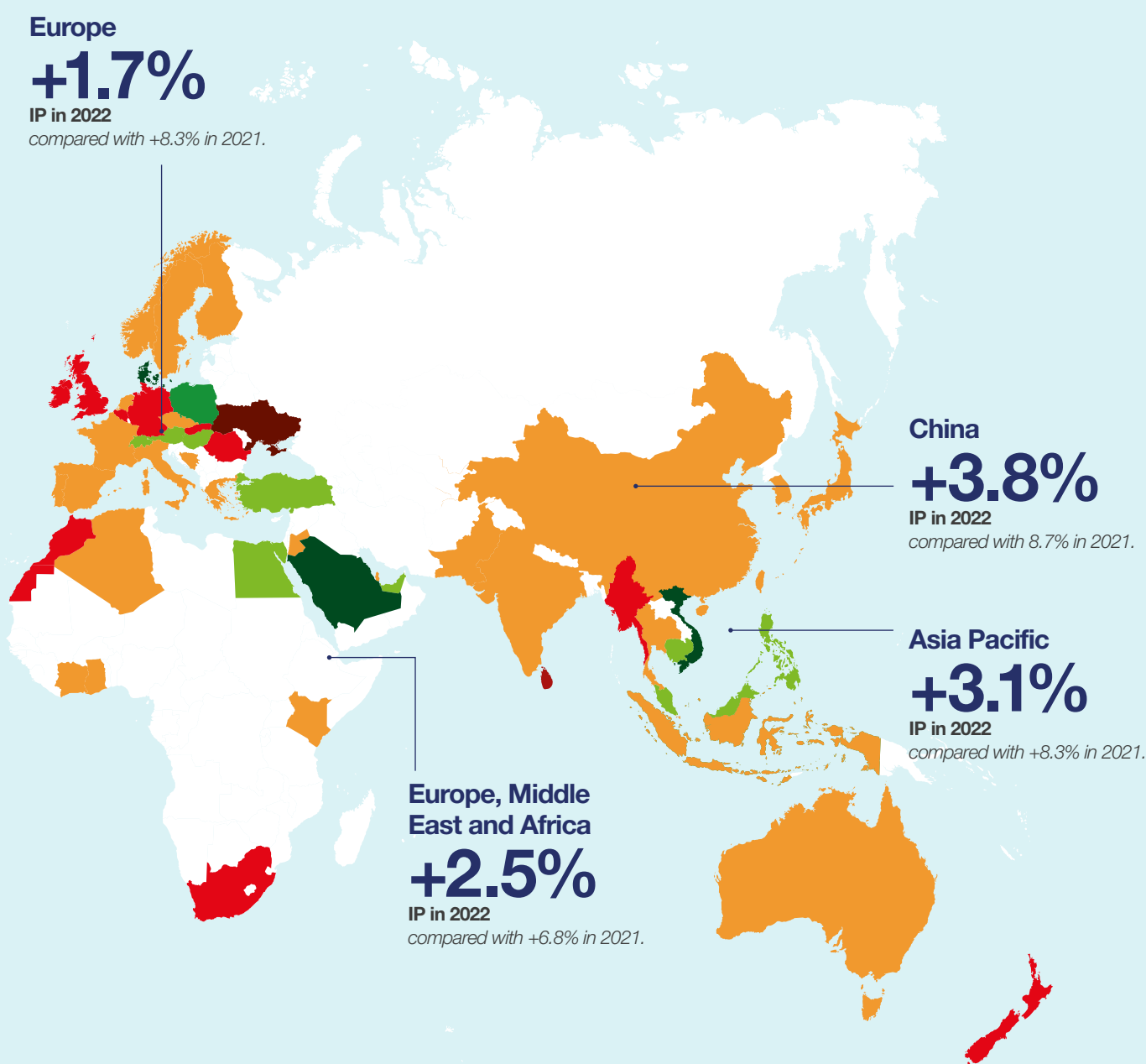
In March 2022, we suspended all Group trading with or within Russia and commenced the process of exiting our Spirax Sarco and Watson-Marlow operations

in Russia. This process concluded in July, with the disposal of our Russian operating companies. The impact on our 2022 results was small as Russia accounted for close to 1% of Group revenues in 2021.

In our largest sectors, Pharmaceutical & Biotechnology and Food & Beverage, which accounted for 41% of Group pro-forma sales in 2022, IP was 0.9% and 1.8% respectively. In the OEM sector (12% of Group pro-forma

sales in 2022) IP was 5.8% and in the Oil & Gas sector that accounted for 5% of 2022 Group pro-forma sales, IP was 1.7%.

During the last year, forecasts¹ for 2023 IP have trended downwards, from 4.0% in February 2022 to 0.7% in February 2023, reflecting ongoing geopolitical tensions, rising interest rates to combat high levels of inflation and the potential for recession in some countries.



Operating Review continued

Steam Specialties

Progress in 2022

Steam Specialties comprises our two world-leading product brands of Spirax Sarco and Gestra and operates across three geographic Divisions: Europe, Middle East and Africa (EMEA), Asia Pacific and the Americas. The OEM sector represented 19% of Steam Specialties total sales, while Food & Beverage and Healthcare accounted for 29% and 3% respectively.

Steam Specialties sales of £866.0 million grew 15% in 2022 or 12% organically. This very strong performance combined strong volume growth ahead of IP, despite the challenging macroeconomic environment, with proactive price management practices that offset significant raw material, energy and wage cost inflation to protect margins. The strong volume growth delivered benefits from operational gearing, supporting revenue investments to drive future organic sales growth.

Demand growth exceeded sales growth across all Divisions, expanding order books, with a higher proportion of larger orders compared to 2021, as customers' capital expenditure continued to recover from pandemic-driven reductions.

EMEA generated 11% organic sales growth. In the UK, Germany, France and Italy, the four largest markets in EMEA which collectively represent over 60% of regional sales, IP progressively weakened during the year and turned negative in the final quarter. There was a strong recovery in demand from the marine sector in Italy, as the outlook for worldwide

travel improved due to the relaxation of COVID-19 restrictions that enabled cruise ships to start operating again.

Asia Pacific achieved 10% organic sales growth despite lower IP and the challenges in China caused by COVID-19 related lockdowns, particularly in Shanghai. The region benefited from a recovery in large orders funded from customers' capital budgets, which account for a higher proportion of sales than in the rest of the world. China, our largest market in the region representing over 50% of sales, achieved 8% organic sales growth compared to 3.8% IP. In Korea, our second largest market in Asia Pacific, organic sales increased by 11%, significantly above IP of 1.6%.

In the Americas, sales grew 20% organically against a mixed backdrop for IP. In the USA, the largest market in the region, representing around 50% of the Americas, sales were up 11% compared to IP of 3.9%. This outperformance against IP reflects good progress in implementing our strategy to drive higher growth from direct sales, compared to growth through distributors, as well as our focus on the Healthcare and Chemical sectors which grew strongly.

In Latin America, which accounts for over 40% of the Americas' sales, there was strong volume growth in the largest markets of Argentina and Brazil, driven mainly by the Food & Beverage sector, Chemicals and Oil & Gas sectors, as well as good price management practices to offset higher inflationary pressures and protect margin.

Steam Specialties adjusted operating profit grew 9% to £206.1 million, up 8% organically. The adjusted operating profit margin was 23.8%, down 120 bps or 90 bps organically. Statutory operating profit of £196.2 million was up 5% from £186.8 million in 2021.

Our lower adjusted operating profit margin, compared to the exceptionally high level of 2021, reflects the full year impact of prior year revenue investments, partially offset by the benefits of operational gearing from higher sales. Had we incurred the full-year cost of these revenue investments in 2021, Steam Specialties 25.0% adjusted operating profit margin would be reduced by close to 200 bps. During 2022, we continued investing further to support future revenue growth, with an expansion of sales-related headcount and new product development, as well as digital and sustainability initiatives.

Gestra's adjusted operating profit margins increased for the full year and exceeded the 20% threshold achieved in 2021, the highest since we acquired the company in 2017.

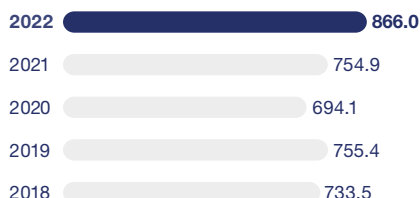
	2021	Exchange	Organic	Acquisitions & disposals*	2022	Organic	Reported
Revenue	£754.9m	£19.1m	£95.6m	(£3.6m)	£866.0m	+12%	+15%
Adjusted operating profit	£188.7m	£3.5m	£15.7m	(£1.8m)	£206.1m	+8%	+9%
Adjusted operating profit margin	25.0%				23.8%	-90 bps	-120 bps
Statutory operating profit	£186.8m				£196.2m		+5%
Statutory operating margin	24.7%				22.7%		-200 bps

*Includes the impact of (i) the acquisition of Cotopaxi and (ii) the treatment of Spirax Sarco Russia as a disposal from the date at which the Group suspended all trading with and within Russia.

Revenue £m

£866.0m

2021: £754.9m



Reported

+15%

Organic

+12%

Group revenue %

54%

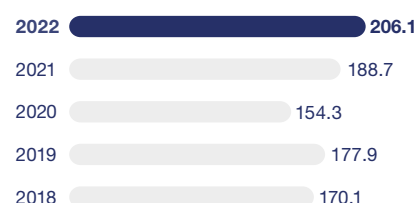
2021: 56%



Adjusted operating profit £m

£206.1m

2021: £188.7m



Reported

+9%

Organic

+8%

Adjusted operating margin %

23.8%

2021: 25.0%

Reported

-120bps

Organic

-90bpsSteam Specialties at a glance
(at year end)**61**

operating units*

66countries with a resident
direct sales presence**5,264**

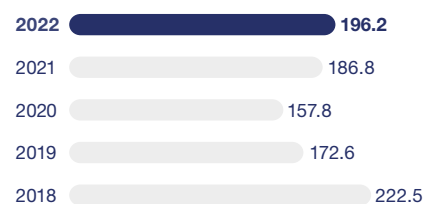
colleagues

*Operating units are business units that invoice locally.

Statutory operating profit £m

£196.2m

2021: £186.8m



Reported

+5%

Key markets



“2022 was a very strong year for all Divisions, despite ongoing global supply chain disruptions, reflecting the progress made in delivering our strategy in support of our Purpose.”

Maurizio Preziosa
Managing Director, Steam Specialties

Operating Review continued

Steam Specialties continued

Business strategy update

In 2021, Steam Specialties launched its refreshed business strategy, Customer first² (Cf²) and 2022 represented the first full year of its implementation.

The refreshed strategy builds on the original Customer first strategy that has been in place since 2014 and focuses on mega trends such as customer insight, sustainability, innovation, digital and inclusivity.



Increase direct sales effectiveness through market sector focus

Following the acquisition of Gestra in 2017, Steam Specialties adopted a sector-driven dual brand strategy. Aligning market sectors that offer the best opportunities with the brand that is traditionally strongest in that sector, ensures that we are well-placed to grow sales at above IP rates. For example, Gestra delivered 40% sales growth in the Chemicals sector as a result of its strong presence, while Spirax Sarco generated growth of 7% in the Healthcare sector, as hospitals sought to catch-up on deferred maintenance expenditure.

In January 2022, Steam Specialties completed the acquisition of Cotopaxi, a digitally enabled global energy consulting and optimisation specialist, to further accelerate the implementation of our Digital Strategy. Cotopaxi's proprietary software platform, STRATA, generates critical insights that are used to better understand industrial customers' management and use of Water, Air, Gas, Energy and Steam (WAGES). Cotopaxi's digital solutions experience in steam installations has enhanced our ability to connect to customers' systems and analyse their data, generating further opportunities and solutions that support system uptime, reduce waste and increase efficiency.



Develop the knowledge and skills of our expert sales and service teams

We continued to implement Customer Value Propositions (CVPs) to support our customers' changing requirements and needs. During 2022, our teams tailored a CVP to support lithium mining projects in Argentina for the automotive battery sector.

We continued to invest in our direct sales force and self-generated sales capability through our Sales Excellence training that is delivered by our Steam Academy. Following the acquisition of Cotopaxi, training now includes modules on our digital capabilities and the value that can be generated for our customers.



Broaden our global presence

Steam Specialties has direct sales capabilities in 66 countries and we continue establishing a stronger sales presence in parts of the world that have previously been under-represented. In 2022, this included parts of Africa and the Middle East with a substantial step-up in the recruitment of direct sales engineers across those regions.



Leverage our research and development (R&D) investments

We continued to invest in new product development across Steam Specialties and released multiple new products during 2022, to support the efficient use and control of steam, including the 'TargetZero' decarbonisation solutions (for more information see below). Due to our relentless focus on innovation, in 2022 Steam Specialties exceeded their long-held Product Vitality (PV) target which compares the revenue from new products, services or solutions introduced in the previous five years to total revenue.



Optimise supply chain effectiveness

In 2021, we created a Global Supply Chain organisation responsible for all Steam Specialties manufacturing sites around the world, to further improve the efficiency of our operations. This global organisation enables the adoption of consistent supply chain methodologies and accelerates the sharing of best practices across the 11 Steam Specialties manufacturing sites, while accelerating investments in plant modernisation. In common with most businesses, Steam Specialties experienced considerable disruption to its supply chain over the past two years with an adverse impact on customer service levels. During 2022, we successfully mitigated materials shortages by expanding our supplier base while also increasing our sales volume.



Operate sustainably and help improve our customers' sustainability

We work closely with our customers to understand their sustainability goals and provide solutions to optimise their energy and water usage, as well as decarbonise steam generation. The Group developed a suite of innovative **TargetZero** decarbonisation solutions through the Thermal Synergy Solutions project, a collaboration between Steam Specialties and ETS designed to decarbonise customers' industrial processes, including the raising of steam. 'ElectroFit', replaces industrial boilers' fossil fuel-fired heating elements with an in-situ conversion to electric heating elements, eliminating the boiler's scope 1 greenhouse gas (GHG) emissions while minimising plant disruptions and retaining the existing boiler infrastructure. 'Steam Battery' is an energy storage system using steam, which retains the thermal energy until required and decouples the electric energy generation from the thermal energy use. 'SteamVolt' uses the patented Chromalox Medium Voltage (MV) technology to provide electric heating solutions at industrial scale to decarbonise the raising of steam, as well as other industrial processes. These solutions were successfully tested on customer sites and we started accepting orders in the second half of 2022.

Alongside our drive to help customers meet their sustainability goals, we are also taking steps to meet the Group's ambitious target of achieving net zero scope 1 and scope 2 GHG emissions by 2030. In 2022 Steam Specialties initiated a £5.9 million investment programme to decarbonise our UK manufacturing facility in Cheltenham (UK), through the installation of all three **TargetZero** solutions for the electrification of our on-site gas-fired boilers. Upon completion by the end of 2023, this project will eliminate the site's scope 1 emissions and our purchased electricity requirements (scope 2 emissions) will be satisfied by green energy contracts.

During the first half of 2023 we will also implement Cotopaxi's STRATA platform across the 11 Steam Specialties manufacturing locations, enabling us to monitor our efficiency and sustainability performance in real time, using the insights to make changes that eliminate waste and reduce consumption.

During the year, our colleagues were involved with more than 50 biodiversity projects across the Business. With projects including, the installation of beehives in Italy, a roof garden in China, a wildlife pond in the UK, as well as mangrove protection and tree planting in Indonesia and Argentina.

Focus for 2023

We anticipate a more challenging macroeconomic environment in 2023 for both our customers and ourselves.

We will continue to support our customers with solutions that improve the safety and efficiency of their industrial processes, thereby reducing their operating costs. With our **TargetZero** solutions, we will also support their journeys towards zero GHG emissions while completing the decarbonisation of our UK manufacturing facility.

In key regions such as the USA, Middle East and Africa, we are focused on expanding our direct sales presence and our direct engagement with customers. We will also leverage our investments in digital capabilities, supported by Cotopaxi, to further enhance our understanding of customers' operations and how to best support them.

Steam Specialties Outlook

IP forecasts for 2023 have trended steadily downwards since February 2022 and are now at 0.7%, reflecting the likelihood of industrial recessions in developed markets and lower growth in emerging markets.

Against this weak macroeconomic backdrop, our resilient business model, ability to self-generate sales, significant proportion of maintenance and repair sales and strong order books underpin our confidence in the growth outlook for Steam Specialties.

Excluding any impact from currency movements, we currently anticipate mid-to-high single-digit growth, over 2022 pro-forma sales, driven by volume growth above IP and proactive price management practices that offset inflation of wages, energy and materials to protect margins.

We also anticipate a more typical drop-through from the increased sales to adjusted operating profit of close to 35%, leading to further improvement in our adjusted operating profit margin.



Steam Battery is part of our **TargetZero** decarbonisation solutions.

Operating Review continued

Steam Specialties

Providing solutions that help improve our customers' sustainability.

Spirax Sarco has worked with its customer, Enomondo, to provide a heating system for the industrial district of Faenza (Italy), powered exclusively by organic waste.

Enomondo burns biomass waste, including grape skins from local wine growers in its thermal power station which has a steam generator.

The resulting steam, which is produced at high pressure, is used to power an electrical generating turbine and also to provide steam used in the district heating system designed and built by Spirax Sarco.

The solution converts low pressure steam to hot water with subcooling technology to give maximum efficiency.

In the process up to 7.5 MW of steam is converted into a 90°C flow of hot water that is distributed to the Faenza district community. This includes the Alpha Tauri Formula 1 team, where the installation of the latest generation of meters gives complete control and monitoring to ensure optimum efficiency contributing to the customer's sustainability goals as well as our own.

7.5 MW
of steam converted
into a 90°C flow of hot
water that is distributed
to the Faenza community.



Electric Thermal Solutions

Acquisitions

During the last four months of 2022, the Group's Electric Thermal Solutions Business (ETS) completed the acquisitions of Vulcanic and Durex Industries, strengthening coverage of attractive end-market sectors and geographies to broaden the platform for strong organic growth of the Business.

Vulcanic

On 29th September, we completed the acquisition of Vulcanic, a European leader of industrial heating solutions that is headquartered in Paris (France) with ten manufacturing facilities worldwide. Chromalox generates close to three-quarters of its sales in the Americas, whereas Vulcanic generates around 80% of its sales in EMEA. Vulcanic complements Chromalox through its strong position in the Food & Beverage and OEM sectors, while serving different markets than Chromalox within the Oil & Gas and Chemicals sectors. Vulcanic comprises several product brands that are each individually strong in their respective sectors. We have appointed an experienced leader for Vulcanic from within our Group and the integration is progressing well.

We are implementing a dual brand strategy for Chromalox and Vulcanic, modelling the highly successful approach in Steam Specialties that aligns the Spirax Sarco and Gestra brands with specific strategic growth sectors. As the lead brands within ETS for electric process heating, including the decarbonisation of industrial processes, Chromalox and Vulcanic will support the effective deployment of our industry leading decarbonisation solutions alongside Steam Specialties.

Durex Industries

On 30th November, we completed the acquisition of Durex Industries, a US-based specialist in custom precision thermal solutions with embedded electric heating, cooling and sensing technologies for ultra-critical applications within complex industrial equipment, with headquarters and manufacturing facilities in Cary, Illinois (USA). OEMs accounted for almost 90% of sales with approximately 60% of sales to the Semiconductor sector.

Durex Industries is a highly complementary brand to Thermocoax, with minimal customer overlap and over 80% of its sales in North America, whereas over 60% of Thermocoax's sales are in EMEA. As the lead brands within ETS for ultra-critical thermal solutions for industrial equipment, Thermocoax and Durex Industries are well positioned to capitalise on the growing demand for increasingly stringent thermal heating requirements in high technology equipment and will accelerate the development of ETS' critical OEM business.

We have retained the existing strong management of Durex Industries and they are working collaboratively across ETS to identify opportunities that accelerate the growth of each brand.

Market overview

Following the acquisitions of Vulcanic and Durex Industries, the Americas and EMEA will represent 56% and 32% of sales respectively on a pro-forma basis.

ETS has a different balance of end markets when compared to the rest of the Group with 18% of sales to the Semiconductor sector and 12% to the Power Generation sector on a pro-forma basis.

Our customers' focus on the decarbonisation of their critical industrial processes, in line with their own sustainability and net zero goals, continues to drive strong demand for both Chromalox and Vulcanic products and solutions. The rate of adoption over time of our decarbonisation solutions remains difficult to predict due to varying rates of progress towards net zero in different countries, capacity to deliver the necessary infrastructure quickly, as well as the relatively higher cost of electricity compared to gas. Therefore, we anticipate this market opportunity will unfold globally over at least the next 30 years.

During 2022, Semiconductor demand grew strongly with the proportion of ETS sales to the sector increasing. We anticipate demand will be lower in 2023 due to consumer spending on electronics being impacted by a weaker macroeconomic environment, as well as a slowdown in the expansion of Semiconductor manufacturing capacity. Through Thermocoax and Durex Industries, ETS supplies complex solutions for precise thermal control, incorporated by OEMs into Wafer Fabrication Equipment (WFE) for more advanced Semiconductor products utilised in higher-end applications. We expect that these niche positions will partially mitigate the impact of an overall reduction in Semiconductor demand. Additionally, there is an opportunity for our solutions to replace incumbent suppliers in the WFE aftermarket, further mitigating cyclicality in the new-build market.

	2021	Exchange	Organic	Acquisitions & disposals*	2022	Organic	Reported
Revenue	£181.3m	£13.2m	£27.4m	£34.2m	£256.1m	+14%	+41%
Adjusted operating profit	£24.0m	£1.9m	£5.9m	£8.1m	£39.9m	+23%	+66%
Adjusted operating profit margin	13.2%				15.6%	+100 bps	+240 bps
Statutory operating profit	£11.1m				£7.3m		-34%
Statutory operating margin	6.1%				2.9%		-320 bps

*Includes the impact of the acquisition of Durex Industries and Vulcanic.

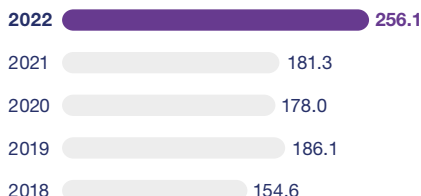
Operating Review continued

Electric Thermal Solutions continued

Revenue £m

£256.1m

2021: £181.3m



Reported

+41%

Organic

+14%

Group revenue %

16%

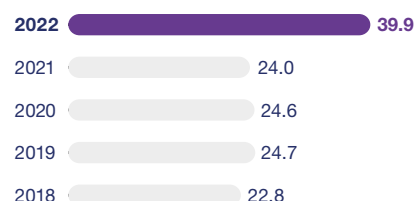
2021: 14%



Adjusted operating profit £m

£39.9m

2021: £24.0m



Reported

+66%

Organic

+23%

Adjusted operating margin %

15.6%

2021: 13.2%

Reported

+240bps

Organic

+100bps

Electric Thermal Solutions at a glance (at year end)

36

operating units*

20

countries with a resident
direct sales presence

2,698

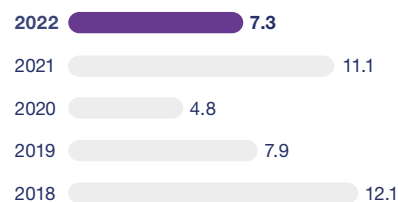
colleagues

*Operating units are business units that invoice locally.

Statutory operating profit £m

£7.3m

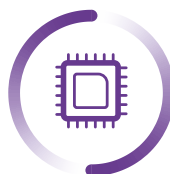
2021: £11.1m



Reported

-34%

Key markets



“ETS is now a much bigger, more geographically balanced Business, well positioned to capitalise on the significant growth opportunities we see, especially from decarbonisation.”

Armando Pazos

President, Electric Thermal Solutions

Progress in 2022

ETS sales grew 41% to £256.1 million or 14% on an organic basis, with the difference due to acquisitions and currency tailwinds.

During 2022, ETS benefitted from strong overall demand growth, significantly ahead of IP and above the growth in sales. Growth in Thermocoax was driven by the Semiconductor sector, with increasing end user demand for sophisticated digital equipment and from the Aerospace & Defence sector, due to demand for sensing and heating technologies in satellites supporting mobile telecommunications networks. Chromalox experienced increasing demand for decarbonisation solutions.

Vulcanic and Durex Industries delivered strong double-digit growth in sales driven by the same decarbonisation trend and Semiconductor sector growth benefiting Chromalox and Thermocoax. Including the acquisitions of Vulcanic and Durex Industries on a twelve-month pro-forma basis, ETS sales would be £382.9 million in 2022.

Manufacturing continued being impacted by disruptions in the global supply chain, although these constraints are beginning to ease. Shipments from our manufacturing facility in Ogden, Utah (USA) remained capacity constrained during 2022 as it transitions to focus primarily on bespoke industrial heating solutions, increasingly utilising our patented Medium Voltage (MV) technology for the decarbonisation of buildings and industrial processes. Throughout the year we continued investing to increase capacity in Ogden, as well as making further operational improvements to support manufacturing of more complex and bespoke solutions. The capacity constraints were compounded by strong demand growth and resulted in ETS carrying a record order book into 2023, underpinning strong sales growth in the year ahead.

Sales from Chromalox EMEA contracted year-on-year following the announcement, in May 2022, of our plans to close the loss-making manufacturing plant in Soissons (France). This facility was successfully decommissioned in September, three months ahead of schedule, with minimal disruptions. The costs associated with the closure (£14.5 million) are included as an adjusting item in the Consolidated Income Statement as disclosed in Note 2 to the Financial Statements. The acquisition of Vulcanic restores the capability to manufacture in Europe some of the products previously sourced from the Soissons facility.

ETS adjusted operating profit grew 66% to £39.9 million and was up 23% on an organic basis, the difference being due to acquisitions and currency movements. Statutory operating profit of £7.3 million was down 34% from £11.1 million in 2021, driven by the restructuring of Chromalox's manufacturing operation in Soissons (France).

ETS adjusted operating profit margin of 15.6% was up 240 bps and 100 bps organically, with the difference due to the fourth quarter contributions from the Vulcanic and Durex Industries acquisitions that had a combined operating margin similar to the overall Group margin.

During 2022, both Chromalox and Thermocoax shipped a high proportion of orders from their existing order book that were booked in 2021 or earlier. These orders did not benefit from the 2022 price increases so the margins achieved were adversely impacted by high materials cost inflation and higher freight costs. Nickel-based alloys, electrical components, petrochemical and resin products, all experienced double-digit cost inflation.

Price increases were applied to new orders taken in 2022 to protect operating margins from this higher cost inflation, with further price increases being applied to new orders received in 2023. Although we still have some orders to be delivered that were taken in 2021, we anticipate some margin progression in 2023 as we increase the shipment of orders taken in 2022 and 2023.

Thermocoax experienced an adjusted operating profit margin decline in 2022, due to our higher proportion of sales on medium-term contracts and an adverse impact of one-off costs associated with the ramp-up of our new manufacturing facility in Normandy (France). Chromalox adjusted operating profit margin increased strongly in 2022, driven by operational gearing from sales volume growth above IP and improved price management practices to offset cost inflation on new orders that was partially offset by the lower margins of some older orders shipped in 2022, as well as a small benefit of overhead reductions in the fourth quarter from the closure of the Soissons (France) facility.

Including the acquisitions of Vulcanic and Durex Industries on a twelve-month pro-forma basis, ETS adjusted operating margin would be above 18.0%.

Business strategy update

ETS implemented a strategy refresh during 2020, resulting in the launch of their 'Engineering Premium Solutions' (EPS) strategy.

An important component of this strategy is the drive towards 'Total Customer Solutions' moving from being mostly product centric to becoming more focused on selling solutions to higher-growth sectors in which we are well positioned. We also continued strengthening our business development function and increasing our focus on new product innovation, with demonstrable technological advantages and quantified sustainability benefits. We made good progress in advancing our strategic agenda in line with the Group's six strategic themes:

Increase direct sales effectiveness through market sector focus

Since reshaping our strategy to prioritise focus on strategic sectors that represent over 50% of our addressable market, we have realised higher growth in these targeted sectors and increased our proportion of direct sales.

We have also continued identifying opportunities for ETS to leverage its position as part of our Group by adopting best practice from other parts of the organisation. In 2022, this led to the launch of a revised 'go to market' strategy in EMEA and Asia Pacific, following its successful roll out in the Americas, which optimises the number of accounts assigned to individual direct sales engineers.

We have continued to invest in our self-generated sales capability by developing the skills and knowledge of our direct sales engineers through the ETS Academy. Building on the success of the Steam Specialties' Academy, the ETS Academy was completed in the third quarter of 2022 and utilises virtual and visual assets to provide a rich and immersive experience for our direct sales teams and end-user customers. Additionally, our sales teams have been undertaking Sales Excellence training to develop or refresh skillsets in consultative value-based selling.

Operating Review continued

Electric Thermal Solutions continued

Chromalox has launched several Customer Value Propositions (CVPs) focused on its decarbonisation and net zero solutions during the year, which required specific training, marketing materials and decarbonisation calculators for the Engineered Chemicals, Sustainable Energy and Oil & Gas sectors.



Broaden our global presence

The acquisitions of Vulcanic and Durex Industries provide an improved geographical balance of the ETS Business globally and will support organic growth by leveraging customer bases, products and technologies. Over the coming years we will implement our integration plans that also accelerate the adoption of our market sector driven dual brand strategy on a global scale.



Leverage our research and development (R&D) investments

ETS is evolving its electrification solutions for decarbonisation and sustainability, which remain important growth drivers as we build a significant pipeline of opportunities.

By combining our core capabilities with Steam Specialties, we have been able to develop synergies within our thermal energy management portfolio that enabled the 'Thermal Solutions Synergy' team to design new industry-leading products that deliver significant sustainability benefits for customers. The new-to-world **TargetZero** solutions are covered in more detail in the Steam Specialties Operating Review on pages 80 and 81. ETS has also been collaborating with Watson-Marlow to release a new product for its Aflex Hose product brand in 2023.

In addition to the **TargetZero** decarbonisation solutions developed with Steam Specialties, ETS developed and launched multiple new products to market in 2022 from both the Chromalox and Thermocoax Divisions. The new Chromalox products include a portable air heater designed for safely heating server rooms and a safe water heater, certified to heat potable water. In addition to range extensions, Thermocoax also launched two new-to-world products to support the fabrication of 3 nm semiconductor chips, as well as radiation-hardened heating cables for aerospace applications.



Optimise supply chain effectiveness

During 2022, we continued investing in further operational improvements, as well

as increasing manufacturing capacity in Ogden, Utah (USA). In order to ensure sufficient capacity to satisfy the anticipated long-term demand for Chromalox's Medium Voltage technologies that also support decarbonisation, we are planning a US\$58 million investment to materially expand the Ogden facility. The new 9,600m² extension will expand the current footprint by almost 60% by the end of 2024 and includes geothermal heating, as well as solar panels for on-site renewable energy supply.

In Normandy (France), Thermocoax's four separate sites came together in a new purpose-built, state-of-the-art manufacturing facility. Production ramped-up during the first half of 2022 as the teams adjusted to working in a single facility and secured all the process qualifications needed for the critical industrial applications that support the Semiconductor, Aerospace and Defence sectors. The plant is fully aligned to our **One Planet: Engineering with Purpose** Sustainability Strategy, with the implementation of solar panels to self-generate electricity, as well as waste reduction and on-site biodiversity projects.



Operate sustainably and help improve our customers' sustainability

During the year ETS continued to implement our **One Planet: Engineering with Purpose** Sustainability Strategy, which included the installation of 1.2 GWh of renewable energy supply at three of our sites in Nuevo Laredo (Mexico), Heidelberg (Germany) and Normandy (France). We completed net zero roadmaps at all manufacturing sites and rolled out environmental compliance calendars to ensure business continuity at key locations including Ogden and LaVergne, Tennessee (USA).

Focus for 2023

During 2023, we will focus on implementing the integration plans for Vulcanic and Durex Industries, as well as accelerating growth opportunities through collaboration with Chromalox and Thermocoax. We will align the 'go to market' dual brand strategy for Chromalox and Vulcanic in Europe during the first half of the year.

Product developments will focus on the next generation of Medium Voltage (MV) technology and Heat Trace systems, supporting decarbonisation and temperature management of commercial infrastructure. ETS is engaged with multiple partners, including universities, cities and agencies, working to decarbonise their district heating systems. We will also focus on leveraging

Vulcanic's presence in Europe to increase the penetration of our Heat Trace systems, which is currently lower than in North America.

Operationally, our focus will be on increasing manufacturing output from our site at Ogden, as well as implementing our plant modernisation and sustainability initiatives. We will also progress the expansion of our Ogden facility.

ETS outlook

The full year effect of the Vulcanic and Durex Industries acquisitions, on a twelve-month pro-forma basis, would result in ETS sales in 2022 of £382.9 million with an adjusted operating profit margin above 18.0%.

We opened 2023 with record order books, which underpins our confidence of achieving another year of good sales volume growth above IP, particularly as we continue to expand our manufacturing capacity to increase shipments. Strong customer demand for decarbonisation solutions will remain a driver of ETS sales growth, although Semiconductor demand that grew strongly in 2022 and accounted for 18% of ETS sales on a pro-forma basis, is likely to be lower in 2023. As Vulcanic and Durex Industries were acquired in late 2022, these Divisions of ETS have not yet managed to fully embed our Group's proactive price management practices so their sales growth rates in 2023 will benefit less from pricing. Consequently, excluding any impact from currency movements in 2023, we anticipate mid-to-high single-digit growth, over 2022 ETS pro-forma sales, albeit slightly lower growth than at Steam Specialties.

Operational gearing from increased sales, continued proactive price management practices that offset cost inflation, a higher proportion of order book shipments that benefit from improved pricing and the full year benefit of lower overheads resulting from the closure of the Soissons facility in France, are expected to drive further adjusted operating profit margin improvements for the Chromalox and Thermocoax Divisions of ETS. We anticipate the adjusted operating profit margin of the Vulcanic and Durex Industries Divisions will decline in 2023, compared to their full year pro-forma margins achieved in 2022, as they derive less benefits from the 2023 price increases and we step up the revenue investments planned for their integration. Consequently, we anticipate ETS adjusted operating profit margin in 2023 will be slightly below 18.0%.

Electric Thermal Solutions

How Vulcanic and molten salt are helping reduce greenhouse gas emissions.

Within ETS, Vulcanic works alongside Chromalox to provide industrial heating solutions, including the decarbonisation of critical industrial processes, each focused on different applications and markets.

Just as Chromalox and Steam Specialties have developed a new-to-world, SteamBattery solution, from our Group (see page 80), Vulcanic provides the electric immersion heater and power control systems that powers 'Heatcube', at Nordjyllandsværket AS (NJV) in Denmark.

'Heatcube' is a thermal storage solution using molten salt for higher temperature applications and was developed by Norway's Kyoto Group to preserve and discharge thermal energy into process heating applications while eliminating emissions.*

Vulcanic's technical expertise and long-standing experience with molten salt applications optimises heater performance and maximises the operating life of the energy charging system. This enables the system to efficiently cycle thousands of times over the course of its 20-30 year expected life, with around 90% efficiency.

Through the creation of ETS within Spirax-Sarco Engineering, the Group continues to support our customers on their sustainability journeys, which is good news for industry and for our planet.

*when connected to green electricity sources.



5 MW
discharge capability.

Operating Review continued

Watson-Marlow

Market overview

Watson-Marlow sales to the Pharmaceutical & Biotechnology sector, which now accounts for around 60% of sales, have historically grown at close to 20% per annum.

This was driven by advances in cell and gene therapies, as well as a move towards single-use manufacturing processes.

In 2020 and 2021, the sector experienced exceptional growth driven by its role in developing and producing COVID-19 vaccines, with Watson-Marlow sales growing 22% and 43% respectively. During the period between the fourth quarter of 2020 and the second quarter of 2022, our Pharmaceutical & Biotechnology customers experienced exceptionally strong demand for vaccines as the industry estimated that at least two doses would be required for a significant proportion of the global population in order to defeat the pandemic, which potentially could be followed by boosters or new vaccines to combat new variants of the virus. As such, capacity additions accelerated and production ramped-up, leading to increased demand for equipment and consumables. This exceptional demand exceeded Watson-Marlow's manufacturing capacity, notwithstanding our multiple capacity expansion initiatives, leading to an increase in the order book, which remained well above pre-pandemic levels at the end of 2022.

COVID-19 vaccine global adoption rates turned out to be much lower than the World Health Organisation (WHO) and most governments anticipated, especially in many developing economies. Nevertheless, the severity of the virus and its symptoms have subsided due to the effectiveness of the vaccines, despite lower-than-anticipated doses being administered. With lower forecasted demand and excess vaccine inventory, production has slowed. In the second half of 2022, as expected,

Watson-Marlow's COVID-19 related demand began normalising, with many customers postponing new orders and rescheduling delivery dates of orders already placed. As a result, Watson-Marlow's full year sales to the Pharmaceutical & Biotechnology sector grew close to 15% in 2022 and untypically over 50% of sales occurred in the first half of the year.

Demand growth in Process Industries was significantly above IP, supported by sector specific programmes to accelerate demand, such as in Food & Beverage and Water & Wastewater sectors, as well as new product introductions.

Following the rapid growth in COVID-19 related demand in 2021 and the first half of 2022, Watson-Marlow expanded capacity at its existing manufacturing facilities with additional shifts and new equipment, which also helped mitigate the impact of global supply chain disruptions. As demand started normalising in the second half of 2022, steps were taken to appropriately right-size capacity and overhead support costs, which included factory labour reductions in the fourth quarter of 2022. Further actions are underway in early 2023, ensuring we are able to both meet our customers' needs and protect our adjusted operating profit margin.

Progress in 2022

Watson-Marlow sales grew 20% to £488.5 million, or 16% up on an organic basis. Sales to the Pharmaceutical & Biotechnology sector grew close to 15% organically and sales to Process Industries sectors grew 19%, significantly ahead of global IP. This level of growth reflects both strong volume increases and our proactive price management practices that offset inflationary cost pressures to protect margin.

Watson-Marlow's adjusted operating profit grew 7% to a record £160.0 million, driven

by strong sales growth and partially offset by revenue investments to support future growth. Organically, adjusted operating profit grew 3%, the difference being the impact of currency and the disposal of our high margin Russian operation.

Watson-Marlow's adjusted operating profit margin of 32.8% declined 390 bps from the exceptional margin of 2021. Despite declining 400 bps on an organic basis, the margin remains 100 bps above the 2019 pre-pandemic margin. Statutory operating profit grew 6% from £145.4 million in 2021 to £154.4 million in 2022.

The reduction in adjusted operating profit margin was driven by the full year impact of 2021 revenue investments, which had an impact of over 200 bps, as well as costs associated with the transition of BioPure to a new facility in Portsmouth (UK) and the ramp-up of our new facility in Devens, Massachusetts (USA), which together had an impact of over 150 bps.

Business strategy update

Strategy25 is Watson-Marlow's five-year organic growth strategy, building momentum to drive sustainable growth that outperforms our markets and create value for all stakeholders.

We made good progress in advancing our strategy agenda in line with the Group's six strategic themes:



Increase direct sales effectiveness through market sector focus

During 2022, Watson-Marlow increased its direct sales workforce and continued embedding our sector driven approach to understand customers' processes, opportunities for improvement and proposing

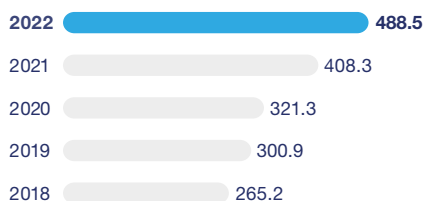
	2021	Exchange	Organic	Acquisitions & disposals*	2022	Organic	Reported
Revenue	£408.3m	£20.2m	£68.6m	(£8.6m)	£488.5m	+16%	+20%
Adjusted operating profit	£150.0m	£7.6m	£5.3m	(£2.9m)	£160.0m	+3%	+7%
Adjusted operating profit margin	36.7%				32.8%	-400 bps	-390 bps
Statutory operating profit	£145.4m				£154.4m		+6%
Statutory operating margin	35.6%				31.6%		-400 bps

*Includes the impact of the treatment of Watson-Marlow Russia as a disposal from the date at which the Group suspended all trading with and within Russia.

Revenue £m

£488.5m

2021: £408.3m



Reported

+20%

Organic

+16%

Group revenue %

30%

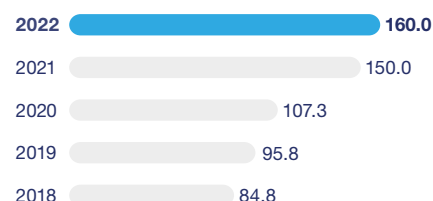
2021: 30%



Adjusted operating profit £m

£160.0m

2021: £150.0m



Reported

+7%

Organic

+3%

Adjusted operating margin %

32.8%

2021: 36.7%

Reported

-390bps

Organic

-400bpsWatson-Marlow at a glance
(at year end)**49**

operating units*

42countries with a resident
direct sales presence**2,337**

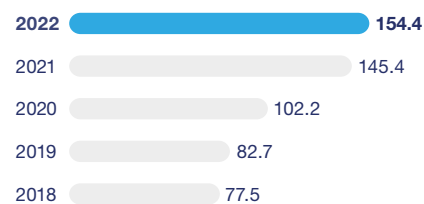
colleagues

*Operating units are business units that invoice locally.

Statutory operating profit £m

£154.4m

2021: £145.4m



Reported

+6%

Key markets



“The launch of our global Innovation Centre in 2022, is just one example of how we are investing in our Business to drive long-term sustainable growth.”

Andrew Mines

Managing Director, Watson-Marlow

Operating Review continued

Watson-Marlow continued

solutions. For example, we have been working with lithium-ion battery customers to use our Bredel APEX pumps and hose solutions to accurately dose, meter and transfer the liquids required for automotive battery production. We are also supporting our customers in the Water treatment sector with high accuracy chemical dosing solutions that have facilitated reduced chemical usage, helping them to achieve their sustainability and cost goals.

In 2022, we invested in over 40,000 hours of training, learning and development for colleagues across all areas of Watson-Marlow. This included the development and deployment of a global training programme for our direct sales engineers to enhance consultative selling skills as we evolve towards our total solutions approach.



Broaden our global presence

During the fourth quarter of 2022 we completed the construction and first phase of production fit-out at our new state-of-the-art manufacturing facility in Devens, Massachusetts (USA), with the first customer deliveries shipped before the end of the year, as planned. This milestone was achieved in 13 months of breaking ground at the factory, demonstrating strong project management and governance, as well as cross-continental collaboration of our teams, set against significant supply chain and inflationary challenges.



Leverage our research and development (R&D) investments

During 2022, we opened our first dedicated Innovation Centre to support the Business globally. From its location close to our factory in Falmouth (UK), this state-of-the-art facility will support all new product developments and is the hub for evolving our Digital Strategy across all products, services, manufacturing processes and core enterprise systems. These ongoing investments are critical to support the quality and consistency of our operations and ensure we continue to deliver value to all our stakeholders.

We launched multiple new products during the year, including an expansion of our digital capability across the core pump range, with a communication protocol used to collect data and control equipment over Ethernet systems. We also launched BioPure-branded hose assemblies, which enable customers to specify a completely customisable solution based on their technical specifications, as well as fully integrated Flexmag single-use

pressure sensing systems to extend our fluid path solutions.



Optimise supply chain effectiveness

During 2022, we made significant progress in expanding Watson-Marlow's manufacturing capacity. The new BioPure facility in Portsmouth (UK) commenced production in March 2022 and has enabled a doubling of capacity, following the successful transition to this new location. Injection moulding machines, which were temporarily located at subcontractor sites to increase capacity, are also being relocated to the new BioPure facility.

Due to global supply chain disruptions and the impact of transitioning to a new facility, we took the decision to hold more inventory to ensure continuity of supply, working with our partners to identify risks and opportunities.



Operate sustainably and help improve our customers' sustainability

Watson-Marlow has established a new dedicated business sustainability team to develop a deeper understanding of our product life cycle sustainability impact, drive engagement and accelerate progress on our commitments to the Group's **One Planet: Engineering with Purpose** Sustainability Strategy.

In 2022, our Aflex Hose facility in Yorkshire (UK) identified that 50% of their annual oil consumption could be filtered, recycled and re-used in the site's braiding machines. This large strong reduction in waste oil volume will support Watson-Marlow to achieve its goal of 10% waste reduction by 2025, as well as reducing costs. We have installed solar panels which generate 1.2 GWh of renewable energy at our new manufacturing facility at Devens, Massachusetts (USA).

Focus for 2023

Our focus for 2023 will include implementing our Operational Excellence Framework, an integrated planning process to better align resources across the demand and supply processes, with the aim of driving efficiency improvements across production and procurement that de-risk our supply chain and reduce costs. In support of our **One Planet: Engineering with Purpose** Sustainability Strategy, Cotopaxi's STRATA platform is being deployed across all Watson-Marlow's manufacturing operations to better monitor our sustainability footprint and drive reductions in consumption and waste. The ramp-up of the new Devens site

will continue throughout 2023, supporting the tightly controlled validation and phased transfer of product brands to the state-of-the-art manufacturing facility.

Watson-Marlow outlook

COVID-19 related demand from Pharmaceutical & Biotechnology customers began to normalise in the second half of 2022 and in the first two months of 2023 we continued seeing a level of demand consistent with the fourth quarter of 2022. In the first half of 2023, we expect that customers will continue working through their existing stocks of our products and may still defer some deliveries from our order book, while repurposing their production to meet continued strong underlying demand growth for cell and gene therapy applications. In the second half of 2023, we anticipate a return of customers' demand growth, although defining the precise timing and scale of the recovery remains difficult.

For the full year 2023, we anticipate Watson-Marlow sales to the Pharmaceutical & Biotechnology sector will be lower than 2022. However, this decline will be largely offset by Process Industries sales growth, driven by volume growth above IP and continued proactive price management practices to offset cost inflation and protect margins. Therefore, excluding any impact from currency movements, we anticipate overall Watson-Marlow sales in 2023 will be slightly below 2022, with over 55% of full year sales occurring in the second half of the year.

As Watson-Marlow continues driving proactive price management practices across all market sectors, slightly lower sales in 2023 implies mid-to-high single-digit sales volume decline, with resulting negative operational gearing. During the fourth quarter of 2022 and first months of 2023, Watson-Marlow has taken steps to appropriately right-size manufacturing capacity and reduce overhead support costs in order to offset the adverse impact of lower sales volumes on Watson-Marlow's adjusted operating profit margin. As a result, we anticipate the full year adjusted operating profit margin in 2023 will remain at a similar level to 2022, with close to 65% of full year operating profit occurring in the second half of the year.

Charges relating to the right-sizing of manufacturing capacity and reduction in overhead support costs are expected to be excluded from 2023 adjusted operating profit as defined in Note 2 to the Financial Statements.

Watson-Marlow

Engineering for the future.

As Watson-Marlow builds its digital maturity, through new tools and investment, we are becoming more agile and effective in customer targeting and operational excellence.

In May 2022, we opened our 5,000m² global Innovation Centre in Cornwall (UK). The Cardrew Innovation Centre is a specialist facility with more than 60 colleagues dedicated to New Product Innovation (NPI) processes for the Watson-Marlow Business globally. The facility incorporates test laboratories, dedicated electronics and software development laboratories, as well as development spaces for user experience, rapid prototyping, metrology and robotics.

At any one time the team can have up to 20 different NPI projects underway to support the development of new pumps and fluid path designs. By remaining focused on evolving our existing ranges, as well as introducing new solutions, we continue to meet the needs of our customers and our wider stakeholders. The work at the Cardrew Innovation Centre is essential to accelerating product time-to-market, optimising our development costs and providing excellence to customers through a standardised approach. All of this helps Watson-Marlow maintain its leading position in the global fluid technology solutions market.

5,000m²
Innovation Centre



Risk Management



Risk is an inherent part of our business operations, core to aligning to our Purpose and we approach it with the same deliberate, strategic consideration as other aspects of the business.



“Our top-down risk review in 2022 underlined an increased risk of disruption to our supply chain caused partly by rising inflation. Our Principal Risks have been realigned in recognition of these pressures.”

Nicholas Anderson
Group Chief Executive

Our approach and appetite for risk

Risk is an inherent part of our business operations, core to aligning to our Purpose and we approach it with the same deliberate, strategic consideration as other aspects of the business. The Risk Management Committee monitors our operational risks, in particular those identified as Principal Risks, on an ongoing basis, while the Board is responsible for the overall stewardship of strategic risk management and internal control. The Audit Committee is also involved in the detailed review of risks and reports back to the Board on its findings.

We hold annual top-down or bottom-up reviews that provide information and evaluations that the Committee uses alongside the risk appetite and risk velocity ratings for our Principal Risks to create an effective system for monitoring, planning and developing our Group-wide approach and culture regarding risk.

The General Managers of our operating companies are involved in the risk assessment process. The evaluations of the Committee, including setting the appropriate levels of risk are then communicated to all Group operating companies.

This ongoing monitoring and engagement contribute to the Group's Risk Register and the way we manage our risks. As they are dynamic and fluid, both our Risk Register and Principal Risks reflect the current conditions across the Group and guide our ongoing monitoring and mitigation activities.

Further reading

Our Principal Risks

➤ See pages 95 to 99

Key risk management actions

The following key actions were undertaken by the Group during 2022 in addition to the regular monitoring of risks:

- **Top-down risk review:** the Committee received high quality input from its Group operating companies and determined that they have sufficiently robust measures in place to effectively mitigate the Group's Principal Risks
- **Risk Register:** the top-down risk review informed the annual review, validation and update of the Risk Register
- **Risk velocity:** Risk velocity was considered and approved as a further measure in our Group's risk management framework. Risk velocity ratings were assigned and validated for all Principal Risks as set out on pages 95 to 99.
- **Rising inflation:** due to elevated levels of inflation in a number of countries and recognising the severity of the impact on our workforce, we decided to revalidate our compensation parameters and bring forward our pay review date in 2023 from March to January to provide earlier support to colleagues with inflationary cost of living and thereby mitigating the risk of attrition
- **Enterprise Risk Management:** the findings of the Enterprise Risk Management review were discussed and actions approved for implementation during 2023 to further enhance the Group's risk management framework
- **Exit from Russia:** followed the imposition of global sanctions on Russia, the Group took the view that Russia's ability to trade with the world would be restricted for many years to come and therefore to safeguard the best interests of the Group, we took the decision to exit Russia together with the ceasing of all direct and indirect trade with Russia

- **Risk Appetite Statement:** the Risk Management Committee confirmed the statement, which can be found on page 142

The Committee's analysis of the Principal Risks affecting the Group, before mitigation, is set out on pages 95 to 99.

Supply chain

Our upstream supply chain has continued to suffer turbulence during 2022 on account of scarcity of materials coupled with a revival in demand which has negatively influenced the stability of some suppliers. Despite a weakening of the negative impact of the COVID-19 pandemic, we have seen a new source of turbulence in the form of the Russian invasion of Ukraine which has led to escalating energy costs and further material constraints. We have responded with a refinement in our supplier risk escalation process with an intent to strengthen the monitoring of the highest scored risks throughout 2023, coupled with improved supplier relationship management, continued dual sourcing and improving the capability of our supply teams. Whilst supply disruptions have been limited in 2022 and the outlook for 2023 is similar, we expect supplier price increases, due to even higher levels of inflation and energy costs.

Risk Register review

Following the annual review of the Risk Register, Principal Risks and the responses from the top-down risk review, 'Loss of Critical Supplier' was, following a similar rise last year, further elevated in priority in the Risk Register. 'Inability to Identify and Respond to Changes in Customer Needs' and 'Breach of legal and regulatory requirements, including Anti-Bribery and Corruption laws (ABC)' were consequently lowered in ranking.

Risk Management continued

Managing risks



The year-on-year trend for each Principal Risk was assessed and updated and risk appetite ratings validated for each of the Principal Risks. Each of the Principal Risks was also assigned a risk velocity rating. Further information relating to risk velocity can be found on page 95.

Climate change risks

Climate change risks are managed and assessed in the same way as all other risks. The focus and scrutiny with our stakeholders including investors, governments, organisations and consumers on the potential impact, likelihood and timing of climate change has increased in the last year. We believe we have a critical role to play in leading the decarbonisation of industrial processes, and our One Planet Strategy sets out the importance to the Group of capturing these opportunities. Our acquisition activity

in 2022, which includes the acquisitions of the Vulcanic and Durex Industries, further positions us favourably to capture the opportunities in the transition to a more sustainable, low carbon world. Although not a Principal Risk, Climate change has been elevated to risk 9 in our Risk Register in 2022. Our Group Director of Sustainability became a member of the Risk Management Committee in 2022 in recognition of the increasing importance of this risk. Following a comprehensive review, our description of this risk was updated in the Group Risk Register, aligning with the TCFD framework and recognising that climate change is not a singular risk, but a combination of physical and transitional risks that will emerge differently under various scenarios. For more information about the management of climate-related risks, please see our TCFD disclosures on pages 59 to 61.

Emerging risks

Following the disposal of our Russian operating companies, we are continuing to monitor the conflict in Ukraine and its subsequent impact on our Group, including rising energy costs, increasing inflationary pressures and corresponding interest rate rises in an effort to curb inflation. These risks have been partially offset by a reduction in COVID-19 related risks.

The Risk Management Committee and the Board are actively involved in assessing emerging risks and over-the-horizon risks. This includes identifying future opportunities and risks that develop from changes in materials technology and nano technology. In 2022, an example of this was manifested in the Group's acquisition of the Cotopaxi business. Cotopaxi has been highly complementary to our Digital Strategy which enhances the way we deliver value to our customers. Their proprietary STRATA system has identified opportunities for energy savings for steam end user customers and we are expecting it to deliver similar efficiencies for our other two Businesses. It is vital that we keep our business current and able to use the latest know-how.

Further reading

Risk Management Committee Report

See pages 139 to 142

Our Viability Statement

See pages 44 to 45

Our Going Concern Statement

See pages 43 to 44

TCFD Disclosures

See pages 59 to 61

Principal Risks

The following pages set out the Group's Principal Risks, as validated by the Committee and describes the links to strategy, the mitigation measures, the velocity of each risk and the appetite for each risk. The Trend column sets out the change in direction of the risk, if any, since 2021.

Principal Risks are those risks that we have identified as currently most relevant to the Group.

Principal Risks

- 1 Economic and political instability
- 2 Significant exchange rate movement
- 3 Cybersecurity
- 4 Loss of manufacturing output at any Group factory
- 5 Failure to realise acquisition objectives
- 6 Loss of critical supplier
- 7 Breach of legal and regulatory requirements (including ABC laws)
- 8 Inability to identify and respond to changes in customer needs

Strategic Theme

- 1 Increase direct sales effectiveness through market sector focus
- 2 Develop the knowledge and skills of our expert sales and service teams
- 3 Broaden our global presence
- 4 Leverage our R&D investments
- 5 Optimise supply chain effectiveness
- 6 Operate sustainably and help improve our customers' sustainability

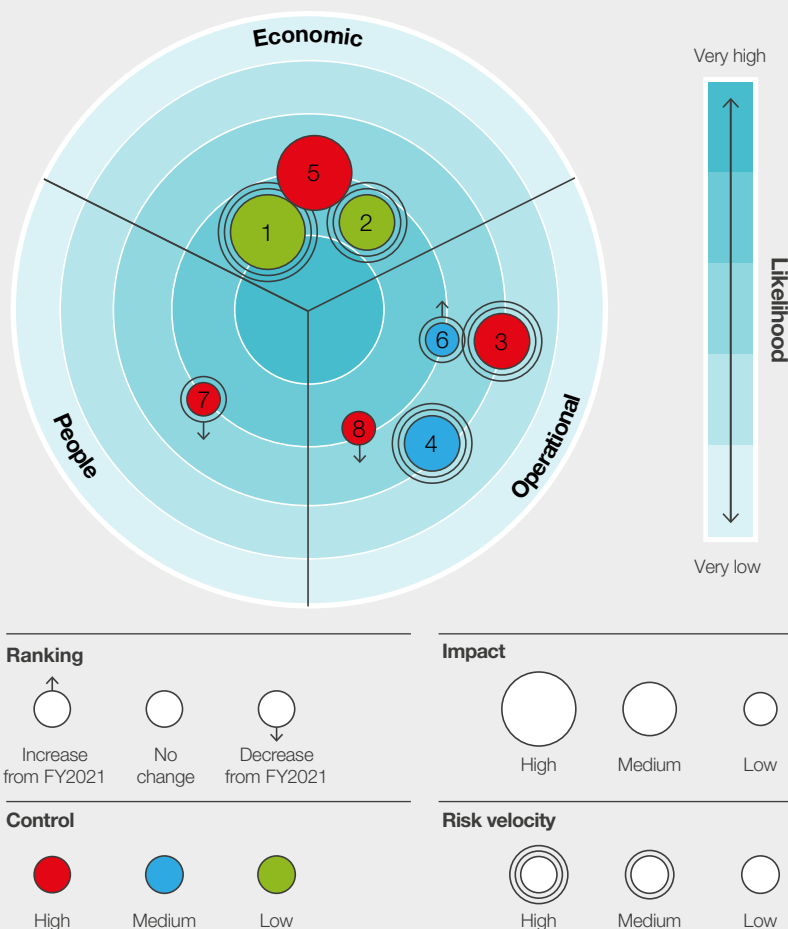
Risk appetite ratings defined:

Very low	Following a marginal-risk, marginal-reward approach that represents the safest strategic route available.
Low	Seeking to integrate sufficient control and mitigation methods in order to accommodate a low level of risk, though this will also limit reward potential.
Balanced	An approach which brings a high chance for success, considering the risks, along with reasonable rewards, economic and otherwise.
High	Willing to consider bolder opportunities with higher levels of risk in exchange for increased business payoffs.
Very high	Pursuing high-risk, sometimes unproven options that carry with them the potential for high-level rewards.


Risk velocity ratings defined:

Velocity	Description	Timeframe
Very low	Very slow impact, response time adequate to mitigate effects	Felt after 12 months
Low	Slow impact, robust response to strategy may mitigate effects	Felt within 12 months
Medium	Moderate time to impact, swift and robust response may mitigate effects	Felt within 6 months
High	Fast impact, immediate response may mitigate effects	Felt within a month
Very high	Very rapid impact with little or no warning. Limited time to respond and mitigate effects	Felt within a week

Risk likelihood, control and impact



Risk Management continued




Principal Risk and why it is relevant	Trend	Risk velocity	Key mitigation, sponsor and explanation of change	Risk appetite rating	Rationale for rating
1. Economic and political instability					
The Group operates worldwide and maintains operations in territories that have historically experienced economic or political instability, including regime changes. In addition to the potential impact on our local operations, this instability also increases credit, liquidity and currency risks.		<input type="radio"/> Very high <input checked="" type="radio"/> High <input type="radio"/> Medium <input type="radio"/> Low <input type="radio"/> Very low	<ul style="list-style-type: none"> Strong internal controls, including internal audit and appropriate insurance Operating in line with the Group Treasury Policy, including currency exchange hedging and cash pooling arrangements Externally-facilitated scenario planning exercises Resilient business model, strengthened by regular strategic business reviews Well spread business by geography and sector Increased liquidity through more headroom on Group debt facilities <p>Executive sponsor: Group Chief Executive</p> <p>Change: This risk has increased due to escalating global political uncertainties and a weakening macroeconomic outlook, partially offset by declining COVID-19 related risks.</p>	<input type="radio"/> Very high <input checked="" type="radio"/> High <input type="radio"/> Balanced <input type="radio"/> Low <input type="radio"/> Very low	We have the background and know-how to successfully manage the unique challenges in economically and politically volatile territories. We are willing to accept these challenges where opportunities for growth exceed the impact of this risk.
				Link to strategic theme:	<div> <div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> </div>

2. Significant exchange rate movement

The Group reports its results and pays dividends in sterling. Sales and manufacturing companies trade in local currency. With our local presence in markets across the globe, the nature of our business necessarily results in exposure to exchange rate volatility.		<input checked="" type="radio"/> Very high <input type="radio"/> High <input type="radio"/> Medium <input type="radio"/> Low <input type="radio"/> Very low	<ul style="list-style-type: none"> Maintain the spread of manufacturing across currency areas Consideration of exchange rate exposures in the manufacturing strategy Forward cover where appropriate and in line with the Group Treasury Policy on hedging currency exchange movements Focus on reducing manufacturing cost, including sourcing materials from cheaper markets, and purchasing in the UK in foreign currency Deployment of price management tools <p>Executive sponsors: Chief Financial Officer</p> <p>Change: No change</p>	<input type="radio"/> Very high <input type="radio"/> High <input checked="" type="radio"/> Balanced <input type="radio"/> Low <input type="radio"/> Very low	We take a balanced view of this risk as the risk arises as a direct result of our global presence, but our geographic spread means we are not wholly dependent on any one currency.
				Link to strategic theme:	<div> <div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> </div>

Key

Trend



-  Risk increased
-  No change to risk
-  Risk decreased

Link to strategic theme

-  Direct link
-  Indirect link
-  No link

Principal Risk and why it is relevant	Trend	Risk velocity	Key mitigation, sponsor and explanation of change	Risk appetite rating	Rationale for rating
3. Cybersecurity					
Cybersecurity risks include theft of information, malware, ransomware and compliance with evolving statutory and legislative requirements. Risks may manifest through a direct attack on our business or through our supply chain.		<input checked="" type="radio"/> Very high <input type="radio"/> High <input type="radio"/> Medium <input type="radio"/> Low <input type="radio"/> Very low	<ul style="list-style-type: none"> Global assessment of our IT environment against UK cyber essentials framework and prioritising actions for improvement Deploying security tools to limit the impact and spread of ransomware System access rights regularly reviewed Further strengthening of security for centrally-managed systems for heightened protection and consistency Mandatory cyber awareness training is delivered to all staff electronically each year <p>Executive sponsors: Group IS Director</p> <p>Change: This risk has increased due to rising geopolitical tensions and sophisticated, state-backed cyber attacks.</p>	<input type="radio"/> Very high <input type="radio"/> High <input type="radio"/> Balanced <input type="radio"/> Low <input checked="" type="radio"/> Very low	Concerns of potential impact on the business, in addition to the important considerations surrounding protection of personal data, reinforce our commitment to implement and maintain robust security measures across the Group.
				Link to strategic theme:	

4. Loss of manufacturing output at any Group factory

The risk includes loss of output as a result of natural disasters, industrial action, accidents or other causes. Loss of manufacturing output from our larger plants risks serious disruption to Group sales.		<input type="radio"/> Very high <input checked="" type="radio"/> High <input type="radio"/> Medium <input type="radio"/> Low <input type="radio"/> Very low	<ul style="list-style-type: none"> New facility for Watson-Marlow Fluid Technology Solutions in North America Expansion of capacity planned for Thermocoax in France and BioPure in the UK Capacity planning and holding stock in sales companies Conducting audits/inspections Annual risk assessments and business continuity planning Reviewing and maintaining appropriate insurance cover Continuing commitment to employee policies, ensuring satisfactory benefits and regular communication with all employees Comprehensive manufacturing footprint project undertaken Investment in new sites to open alternative lines of supply <p>Executive sponsors: Managing Directors of Steam Specialties, Electric Thermal Solutions and Watson-Marlow Fluid Technology Solutions</p> <p>Change: No change</p>	<input type="radio"/> Very high <input type="radio"/> High <input type="radio"/> Balanced <input checked="" type="radio"/> Low <input type="radio"/> Very low	While we have mitigated this risk through a geographic spread of factories, calculated replication of capacity and management of stock, we have a low appetite for this risk due to the potential negative consequences to the Group and its customers.
				Link to strategic theme:	

Risk Management continued

Principal Risk and why it is relevant	Trend	Risk velocity	Key mitigation, sponsor and explanation of change	Risk appetite rating	Rationale for rating
5. Failure to realise acquisition objectives					
<p>The Group mitigates this risk in various ways, including through comprehensive due diligence, professional advisers, contractual protections and comprehensive integration planning. However, there are some variables that are difficult to control, such as adverse economic conditions, or the loss of key employees, which could impact acquisition objectives.</p>	→	<input type="radio"/> Very high <input type="radio"/> High <input type="radio"/> Medium <input type="radio"/> Low <input checked="" type="radio"/> Very low	<ul style="list-style-type: none"> • Regular review of acquisition criteria in line with strategic plan • Board approval of integration plans for major acquisitions • Scrutiny of targets and implementation plans by external advisers and internal key players • Use of retainer/escrow to provide protection against warranty claims • Use of insurance as protection against seller breach and non-disclosure • Ensuring valuation models show a healthy return on investment • Regular monitoring of performance by the Board against the approved investment case <p>Executive sponsors: Group Chief Executive</p> <p>Change: No change</p>	<input type="radio"/> Very high <input type="radio"/> High <input type="radio"/> Balanced <input checked="" type="radio"/> Low <input type="radio"/> Very low	<p>Thorough planning and proper due diligence can mitigate many of the potentially risky aspects of an acquisition. Implementation plans must be well-developed and carefully pursued to achieve the full strategic and financial benefits.</p>

Link to strategic theme:




6. Loss of critical supplier


<p>This risk relates to the loss of a critical supplier that could result in manufacturing constraints and delayed deliveries to customers.</p>	↑	<input type="radio"/> Very high <input type="radio"/> High <input checked="" type="radio"/> Medium <input type="radio"/> Low <input type="radio"/> Very low	<ul style="list-style-type: none"> • Improved supplier risk assessments and actions to create supply chain alternatives • Supplier selection processes have been improved with increased importance placed on product quality, product delivery, financial stability and supplier sustainability • Supplier development and supplier management resources have been strengthened • As part of our procurement strategy, we are securing more robust sources of supply • Dual sourcing strategies for critical suppliers and critical parts give us greater flexibility in our supply chain • Continued with global market assessment exercises to establish correct price points and mitigate price increases <p>Executive sponsors: Business Supply Heads</p> <p>Change: This risk has increased on account of continuing supply chain headwinds, affected by zero-COVID policy in China (which has now ended) and the Russia/Ukraine crisis, and the impacts will continue into 2023, as global supply chains look to realign to more secure sources of supply.</p>	<input type="radio"/> Very high <input type="radio"/> High <input type="radio"/> Balanced <input checked="" type="radio"/> Low <input type="radio"/> Very low	<p>Our expenditure with suppliers is not heavily concentrated in any one supplier or group of suppliers. Therefore, while the loss of a critical supplier would present logistical difficulties and would likely lead to delayed deliveries, the impact would be limited in terms of number of products and customers affected.</p>
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Link to strategic theme:



Principal Risk and why it is relevant	Trend	Risk velocity	Key mitigation, sponsor and explanation of change	Risk appetite rating	Rationale for rating
7. Breach of legal and regulatory requirements (including ABC laws)					
We operate globally and must ensure compliance with laws and regulations wherever we do business. As we grow into new markets and territories we continually review and update our operating procedures and ensure our colleagues are fully informed and educated in all applicable legal requirements, such as with respect to anti-bribery and corruption (ABC) legislation. Breaching any of these laws or regulations could have serious consequences for the Group.		<input type="radio"/> Very high <input type="radio"/> High <input checked="" type="radio"/> Medium <input type="radio"/> Low <input type="radio"/> Very low	<ul style="list-style-type: none"> • Ongoing global monitoring of commercial arrangements and agreements, with appropriate professional advice • Established procedures to maintain accreditations • Annual Group-wide ABC training improved with a new programme • Multi-lingual, multi-national secure whistle-blowing hotline • Group Litigation Report and ongoing monitoring of cases • Regular updates on Corporate Governance and Stock Exchange rules • General Data Protection Regulation compliance plan in place • Conducting supplier audits • Engaging suppliers to commit to compliance with the principles of the Supplier Sustainability Code <p>Executive sponsors: Group General Counsel</p> <p>Change: No change</p>	<input type="radio"/> Very high <input type="radio"/> High <input type="radio"/> Balanced <input type="radio"/> Low <input checked="" type="radio"/> Very low	We abide by the laws, rules and regulations of the jurisdictions in which we operate and given the serious consequences for breaching these laws, rules and regulations, we have a very low appetite for this risk.
				Link to strategic theme:	<div> <div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> </div>

8. Inability to identify and respond to changes in customer needs

This risk could lead to a reduction in demand from a failure to respond to changes in the needs of customers or technology shifts.		<input type="radio"/> Very high <input type="radio"/> High <input type="radio"/> Medium <input type="radio"/> Low <input checked="" type="radio"/> Very low	<ul style="list-style-type: none"> • Stronger presence of sales engineers, compared with competitors, in the marketplace • Acquisition of Durex Industries and the Vulcanic Group to better position the Group in meeting customer demand in the transition to more sustainable industries • New product ideas generated by market development managers from close alignment with sales engineers and customers • Sales and competitor analyses undertaken to identify any trends or technology shifts • Digital strategies for each Business are either underway or under preparation with longer term implications on investment, resource levels, new skills and need to develop external partnerships • A Group Digital Director leading the Group Digital Strategy • Acquisition of Cotopaxi to further accelerate the Group digital learning curve <p>Executive sponsors: Managing Director, Steam Specialties</p> <p>Change: No change</p>	<input type="radio"/> Very high <input type="radio"/> High <input type="radio"/> Balanced <input checked="" type="radio"/> Low <input type="radio"/> Very low	The Group continues to focus on its market awareness, invests in technical and sales knowledge via the Spirax Sarco Academy and, through Customer first sectorisation, seeks to be more closely attuned to its customers. There is a good level of control effectiveness, but a low appetite for this risk.
				Link to strategic theme:	<div> <div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> </div>

Our Governance

Welcome to our 2022 Governance Report. In this report you can see the composition of our Board and our Executive Committee and find out how our governance framework for planning, implementation and monitoring of Company performance ensures we are well placed to respond and adapt to the changing environment.



Our report outlines the Board's key areas of focus in 2022.

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Corporate Governance Statement

The Disclosure Guidance and Transparency Rules (DTR) require a company to include in its Directors' Report a governance statement containing certain information. However, as allowed by DTR 7.2.9, we have chosen to set out the information in this governance section of the Annual Report. The Group's risk management and internal control framework and the Principal Risks and uncertainties, described on pages 93 to 99, the Directors' Report on pages 169 to 172 and the various Committee Reports on pages 114 to 147 also contained required information and are incorporated into this statement by reference.

Leading effective governance to ensure the successful management of the Group across its diverse Businesses.

The ways in which we have aligned governance to strategy to ensure compliance with some of the key elements of the Code and our leadership on these matters are highlighted below.

Company Purpose

See inside front cover

Strategy

See pages 22 to 37

Business model

See pages 22 and 23

Stakeholder engagement

See pages 111 to 113

Culture and Values

See pages 21 and 109

Sustainable thinking

See pages 46 to 71

Resource/ capital allocation

See pages 41 to 44

Workforce practices

See pages 48 to 55
and 114 to 117

Effective controls and framework

See pages 93 to 99
and 128 to 142

Board leadership and Company Purpose

Chair's introduction



“ESG has long been at the heart of our Group’s core activities. The Board is pleased to have been directly involved with refreshing our One Planet: Engineering with Purpose Sustainability Strategy in 2021 and overseeing its implementation in 2022. We have been more challenging with our ESG goals and targets and equally our direct involvement continues to increase given its importance to shareholders and wider stakeholders.”

Jamie Pike
Chair

Our Purpose

Our Purpose, to create sustainable value for all our stakeholders as we engineer a more efficient, safer and sustainable future, helps our Group companies to stay relevant in a fast-changing world. It drives our direction and priorities and connects us with the communities of which we are part. Our Purpose also provides our colleagues with the clarity needed to respond quickly and with agility as part of ONE Group.

Environmental, Social and Governance (ESG) oversight

I would like to take the opportunity this year to set out in detail the Board’s direct and comprehensive oversight of ESG matters, which are essential to the execution of our Group Strategies.

ESG and Health and Safety updates are always the first two operational matters addressed by the Board at each meeting. Details of matters discussed at meetings held in 2022 can be found on pages 108 and 109. Sustainability reports will include updates on the One Planet Strategy and Everyone is Included plan and progress against sustainability KPIs.

The Board held various meetings with the Group Director of Sustainability, Group Sustainability Reporting Manager, Sustainability Data Manager and the Group’s Chief Financial Officer (as chair of the net zero initiative), to:

- discuss the approach to sustainability, performance and progress
- review the Annual Report ESG disclosure metrics (assessed by risk)¹
- review and discuss ESG data governance processes and agreed best practice improvements

- discuss and supervise the audit and assurance of ESG data (including extending the scope to include water use)
- review and supervise the Task Force on Climate-related Financial Disclosures (TCFD)

Subsequent to these meetings, updates and reports were presented to the Audit Committee for discussion and where appropriate, recommendations to the Board for inclusion in the Annual Report & Accounts on the matters listed above.

During 2022 there were three meetings of the Colleague Engagement Committee (CEC) – previously known as the Employee Engagement Committee. The Committee’s principal remit is to ensure that the voice of the workforce is considered in all aspects of the Board’s thinking and to understand and support colleague engagement activities across the Group. The CEC also has a clear programme and agenda for meeting self-selected groups across the business, without management present, in order to understand better their roles and gain their feedback on the organisation and their experience working for the Company.

In 2022, the CEC facilitated two meetings on behalf of the Remuneration Committee, in addition to their formal programme of meetings, to better understand Executive and colleague pay arrangements as part of the review of the Company’s Remuneration Policy which is due for reapproval by shareholders at the 2023 Annual General Meeting.

Full information of the CEC’s activities in this regard can be found in the CEC Report on pages 114 to 117 as well as in the Remuneration Committee Report on pages 143 to 168.

Section 172 Statement

The long-term success of our business is dependent on the way we work with all our stakeholders and continues to require effective engagement, constructive working practices and recognition of stakeholder views in order to create and sustain value for all.

In respect of Section 172 of the Companies Act 2006 (as amended by the Companies (Miscellaneous Reporting) Regulations 2018), the Directors have prepared a statement describing how they have had regard to the matters set out in Section 172, when performing their duty to promote the success of the Company see pages 111 to 113.

Board changes

On 31st January 2023, we reported that, for personal reasons, Olivia Qiu stepped down as a Non-Executive Director. On behalf of our shareholders, the Board acknowledges with gratitude Olivia’s significant contribution since her appointment. We respect her decision to step back from some external commitments at this time and we wish her all the very best for her future.

In line with the succession planning undertaken by the Nomination Committee, we have initiated the process to appoint another Non-Executive Director with the skills and experience required to support the implementation of our strategies in line with our commitments to inclusion and diversity.

¹ 2021 Annual Report & Accounts page 129

Board composition

As illustrated in the Board biographies on pages 104 and 105 and the Board at a glance (as at 31st December 2022) on page 107, we continue to ensure that our Board is diverse ethnically, culturally and in terms of gender and we have always been transparent in our reporting of Board composition. The Financial Conduct Authority (FCA) has introduced new listing rules, effective for accounting periods starting on or after 1st April 2022, to create more transparency around this matter. Whilst we already disclose much of the information already, we have chosen to include all the required information voluntarily this year. This can be found in the Nomination Committee Report on pages 124 to 127.

Board Performance

The Chair confirms that, following a formal performance evaluation, each Director's performance continues to be effective and each Director demonstrates commitment to the role. The Senior Independent Director conducted a review of the performance of the Chair as required by the Code and the review concluded that the Chair's performance was good.

Outcome of 2022

We consider that our performance was strong in 2022 whilst we continued to make the significant investments in our future growth. More information on the 2022 Group performance can be found in the Strategic Report on pages 1 to 99.

Fair, balanced and understandable

In accordance with the Code, the Directors confirm that they consider the Annual Report & Accounts, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's financial position, performance, business model and strategy.

Statement by the Directors on compliance with the Code

The Code applied to the Group for the financial year ended 31st December 2022. The Board considers that it has complied, in full, with the provisions of the Code other than provision 38 (Executive Directors' pension contributions) where, in line with the 2020 Remuneration Policy, all Executive Directors will have moved to the new level of 10% of base salary by the end of 2022.

With effect from 1st January 2023 we are now fully compliant with all Code provisions following the final step change bringing the incumbent Group Chief Executive's pension contributions in line with the wider colleague maximum contributions (more information on this can be found in the Remuneration Report on page 145. We detail our compliance, on a Code provision-by-provision basis, in the Corporate Governance section on our website, www.spiraxsarcoengineering.com.

Proxy advisory firms

The Company engages with a number of proxy advisory firms ahead of publication of its Notice of AGM and publication of their proxy reports in order to, where possible, align proposed resolutions with investor expectations.

Annual General Meeting

The 2023 Annual General Meeting (AGM) is scheduled to take place on Wednesday, 10th May 2023 and an explanation of the resolutions sought, is set out in the Circular posted on our website and sent to shareholders in the format selected by them. As required by the Code the resolutions regarding each Director's appointment or reappointment will be accompanied by information on why their contribution is, and continues to be, important to the Company's long-term sustainable success. In 2023 we will be refreshing our Remuneration Policy and modifying our Performance Share Plan following a shareholder consultation.

This year we are pleased to reinstate a physical AGM meeting and welcome our shareholders in person. I look forward to meeting shareholders at the AGM on Wednesday 10th May 2023.

Jamie Pike
Chair

8th March 2023

Further reading

➤ The Notice of Annual General Meeting and all governance-related policies and procedures are available to view and download: www.spiraxsarcoengineering.com

Board focus for 2023

- Continue to support the Group Executive Committee and the three Businesses with their growth plans through the implementation of their medium-term plans.
- Key management presentations and discussions are planned in 2023 across all of our Businesses, including Business Digital strategies and Group Strategic risks
- Further consolidate our position through both organic and inorganic growth
- Focus on ESG and climate change
- Board succession planning

Board leadership and Company Purpose continued

Board of Directors

At year end 2022



Jamie Pike MBA, MA, MIMechE

Chair
Appointed to the Board

May 2014

Areas of experience

Engineering, international business, senior management, M&A, strategy

Background

Jamie Pike joined Burmah Castrol in 1991 and was Chief Executive of Burmah Castrol Chemicals before leading the Foseco buyout in 2001 and its subsequent flotation in 2005. Prior to joining Burmah, he was a partner at Bain & Company. Jamie was educated at Oxford, holds an MBA from INSEAD and is a Member of the Institute of Mechanical Engineers.

External appointments

Non-Executive Director and Chair designate of XP Power Limited.



Nicholas Anderson BSc Eng., MBA

Group Chief Executive
Appointed to the Board

March 2012. Appointed Chief Operating Officer in August 2013 and Group Chief Executive in January 2014

Areas of experience

Engineering, international business, senior management, M&A, operational, strategy, sales and marketing, industrial

Background

Before joining the Group in 2011 as Director EMEA, Nicholas Anderson was Vice-President of John Crane Asia Pacific (part of Smiths Group plc), based in Singapore and President of John Crane Latin America, based in the USA. Previously, Nicholas held senior positions with Alcoa Aluminio in Argentina and Brazil, starting his career with the Foseco Minsep Group plc in Brazil.

External appointments

Non-Executive Director of BAE Systems plc.



Nimesh Patel BSc

Chief Financial Officer
Appointed to the Board

September 2020

Areas of experience

International business, senior management, M&A, finance and accounting, industrial, pensions, tax and treasury

Background

Before joining the Group in 2020, Nimesh Patel was Chief Financial Officer of the De Beers Group. Prior to that he was Group Head of Corporate Finance at Anglo American plc, leading a team based in London and Johannesburg. Previously, Nimesh spent 14 years in investment banking at both JP Morgan and as a Managing Director at UBS.

External appointments

Co-Chair of the FTSE Women Leaders Review and Trustee of Barts Charity



Angela Archon MSc SE, BSc CEng

Independent Non-Executive Director
Appointed to the Board

December 2020

Areas of experience

Engineering, operational, strategy, international, M&A, manufacturing, senior management

Background

Angela Archon held various senior executive positions while employed by IBM Corporation representing them for eight years as Board Liaison for the National Action Council for Minorities in Engineering. She is a member of the Engineering Honour Society and earned a Professional Engineer's license. Until December 2022, she was a non-executive director of Switch Inc., listed on the New York Stock Exchange.

External appointments

CommonSpirit Health, Non-Executive Director of DT Midstream Inc.



Peter France

Independent Non-Executive Director
Appointed to the Board

March 2018

Areas of experience

Engineering, international, senior management, M&A, operational, strategy, sales and marketing, industrial, manufacturing

Background

Peter France was Chief Executive Officer of Rotork plc from 2008 to 2017. He also gained wide experience in a number of key roles at Rotork plc from 1989 to 2008 including acting as Chief Operating Officer and Director of Rotork South East Asia based in Singapore.

Peter is a Chartered Director of the Institute of Directors.

External appointments

Chief Executive Officer of ASCO Group Limited.



Caroline Johnstone BA, CA

Independent Non-Executive Director
Appointed to the Board

March 2019

Areas of experience

International, M&A, finance, people

Background

Caroline Johnstone has 40 years' experience working with large global organisations on mergers and acquisitions, culture change and cost optimisation. She was a partner in PricewaterhouseCoopers (PwC) and sat on the UK Assurance Board as people partner. Caroline is a member of the Institute of Chartered Accountants of Scotland.

External appointments

Chair of Synthomer plc, Non-Executive Director and Audit Committee Chair of Shepherd Group Ltd, a private company which owns Portakabin Limited and sits on the Governing Board of the University of Manchester.



Richard Gillingwater MA
**Independent Non-Executive Director
 & Senior Independent Director**
Appointed to the Board

March 2021

Areas of experience

International business, investment, finance and non-executive experience

Background

Until December 2022, Richard Gillingwater was Chair of Janus Henderson Group plc. He has also held a range of executive positions within global investment banks including Kleinwort Benson, Credit Suisse and Barclays de Zoete Wedd. Richard holds an MBA from the International Institute for Management Development, a BA Law from Oxford University and is qualified as a solicitor.

External appointments

Senior Independent Director of Whitbread plc and Governor of the Wellcome Trust.



Andy Robson LLB Law Barrister
**Group General Counsel and
 Company Secretary**
**Appointed as Group General Counsel
 and Company Secretary**

June 2012

Areas of experience

International law, corporate governance, international business development including M&A, business restructuring, information technology, contract negotiation

Background

Before joining the Group in 2012, Andy Robson was General Counsel and Company Secretary of RM plc, a role he held for 14 years. Prior to this, Andy was European General Counsel with Cendant Corporation headquartered in Baltimore, USA and worked in the USA for Blackstone Trust.

Key

- A Audit Committee
- N Nomination Committee
- EE Colleague Engagement Committee
- R Remuneration Committee
- RK Risk Management Committee
- Denotes Committee Chair
- ▶ Executive
- ▶ Non-Executive
- ▶ Company Secretary
- ▶ Group Leadership Team
- Flag denotes country of citizenship

Further reading

- + **Read about our Board diversity, composition, succession and evaluation. See pages 124 to 127.**



Jane Kingston BA
Independent Non-Executive Director
Appointed to the Board

September 2016

Areas of experience

Engineering, international, senior management, operational, people, remuneration

Background

From 2006 until her retirement in December 2015, Jane Kingston served as Group Human Resources Director for Compass Group PLC. Prior to this, she served as Group Human Resources Director for BPB plc. Jane has worked in a variety of sectors, including roles with Blue Circle Industries plc, Enodis plc and Coats Viyella plc and has significant international experience.

External appointments

Non-Executive Director and Remuneration Committee Chair of Inchcape plc.



Olivia Qiu PhD, BSc
Independent Non-Executive Director
Appointed to the Board

December 2020 to January 2023

Areas of experience

Engineering, international, digital transformation, innovation

Background

Olivia Qiu has held a range of executive positions with large global organisations including Chief Executive Officer and Board Director of Alcatel-Lucent Shanghai Bell. Olivia was previously a Non-Executive Director of Renault Group and Saint Gobain.

External appointments

Chief Innovation Officer with Signify (formerly Philips Lighting).

Due to personal reasons, Olivia stepped down from the Board on 31st January 2023.



Kevin Thompson BSc, FCA
Independent Non-Executive Director
Appointed to the Board

May 2019

Areas of experience

Engineering, international, senior management, M&A, strategy, finance, pensions, tax and treasury

Background

Kevin Thompson was Group Finance Director of Halma plc from 1998 to 2018, having joined Halma as Group Financial Controller in 1987. Kevin qualified as a Chartered Accountant with PricewaterhouseCoopers (PwC) and is a Fellow of the Institute of Chartered Accountants in England and Wales.

External appointments

Trustee of the Great Ormond Street Hospital Children's Charity.

Board leadership and Company Purpose continued

Our Group Executive Committee



Nicholas Anderson

Group Chief Executive

See Biography on Board of Directors page 104.



Nimesh Patel

Chief Financial Officer

See Biography on Board of Directors page 104.



Andy Robson

Group General Counsel and Company Secretary

See Biography on Board of Directors page 105.



Jim Devine

**Group HR Director
Appointed to the Group
Executive Committee**

February 2016

Background

Before joining the Group in 2016, Jim was Group HR Director at Chemring plc and prior to that held a range of senior HR roles at Centrica plc, Ford Motor Company and BAE systems.



Andrew Mines

**Managing Director, Watson-Marlow
Appointed to the Group
Executive Committee**

November 2019

Background

Prior to joining the Group, Andrew held the position of Executive Vice President, Global Construction Products of Illinois Tool Works Inc. (ITW) and was a member of the Group Executive Leadership Team. Andrew had a 23-year career with ITW comprising engineering, sales, manufacturing and senior roles in global Automotive and Construction sectors.



Armando R. Pazos

**President, Electric Thermal Solutions
Appointed to the Group
Executive Committee**

December 2021

Background

Armando joined the Group in March 2020 as the Vice President of Global Sales and joined the GEC in December 2021 following his promotion to President and Managing Director of the Electric Thermal Solutions Business. Prior to this, Armando was at Ingersoll Rand, an industrial global manufacturer of tools, pumps, and air compressors, for 24 years.



Sarah Peers

**Group Director of Sustainability
Appointed to the Group
Executive Committee**

October 2022

Background

Sarah joined the Group in 2013 as Group Head of Corporate Communications and was appointed Group Head of Sustainability in July 2020 and is now Group Director of Sustainability. Prior to joining the Group, Sarah worked as a qualified teacher. Sarah holds a Doctorate in Historical Geography (specialising in early industrial labour history) from the University of Oxford.



Maurizio Preziosa

**Managing Director, Steam Specialties
Appointed to the Group
Executive Committee**

January 2021

Background

Maurizio joined Spirax-Sarco Engineering Group in 2011 as Managing Director of Spirax Sarco Italy and developed his career in the Group by assuming the role of Regional General Manager Southern Europe, Global Divisional Director Gestra, up to the appointment at Group Managing Director Steam Specialties in 2021. Prior to joining Spirax-Sarco Engineering Maurizio worked in ABB Group with different sales management and general management roles.

The Board at a glance

At year end 2022

Composition and skills

Expertise and experience

Core expertise



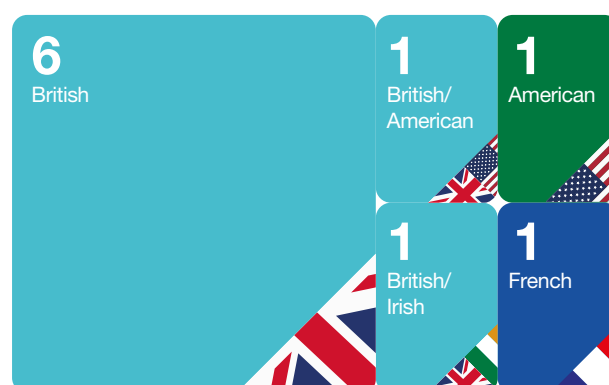
Length of service



5yrs 10mths
Average length of service

Board makeup

Nationality



Gender diversity



Ethnic diversity



Board and Committee attendance

	Board	Audit	Remuneration	Nomination	Colleague Engagement	Risk ¹
Jamie Pike	6/7 ³	–	–	6/7 ³	3/3	–
Nicholas Anderson	7/7	–	–	–	–	5/5
Richard Gillingwater	7/7	5/5	5/5	7/7	–	–
Nimesh Patel	6/7 ²	–	–	–	–	5/5
Jane Kingston	7/7	–	5/5	7/7	3/3	–
Kevin Thompson	7/7	5/5	5/5	7/7	–	–
Caroline Johnstone	7/7	5/5	–	7/7	3/3	–
Peter France	7/7	5/5	–	7/7	3/3	–
Angela Archon	7/7	–	5/5	7/7	3/3	–
Olivia Qiu	6/7	4/5	–	6/7	3/3	–

How the Board spent its time



1 The Risk Committee consists of the Executive Directors, members of the GEC and other key individuals, full details can be found on page 139.

2 Attendance at Management Training Course

3 Absence due to a prior commitment, however fully briefed the delegate chair

Board leadership and Company Purpose continued

Board activities

Board and Committee meetings during the year

Ordinarily the Board meets seven times a year and then on an ad hoc basis as required. In the year ending 31st December 2022, in addition to the seven scheduled meetings of the Board, there were two ad-hoc meetings to discuss specific topics arising outside of the formal Board and Committee schedule. These meetings specifically addressed the acquisitions of Durex Industries and the Vulcanic Group of Companies. Attendance at scheduled Board and Committee meetings is set out in the table on page 107. Other senior Executives and Non-Executive Directors (where they are not formal Committee members) attended by invitation.

All Directors are expected to attend all Board meetings and relevant Committee meetings unless prevented by prior commitments, illness or a conflict of interest. Directors unable to attend specific Board or Committee meetings are sent the relevant papers and asked to provide comments in advance of the meeting to the Chair of the Board or Committee.

In addition, all Board and Committee members receive the minutes of meetings as a matter of course.

Board activities

The Board is collectively responsible for the long-term success of the Company, its strategy, governance and internal controls and is accountable for its activities. The Board ensures good governance practices are embedded throughout the Group as they are an integral part of running a successful business. This specifically includes a focus on Environmental Social and Governance (ESG) matters.

To support this, the Board considers reports on the key activities of the Group and reports from the Chairs of the Audit, Nomination, Remuneration and Colleague Engagement Committees as appropriate at each scheduled Board meeting. It also receives information on important forthcoming events, reports on environmental, sustainability and health & safety matters, on strategy, investor relations and legal affairs.

The Chair, with assistance from the Group General Counsel and Company Secretary, is responsible for the governance arrangements. This includes meeting agendas, timely information flows and facilitating dialogue between Executive and Non-Executive Directors, to encourage an open and supportive culture.

Board agendas are carefully planned to ensure focus on the Group's strategic priorities and key monitoring activities, as well as reviews of significant issues. The Company Secretary is responsible for maintaining forward agendas for the Board and its Committees, ensuring that items are evenly distributed and scheduled at the appropriate times of the year for timely consideration. Agenda timings are proactively managed to enable sufficient time for consideration of items.

The Board regularly receives papers and presentations from senior management, giving the Board the opportunity to meet colleagues below Board level. This helps to embed a positive attitude to good governance in the Company's culture and ensures that processes and procedures are adhered to by demonstrating the Board's desire to ensure they have robust information on which to make sound decisions and carry out their statutory duties.

As per best practice, our Non-Executive Directors meet with Deloitte, (external auditor) and Korn Ferry, (independent remuneration consultants), separately from our Executive Directors after every Board meeting. The Colleague Engagement Committee meets with groups of colleagues separately from management. More information about these meetings can be found on pages 114 to 117.

Annually the Board combines a scheduled Board meeting with further meetings focusing on strategic development and to review the Group's longer term outlook. At this meeting members of the Group Executive Committee present strategy papers for their business areas including financial, technology, organic and inorganic growth and stakeholder engagement. On ESG matters, the Group Director of Sustainability presents updates on progress with the implementation of the One Planet Strategy at every Board meeting and the Group Head of Safety regularly attends Board meetings. In addition, the Board has been actively involved in the setting of goals and targets relating to ESG matters and their translation into performance-related metrics.

The Group's Whistle-blowing Policy and independently facilitated whistle-blowing platform enables colleagues to report any concerns related to unethical or illegal conduct within the business, anonymously if preferred. The Board receives reports from the Group General Counsel if any concerns have been raised via the policy.

Key Board activities

Strategy

- Reviewed and assessed medium-term plans for all three Businesses
- Reviewed Corporate Strategy
- Reviewed One Planet Strategy
- Two-day Strategy presentations
- Acquisitions of Durex Industries and the Vulcanic group of companies

Audit and risk

- Annual Risk Review
- Reviewed external financing facilities
- Withdrawal from Russia
- Deep-dive on Principal Risk 'Loss of manufacturing output'

Performance

- Monthly, quarterly, biannual and annual trading, as appropriate*
- Company share performance and shareholder/analyst feedback*
- Business reviews and senior management presentations
- Aflex, Spirax USA and BioPure performance and management review by Board during visits to operations

Culture and People

- Rising Talent presentations
- Group Talent update
- Full organisational and succession review across all senior management (to GEC-3)
- Colleague focus groups facilitated by Colleague Engagement Committee, which includes a number of NEDs
- Reviewed and approved the 2023 Diversity and inclusion goals
- Board Visits to Aflex Hose, Spirax USA and BioPure

ESG and Health and Safety

- Health and safety and sustainability strategy updates*
- Setting goals and targets for forthcoming year
- Reviewed and supervised the full year results for sustainability KPIs and progress against targets
- Received a sustainability recruitment update
- Received an update and reviewed the Group's 2021 TCFD disclosures
- Approved introduction of new Electric Company Vehicle Scheme
- Aflex Hose, Spirax Sarco USA and BioPure ESG review during Board visits

Leading with Purpose

Key Board activities continued

Governance

- Received updates by Committee Chairs*
- Received updates on all material legal and Governance matters*
- Compliance programmes update*
- Approval of 2022 Modern Slavery Statement
- Reviewed Bid Defence
- Refreshed Sanctions Policy
- Refreshed Whistle-blowing policy and approved colleague-wide awareness campaign

*Standing items at every scheduled Board meeting

Culture and Values

To achieve our Purpose, we rely on our widely understood and established business model and most importantly, a strong and supportive culture. Our culture comes from colleagues living our Values (see page 21) to provide mission-critical solutions for our customers' essential industrial processes.

Our Values guide Board decision-making. We prioritise Safety and through our engagement with each other and our Group colleagues we help improve Collaboration and Respect. We support Excellence and Customer Focus through an ongoing programme of investment – our decision-making is supported by site visits and management presentations. We promote and support Integrity through our transparent approach, as well as ensuring the Group has appropriate processes and controls which underpin strong corporate governance.

The Board was pleased to approve and oversee the implementation of the Group's Inclusion Plan in 2022, noting the impact it is already having across the Group. To further strengthen our focus on inclusion and equity leading to greater diversity in our Group, we approved a set of refreshed Diversity goals at our December meeting, which can be found on page 50.

“As a more inclusive Group we aim to unlock more of our creativity and innovation, drive superior performance as well as retain and attract new talent.”

Jamie Pike
Chair

The Board monitors and assesses culture using the following mechanisms:

Approach	How it links to culture
Colleague Engagement Committee	Insight (in form of business and HR leads presenting) from different business areas to understand what is happening locally as drivers to improve engagement and colleague experience. This enables discussion and visibility of how values are being lived through organisation and how aligned local culture is to the current and future strategic objectives.
Colleague survey	Gives global insight into colleague engagement and enablement that informs where focus/action needs to be placed to support the organisation's culture and the group's strategic goals.
Committee Focus Groups	Monthly touchpoints with groups of colleagues from different business areas globally to listen to the colleague voice, open dialogue and gain feedback on what it's like to work at Spirax/build assurance that the desired culture is being embedded within the organisation. This involves presenting key themes to the management teams to support any local/group activity that is required. During each of the operational visits detailed in board activities (Aflex, BioPure and Spirax Sarco USA) a Colleague Focus Group takes place with feedback to management and the CEC.
Internal Audit reports	Information from the internal audit team on the impact of policies and processes
Inclusion and Diversity	Review and supervision of Diversity goals on gender and ethnicity
Other	Whistle-blowing cases, grievance as well as 'speak-up' data, health and safety data (including near misses), promptness of payments to suppliers, attitudes to regulators,

Board leadership and Company Purpose continued

Leading with Purpose continued

Supporting framework

We have a comprehensive Code of Conduct and supporting policies, including Whistle-blowing, Anti-Bribery & Corruption, and Human Rights Policies, which set standards for ensuring that our business activities are conducted in a responsible manner for the benefit of our shareholders, customers, colleagues and suppliers. Spirax-Sarco Engineering has zero tolerance to any form of bribery and corruption, both within our Group and in any dealings with our customers, suppliers and other third parties. Our Anti-Bribery and Corruption Policy and Modern Slavery Statement can be found on our website, www.spiraxsarcoengineering.com/our-approach/corporate-governance.

All colleagues and Board members are expected to demonstrate and promote high standards of ethical business conduct and to know and follow our Code of Conduct with pride. Our Whistle-Blowing Policy and Safecall, our secure whistle-blowing facility, enables colleagues to make reports if they suspect anything inappropriate or experience any misconduct or wrongdoing in our business. The facility, hosted by Safecall, an independent provider, enables colleagues to report concerns via a web portal or by telephone, anonymously if preferred. We have a number of Group policies which are designed to help our colleagues balance their work and personal lives effectively, including flexible working.



Further reading

✚ Our Anti-Bribery and Corruption Policy and Modern Slavery Statement can be found on our website, www.spiraxsarcoengineering.com/our-approach/corporate-governance

Reinforcing our 'speak-up' culture globally

As part of ensuring our workplaces are safe and inclusive, we educate and support our colleagues to help us eliminate wrongful conduct. In 2022, this included reinforcing our message of zero tolerance through our anti-bribery and corruption training. The training is available in 16 languages and every colleague is required to complete the training annually, including new colleagues in Cotopaxi, Vulcanic and Durex Industries.

We also arranged awareness sessions during the year to help colleagues and particularly our senior managers to strengthen our resilience against instances of fraud or policy breaches.

To ensure all colleagues feel able to 'speak up' if they have a concern, we launched an awareness campaign to remind colleagues about how to access and use our whistle-blowing platform Safecall. The service enables colleagues to report potential wrongful conduct or illegal activity they are concerned about, while maintaining their own anonymity. Our multi-language Group campaign included an international directory of telephone numbers, posters and digital signage.

The Safecall service launched in 2015. In 2022 the service received 26 calls which have been reviewed by the Audit Committee.



Engagement with stakeholders and Board decision making

Section 172 Statement

The long-term success of our business is dependent on the way we work with all our stakeholders and continues to require effective engagement, constructive working practices and recognition of all stakeholder views in order to create and sustain value for all.

This section, from pages 111 to 113 forms our Section 172 statement. It describes how the Directors have performed their duty, in good faith, to promote the success of the company, for the benefit of our shareholders, including how they have considered and engaged with wider stakeholders, and how they have taken account of the matters set out in Section 172(1)(a) to (f) of the Companies Act 2006.

Considering these broad interests is an important part of the way the Board makes decisions, but at times the Board has to balance the competing interests of different stakeholders and other factors in delivering the Company's Strategy. Some examples of key decisions that the Board has taken and how it has taken into account the views and needs of wider stakeholder in making those decisions are described in the following pages.

Section 172(1)

(a) the likely consequences of any decision in the long-term



Engineering our difference to create sustainable, long-term value.

The Board always strives to act in the long-term interests of its key stakeholders to achieve our Purpose of creating sustainable value for all of our stakeholders by engineering a more efficient, safer and sustainable world.

Our strategy is designed to help us do better what we already do. The individual Business strategies drive the organic growth of the Group, whilst our corporate strategy drives inorganic revenue growth. Our sustainability strategy, **One Planet: Engineering with Purpose**, drives our Environmental, Social and Governance performance.

Relevant disclosures

Making our difference: Our ONE Group approach pages 20 to 27

Progress against our strategy pages 32 to 33

b) the interests of our colleagues



Engineering our difference for our colleagues, whoever they are and wherever they work.

During 2022, several Board meetings have been held at our manufacturing sites. We have visited Aflex Hose in their new facility in Huddersfield in the north of England, Steam Specialties at the USA site in Charlotte, South Carolina and BioPure at their new facility, near Portsmouth in the south of England. This has presented plenty of opportunity for the whole Board to connect with colleagues and local management as they showed us around the site and shared their initiatives with us.

As part of our commitment to inclusion, equity and diversity we launched our Group Inclusion Plan, **Everyone is Included**. To ensure a continued focus on inclusion and equity leading to greater diversity in our Group, the Board also approved a refreshed set of Diversity goals in 2022.

Nimesh Patel, Chief Financial Officer became a Co-Chair of the Women FTSE Leaders Review and Nicholas Anderson, Group Chief Executive, is now an Ambassador for the 25x25 campaign, which is seeking to achieve 25 female CEOs in the FTSE100 by 2025.

The Board supported the Group becoming signatories to the UN Women's Empowerment Principles and the UN LGBTI Standards of Conduct for Business, building on previous commitments, including as signatories to the Change the Race Ratio campaign which we began supporting in 2021.

Relevant disclosures

Engineering our difference for colleagues, pages 52 to 55

Sustainability Report, pages 46 to 73

Board leadership and Company Purpose continued

Engagement with stakeholders and Board decision making

Section 172(1)

(c) the need to foster business relationships with suppliers, customers and others



Engineering our difference for our customers and suppliers.

The Board understands the importance of fostering business relationships with our suppliers and customers. In 2022 the Board approved investment in the Group's manufacturing capabilities, supply capacity, factory modernisation and in IT systems and Digital to support sustainable growth that meets the needs of our customers today and tomorrow.

The launch of new-to-world decarbonisation solutions, created through a cross-Business collaboration between Steam Specialties and Electric Thermal Solutions, ensures we can support our customers to achieve their sustainability goals and protect the environment. Our collaborative and proactive approach has created mutual benefit across our global supplier networks during these economically challenging times.

We relaunched our Supplier Sustainability Code (SS Code) to support our collaborative journey towards a sustainable supply chain. We also launched our new third-party Supply Chain Sustainability Portal (Portal). The Portal forms the foundation of our supplier sustainability practices and will include our strategic suppliers allowing us to monitor their compliance with our SS Code and our sustainability standards more broadly.

Relevant disclosures

Engineering our difference for customers, pages 12 to 15

Engineering our difference for suppliers, pages 18 and 19

Sustainability Report, pages 46 to 73

(d) the impact of Spirax-Sarco Engineering's operations on the community and the environment



Engineering our difference for our local communities and the environment.

Our 'Giving today for a better tomorrow' community engagement framework has made a tremendous difference in our local communities.

Jamie Pike, Chair, and Caroline Johnstone, NED, are Independent Trustees on the Group Education Fund, founded by Spirax-Sarco Engineering, which meet throughout the year to review applications and confirm investment in educational causes.

Launch of the Group Education Fund and investment of more than £1 million in 51 projects is having a huge beneficial impact on our local communities.

All Board members participated in training on sustainability reporting in December 2022.

Given the increasing importance placed on sustainability by all stakeholders, the Board considered that the GEC should have greater representation in this area and Sarah Peers, Group Director of Sustainability, became a member of the GEC, effective 1st October 2022.

For more information on how the Board has managed Climate change risk please see pages 140 to 141.

Relevant disclosures

Engineering our difference for the environment, pages 16 and 17

Sustainability Report, pages 46 to 73

Board ESG oversight, Corporate Governance statement page 102

(e) the desirability of maintaining a reputation for high standards of business conduct



Engineering our difference with integrity.

We have a comprehensive Code of Conduct and supporting policies, including Whistleblowing, Anti-Bribery & Corruption, and Human Rights Policies, which set standards for ensuring that our business activities are conducted in a responsible manner for the benefit of our shareholders, customers, colleagues and suppliers. Spirax-Sarco Engineering has zero tolerance to any form of bribery and corruption, both within our Group and in any dealings with our customers, suppliers and other third parties we may deal with.

All colleagues and Board members are expected to demonstrate and promote high standards of ethical business conduct and to know and follow our Code of Conduct with pride. We provide a whistleblowing facility, which is underpinned by our Whistleblowing Policy, enabling colleagues to make reports if they suspect anything inappropriate or experience any serious misconduct or wrongdoing in our business.

Relevant disclosures

Supporting framework, Corporate Governance statement page 110

Board Decision:

Supporting our colleagues globally through the cost-of-living crisis

During 2022, we recognised the impact of the cost-of-living crisis on colleagues worldwide. Inflationary pressures globally meant retrospective pay benchmarking data was of limited value as it only reflected pay increase levels made prior to Russia's attack on Ukraine and the economic consequences that followed. In the 2023

planning process the Board decided not to use the market data and to ensure colleagues were properly supported in more challenging times, instead looked at predicted inflation as the key reference point for setting base pay increases. As a result, the Group set increments, country-by-country, at levels designed to materially replace the eroded purchasing power which, for the UK, meant a pay increase of 7.1% for the majority of UK colleagues. In line with shareholder guidance, the pay increase for Executive management was lower at 5.3%.

The Board were mindful of the impact of salary increases on the wider group of stakeholders. The Board considered the decision to provide cost-of-living salary increases was appropriate in order to maintain colleague engagement and motivation. The adverse impact on other stakeholders, such as customers and suppliers, was minimal in comparison to the positive impact for our colleagues.

Section 172(1)

(f) the need to act fairly as between our shareholders



Engineering our difference for our shareholders.

The Board recognises our shareholders and investors as an important stakeholder group.

Through monthly calls with shareholders and analysts, and by providing regular forums for meeting and communicating with shareholders, their advisers and the investment community, we ensure that we understand the views and opinions of our investors and are kept informed of any concerns that may arise. We are also able to give updates on our results and developments within our Businesses. We undertook around 160 investor meetings during the year, the calendar to the right shows shareholder events attended throughout the year.

The AGM is an opportunity shareholders and investors, including retail investors, to meet with the Directors and put questions to the Board. The Company proactively encourages its shareholders to vote, by way of a poll, at general meetings by providing electronic proxy voting for those who wish to vote online, and personalised proxy cards to those electing to receive them.

Relevant disclosures

Regulatory Disclosures pages 169 to 172

Board Decision:

Closure of manufacturing operations in Soissons, France.

Chromalox's manufacturing plant in Soissons (France) had been loss-making since the Company's acquisition by Spirax-Sarco Engineering in 2017. The financial underperformance could not be sustained, but the final decision to close Soissons was only taken after the Board conducted a full review including a s172 analysis of how their decision-making would impact our stakeholders, including colleagues, customers, suppliers and our shareholders.

The Board concluded that closing Soissons was in the best interests of the business while ensuring that appropriate mitigating actions were undertaken to help those stakeholders adversely affected by the decision. The local operating company entered into extensive consultations with all affected stakeholders. A care package for affected colleagues was developed and included support for mental health and wellbeing, outplacement assistance, retirement planning advice and reskilling for 61 affected colleagues. Following the decision to close the site, financial compensation provided was well above the statutory requirement.

As the facility was loss-making, the closure resulted in significant cost savings for ETS. Additional cost benefits came from relocating the French Sales Company to lower cost premises and selling fixed assets, such as land and buildings, enabling the Group to continue investing in the long term.

The impact on customers and suppliers was also considered. As the French Sales Company focus is on selling decarbonisation and heat trace products, which were not produced at Soissons, the Board concluded that the impact could be easily mitigated, not least with the proposed acquisition of Vulcanic, which was in process at the time and subsequently added four French manufacturing facilities to the Group. The local community will benefit from a revitalisation programme funded by amounts paid by Chromalox to the local authorities, to fund local projects which reduce the impact of business closures on the community.

2022 Shareholder engagement

January

- Berenberg 8th Annual Investor Relations Forum (virtual)

March

- Full Year Results Announcement and shareholder roadshows (virtual)
- Berenberg UK Corporate Conference 2022

May

- Trading Update

June

- Investor Roadshow – EUR
- ETS Investor Seminar
- Investor site visits to Cheltenham

July

- Investor site visits to Cheltenham

August

- Half Year Results Announcement and shareholder roadshows (virtual)

September

- Investor Roadshow – Europe
- Investor site visits to Cheltenham

October

- Investor Roadshow – USA

November

- Trading Update
- Investor site visits to Cheltenham
- JP Morgan Best of British Conference
- 2023 Remuneration Policy consultation

December

- Goldman Sachs 14th Annual Industrials Conference
- Investor site visits to Cheltenham
- 2023 Remuneration Policy consultation

Board leadership and Company Purpose continued

Colleague Engagement Committee Report



“One overriding reflection from my interactions with colleagues is how open everyone is – and how keen management is to hear feedback; this enables a focus on continuous improvement.”

Caroline Johnstone
Chair of Colleague Engagement Committee

Members

Our Colleague Engagement Committee comprises:

Membership

Caroline Johnstone
(Chair)

Angela Archon

Peter France

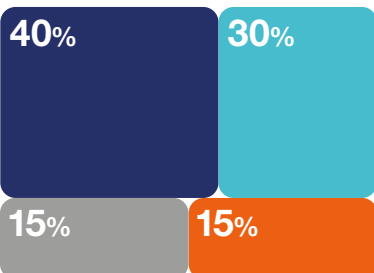
Jane Kingston

Jamie Pike

Olivia Qiu¹

¹ Olivia Qiu stepped down from the Board on 31st January 2023

How the Committee spent its time %



- Business updates on colleague engagement
- Direct Colleague Engagement follow-up
- Committee remit, planning and approach to engagement
- Current Engagement Practices and Survey results

This breakdown reflects topics addressed during Committee meetings, and does not include time spent during engagement events.

Committee role and responsibilities

The Colleague Engagement Committee (the Committee) was created by the Board in 2019, to create a more formal and regular, two-way, direct dialogue between the Board and colleagues, providing tangible insights and ensuring our Colleague's voices are heard in the Boardroom. The Committee Chair reports back to the full Board after each meeting with key findings and actions arising. The main duties of the Committee include:

- A programme of engagement activities to enable the Board (and Non-Executive Directors in particular) to have regular dialogue with colleagues
- Overseeing the approach to, the results and action-plans of each biennial global colleague engagement survey
- Regular engagement with senior management across the Group to understand ongoing and developing engagement practices
- Supporting the Audit Committee and the Board in ensuring that procedures in place for colleagues to raise concerns in confidence and anonymously are accessible and publicised

Key activities undertaken

The Committee met three times in 2022, details of attendance can be found on page 107. Our Group Chief Executive and Group Chief Financial Officer also attend most Committee meetings, which enables us to reflect and discuss colleague engagement with them. Other members of the Board and the Group Executive Committee (GEC) regularly attend the Committee. The Non-Executive Directors consistently take the opportunity to meet without management present.

During the year, the Committee had a full agenda which included:

- Eight structured discussion and feedback meetings with colleagues in different areas of the Group – we had a mix of virtual and in-person meetings and over 90 colleagues participated
- We invited leaders from across our Group to attend Committee meetings to discuss engagement activity and progress in their areas
- The Committee held all their meetings at operational sites (see detail in Board visits)
- The Committee members have continued to have informal 'coffee talks' with colleagues across the Group who are randomly selected on a quarterly basis

The full Committee terms of reference can be found on our website, www.spiraxsarcoengineering.com.

Chair's review of 2022

Both the direct contact we have had with colleagues, as well as the openness of the Businesses in sharing updates with the Committee, has given us good insight into the business culture in the Group. One overriding reflection from my interactions with colleagues is how open everyone is – and how keen management is to hear feedback; this enables a focus on continuous improvement.

Committee meetings and operation

During the year we reviewed and made slight amendments to our Terms of Reference which can be found on our website, www.spiraxsarcoengineering.com. The Group has also formalised its approach to colleague engagement, setting clear targets and clarifying how the Board's colleague engagement activities sit alongside the wider colleague engagement programme, more information can be found below.

Amanda Janulis, Group Corporate Counsel, is the secretary to the Committee. During 2022, the Committee has continued to work with Amanda, Jim Devine, Group HR Director and Jenni Forrester, Head of Colleague Experience. The Committee remit and agenda continues to develop, thanks to the input and hard work of Amanda, Jim and Jenni. Jenni has now taken on a new role in the Group and has handed over her role in supporting the Committee – she has added a great deal to the thinking and success of colleague engagement across the business and to the development of the Committee and I want to recognise and thank her for this. We look forward to working with her in her new role.

Colleague engagement and feedback

We have continued our programme of structured meetings with colleagues from across the Group, which gives us the opportunity to hear from colleagues.

Our approach to colleague engagement and feedback

- Colleagues are invited or volunteer for attendance, with the aim to have a group who represent all areas of an operating unit, including sales and supply businesses, office and shop floor workers, day and night shifts etc
 - At the start of each meeting, we commit that all comments are completely confidential and non-attributable, and that we feedback only themes to management and to the Committee
 - Following the colleague discussions, we summarise the themes in a paper to management and the Colleague Engagement Committee. I also have a formal debrief with the local and regional management, to offer key insights, enable a discussion and consideration of potential resulting action
 - At the subsequent Committee meeting, we discuss the key themes, Committee members reflect on both the positive feedback and the areas of concern and management reflect on any actions required
 - A summary is fed back to the next full Board meeting and the Board continues to reflect on colleague views when making key decisions as a Board – see the section 172 statement on pages 111 to 113 for examples of how the Board considered colleagues in their decision-making
- The Group has more than 10,400 colleagues and one of the Committee's challenges in engaging effectively with a high proportion of colleagues is the geographical spread of our 146 operating companies, some of which are very small. Only ten operating companies have more than 100 colleagues. We have therefore, developed a systematic but pragmatic approach to identifying our programme of colleague meetings by referencing:
- Headcount across business operations and geographies, so we have a mix of interactions across the three Businesses of Steam Specialties, Electric Thermal Solutions and Watson-Marlow across the three main geographies of Asia Pacific, the Americas and Europe. We ensure that our meetings are held with colleagues representing both large and smaller operating companies and this year have had the pleasure of meeting with over 100 colleagues
 - We also consider functions and special interest groups – in 2022, we held discussions with colleagues in the earlier years of their career (including graduates, year-in-industry and apprentices). We also had deep-dive discussions with colleagues in central functions including IT, Finance, HR and Legal
 - We consider different strata of the organisation, holding discussions, for example with those in middle management
 - We refer back to previous colleague engagement surveys and the engagement results, comparing against trends and other business unit KPIs. This may lead us to visit an operating company which has less positive engagement results or we may choose one with higher engagement results to identify opportunities for sharing best practice
 - We will occasionally revisit a business area to run a follow-up discussion with colleagues to test whether actions taken have had an impact on the colleague experience locally

Board leadership and Company Purpose continued

Colleague Engagement Committee Report continued

Focus groups held in 2022

January

- **ETS, Chromalox, Ogden** – a follow-up focus group with some colleagues that we met in 2019 and some new colleagues joined the session
- **Steam Specialties, Spirax Sarco, South Korea** – colleagues from sales and supply joined us, with assistance from a translator

April

- **Early Careers** – colleagues on our Global Graduate Development Programme, Apprenticeship Scheme as well as our Year-in-Industry (YINI) scheme

June

- **Steam Specialties, Spirax Sarco, USA** – colleagues from sales and supply joined a discussion at our Blythwood manufacturing site in South Carolina

October

- **Steam Specialties, Spirax Sarco and Gestra, Italy** – outwith the normal Board meeting schedule, I visited our Italian operating company and was able to tour the facility, meeting colleagues and managers. We conducted two separate focus groups, with representatives of firstly the sales teams and, secondly, with supply colleagues
- **Watson-Marlow, BioPure, UK** – on-site discussion with colleagues from the manufacturing facility in Portsmouth

December

- **Colleague Network Groups** – colleagues who participate in our colleague resource groups, such as the Women's Network, Working Families forum, LGBTQ+ community and disability forum joined us for a discussion

The majority of the time in the discussion group is spent asking colleagues' for their views on a handful of topics. In 2022, our typical areas included gauging colleagues' understanding of and engagement in our Group's sustainability and inclusion strategies. We have also continued to explore how well we live our Values (and Safety in particular), but we also leave plenty of space to hear what's on our colleagues' minds. In support of the Board and Audit Committee focus on ensuring we have adequate whistle-blowing arrangements, we always check if colleagues are aware of our Safecall external helpline.

In 2022, we developed the introduction to the structured meetings, briefly sharing with colleagues the role and operation of the Board and where the Colleague Engagement Committee fits in. These have been well received, with colleagues taking an interest in the wider leadership of the Group.

We hear many consistent and positive messages across the discussions, including:

- Safety is always the first priority and our strongest Value, followed closely by Customer Focus. Colleagues feel cared for by the Company and this has continued beyond the period of the pandemic with many specific examples shared with us, both at a Group and a local level
- Colleagues feel they are treated with respect and have opportunities to influence ways of working with their ideas
- Our colleagues are particularly proud of our investment in and commitment to sustainability (our **One Planet: Engineering with Purpose** Sustainability Strategy) and inclusion (Everyone is Included)
- There is a great deal of enthusiasm for potential future growth, colleague development and our ability to create further value for customers, through digital tools

The most consistent challenges for us seem to relate to leveraging our resources as we mature and grow as a Group:

- Colleagues would welcome more information and insight around the Group's products, customers and opportunities. We have a particular challenge to communicate with colleagues who don't operate on company email

- We will continue to focus on our Value of Collaboration. We need to enable our colleagues to work together cross-functionally in a more seamless way, so they can maximise their personal and our business effectiveness – this will be through a mix of technology, processes and ways of working. We need to reflect on where it is possible to align processes and share know-how across our Group

The Committee and management really value the time taken by our colleagues in offering their feedback in focus groups and management always look for opportunities to take action. Management ensures that, where appropriate action is taken, we communicate that back to the specific group that provided the feedback, some examples of actions taken in 2022 are shown in the table opposite.

Other Committee activities in 2022

Business unit discussions – At Committee meetings in 2022, we invited the leaders of our three Businesses, operational and functional, to share their approach to colleague engagement as well as their engagement successes and challenges.

Board site visits – During 2022, several Board meetings have been held at our manufacturing sites. We have visited Aflex Hose in their new facility in Huddersfield in the north of England, Steam Specialties at the USA site in Charlotte, North Carolina, and BioPure at their new facility, near Portsmouth in the south of England. This has presented plenty of opportunity for the whole Board to connect with colleagues and local management as they showed us around the site and shared their initiatives with us. In 2023, we hope to be able to visit more of our colleagues, including a planned trip to the USA.

Informal engagement – All NEDs participate in 'coffee talks', an informal scheme where colleagues are randomly paired with another for a virtual coffee. This gives NEDs the opportunity to speak to colleagues at all levels of the Group one to one, to both understand their role and gain their feedback on the organisation and their experience working with us.

Feedback received	Action taken
One group indicated that they would welcome more information on the background to the Business unit strategy, that those who were newer to the Business had not been involved in earlier versions of the strategy and therefore lacked the base level understanding.	The team took this on board when developing further discussion sessions on the strategy, taking time to set the context and then considered the team's role in the next phase.
Colleagues suggested that the Group could gain more value from our UK apprenticeship scheme and potentially roll out an apprentice programme in other parts of the world. We were also asked to consider how the various streams of early careers, such as graduates, apprentices and YINIs, could join-up on certain initiatives to share knowledge and streamline resource.	Management have since undertaken a wider review of our apprenticeship programme and what opportunities we may have to leverage something similar globally, which will be a focus for 2023.
Since we have fully embraced hybrid working, one group asked that laptops became 'standard' issue as some still had desktop computers which made working from anywhere but the office impractical.	Desktop computers have since been replaced with laptops, where appropriate and going forward, laptops are issued to new starters.
Some of our female colleagues raised the challenges of getting well-fitting workwear.	This prompted a review of available workwear across our manufacturing locations.
In one very high growth area of our Business, colleagues were very positive about the new facilities and investment from the Group but felt that they had had limited time to understand the Business strategy and wanted to "see it for themselves".	The local management team took an action to 'introduce' all colleagues to their new site, with a tour across all areas, to demonstrate products and their impact on society as well as innovation opportunities.
One group shared that the additional Wellbeing Day, offered to all colleagues in 2022, was not showing on their HR system, so they were unable to request the leave.	The local HR team rectified this immediately.
Participants, particularly in our manufacturing populations, were not always aware of our whistle-blowing hotline (Safecall) or where they would find the number should they need it.	In response, management took action to refresh communications via posters around the workplaces, particularly manufacturing locations.

Looking forward

We look forward to having oversight of and hearing the results of the 2023 colleague engagement survey across the Group that will run during April 2023.

The Committee has planned a number of colleague meetings across the Group in 2023, which will include engaging with some of our Sales Engineer job family and with teams from our two new acquisitions in ETS, Vulcanic and Durex Industries, as well as a meeting with one of largest operating companies, UK Supply, as a follow-up to our last meeting with the team there in 2020.

We also want to advance our race equity journey by better understanding the lived experience of our Black and African American colleagues across our USA operations. To start this, we will be working with an external partner in the USA to run some virtual and physical colleague focus

roundtables to assess our race equity culture, identifying opportunities to improve this and to grow our leadership diversity. One of our Committee members, Angela Archon, will participate in these.

All NEDs will continue to participate in quarterly 'coffee talks' and members of the Committee will also take part in an International Women in Engineering Day event as well as the 2023 Graduate Conference.

I am happy to answer any questions or take any feedback on our Committee activities, at our Annual General Meeting in May or at any time.

Caroline Johnstone
Chair of Colleague
Engagement Committee

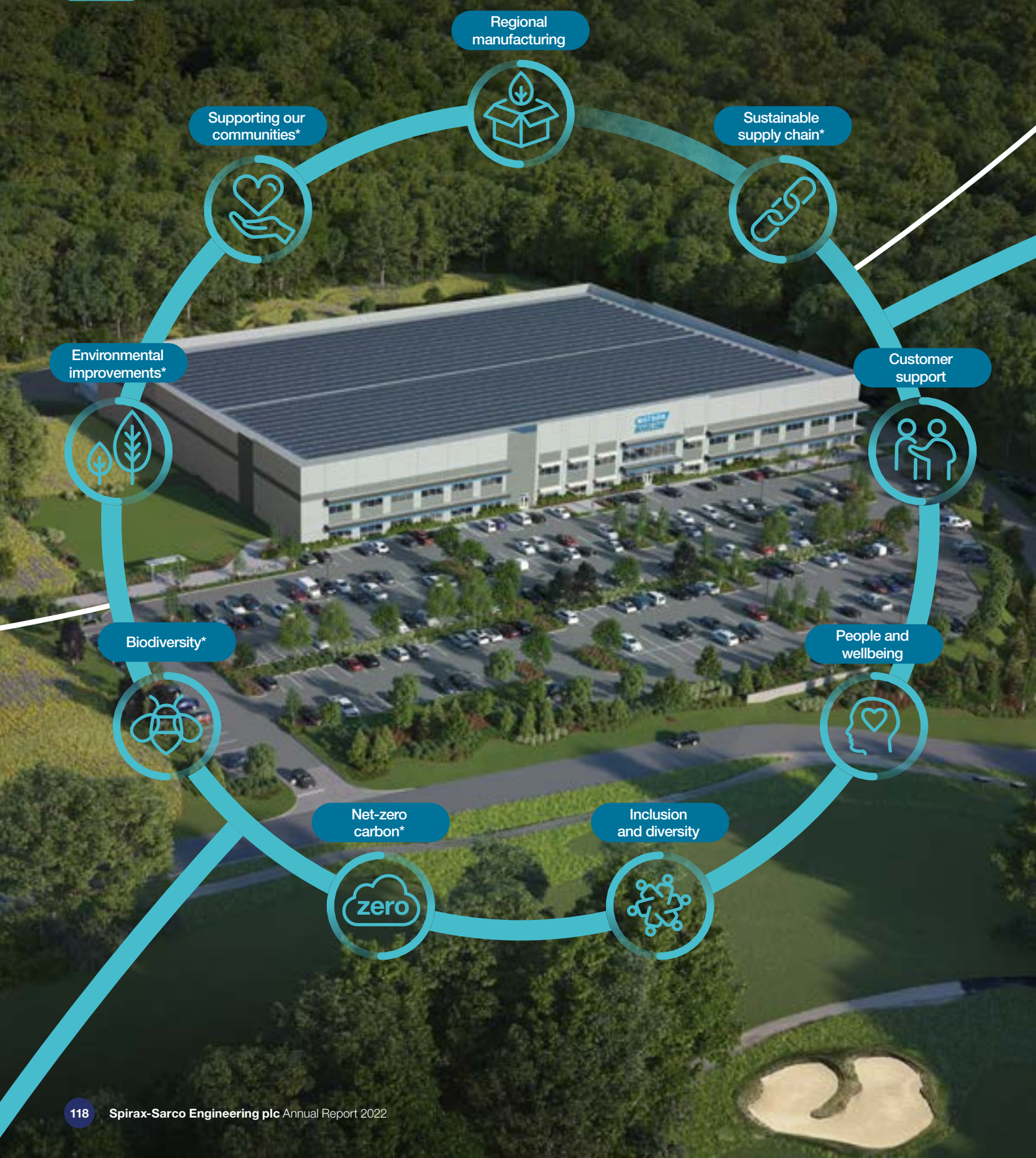
8th March 2023

Committee focus for 2023

- 2023 Group-wide engagement survey
- Colleague discussion and feedback meetings including with companies recently acquired by the Group
- Externally facilitated discussions with our Black and African American colleagues across our USA operations to advance our race equity focus

Engineering our difference for shareholders

Investing in sustainable, future growth...





...to create long-term value.

Watson-Marlow's new state-of-the-art 14,000m² manufacturing facility in Devens, Massachusetts (USA) epitomises our approach to sustainable growth. Construction of the site is complete with the final phase of internal fit out to be completed during 2023.

Regional manufacturing capability is a key component of our business model, enabling us to deliver for customers with shortened supply chains as well as enhanced customer support. This multi-brand facility marks a significant step forward in Watson-Marlow's global supply strategy.

It also represents a 'blueprint' for our future manufacturing investments to be efficient, safe and sustainable in line with our Group's Purpose, by combining wellbeing features and digital innovations with environmental and biodiversity initiatives into the design.

To support colleague wellbeing, picnic areas and a designated walking trail outside complement internal facilities including a reflection room, fitness centre, café and gender-neutral facilities.

Sustainability design includes solar panels, electric vehicle charging, retention ponds for storm water

management, rainwater harvesting and upgraded insulation. In addition, we are optimising our operations through digital monitoring of energy usage and manufacturing operations. Biodiversity initiatives include native landscaping and protection for local wildlife including the threatened species Blanding's turtles.

We are very proud of our latest manufacturing facility which is fully aligned to our **One Planet: Engineering with Purpose** Sustainability Strategy and Group Purpose, underpinning our approach to achieving sustainable growth over the long term.

US\$106 million

invested in our 'blueprint' state-of-the-art, sustainable and inclusive manufacturing facility in the USA.

*In line with our Sustainability Strategy commitments.

Division of responsibilities

The Board is responsible for providing leadership to the Group. The governance structure of the Group ensures the Board, together with the Board Committees and Group Executive Committee, has sufficient controls and oversight of the business, with a balanced approach to risk that is aligned with Spirax-Sarco Engineering's culture. The structure assists the Board in fulfilling its responsibilities and is designed to ensure that the Board focuses on strategy, monitoring the performance of the Group and governance as well as risk and control issues.

An overview of the division of responsibilities, as set out in the Code, is provided in the diagram opposite and we comply with all the relevant Principles and Provisions. The responsibilities of the Chair, Group Chief Executive, Senior Independent Director, Board and Committees are set out in writing and agreed by the Board. A clear division is made between the leadership of the Board and Executive leadership.

The Role of the Board

The Board is collectively responsible for the long-term success of the Company. The business of the Company is managed by the Board who may exercise all the powers of the Company. The Board has a formal schedule of matters reserved for the Board's decision-making which is available on the Group's website. Although the Board retains overall responsibility, it delegates certain matters to the Board Committees and the detailed implementation of matters approved by the Board and the day-to-day operational aspects of the business to the Group Executive Committee.

Board Committees

The Board Committees consist of Non-Executive Directors and each Committee Chair reports to the Board on matters discussed at Committee meetings and highlights any significant issues that require Board attention. The terms of reference for each Board Committee are reviewed annually and are available on the Group Website. The annual reports by each Board Committee Chair are given in this Annual Report.

Group General Counsel and Company Secretary

The Group General Counsel and Company Secretary, together with the Group Legal team including the newly appointed Group Assistant Company Secretary, support the Chair and the Committee Chairs in making sure members are equipped for informed decision-making and that they appropriately allocate their time to subjects. All Directors have access to the advice of the Group General Counsel and Company Secretary as well as the Group Legal team, who are responsible for advising the Board on all governance matters. Both the appointment and removal of the Group General Counsel and Company Secretary is a matter for the whole Board.

Group Executive Committee

There is a clear division of responsibilities between the leadership of the Board and our Executive leadership. Our Group Chief Executive's roles and responsibilities include: management of the Group's short-, medium- and long-term performance; stewardship of capital, technical and human resources; corporate and business strategy; internal risk management controls and organisational structure.

Delegation of Authority

An internal Delegated Authority matrix is operated ensuring that decisions are taken at the right level within the Group by those best placed to take them, whilst simultaneously allowing the business to function efficiently. The matrix is reviewed annually to accommodate any adjustments required to ensure practical compliance.

Governance framework

Board of Directors				
<ul style="list-style-type: none"> Responsible for setting the Group's strategy and ensuring strategic objectives are met Direct involvement in all ESG matters. Assesses culture and promotes the long-term success of the Company 		<ul style="list-style-type: none"> Approves the Company's financial statements and performance expectations Ensures maintenance of a framework of prudent and effective controls 		<ul style="list-style-type: none"> Ensures effective engagement with shareholders and all our stakeholders, including the workforce Approves matters relating to the composition of the Board and Committees
Chair		Senior Independent Director		Group Chief Executive
<ul style="list-style-type: none"> Responsible for the leadership and effectiveness of the Board Promotes a culture of openness and debate Facilitates constructive Board relations Holds meetings with Non-Executive Directors, without Executive Directors present 		<ul style="list-style-type: none"> Provides a sounding board to the Chair Serves as an intermediary for the other Directors and shareholders Leads an annual meeting of Non-Executive Directors to appraise the Chair's performance 		<ul style="list-style-type: none"> Responsible for the day-to-day running of the Group's business and performance and the implementation of strategy Leads the Group Executive Committee Represents management on the Board
Designated workforce engagement NED		Non-Executive Directors		Group General Counsel and Company Secretary
<ul style="list-style-type: none"> Chair of the Colleague Engagement Committee Responsible for colleague engagement Facilitating two-way dialogue between the Board and its Committees and the Workforce, flagging issues and feedback to the Board 		<ul style="list-style-type: none"> Provide constructive challenge, strategic guidance and offer specialist advice Hold a prime role in appointing and removing Executive Directors Scrutinise and hold to account the performance of management and individual Executive Directors against agreed performance objectives 		<ul style="list-style-type: none"> Advises the Board on all governance matters Supports the Board to ensure that it has the policies, processes, information, time and resources it needs for the Board to function effectively and efficiently Advises the Board on important legal and regulatory matters
Audit Committee	Nomination Committee	Remuneration Committee	Risk Committee	Colleague Engagement Committee
The overall purpose of this Committee is one of oversight and monitoring of the entire financial reporting and control process, to ensure the integrity of the Group's Financial Statements and assurance over them	The main role of this Committee is to recommend changes to the Board and consider succession planning for the future	This Committee determines the philosophy, principles and policy of Executive Director and senior manager remuneration having regard to the latest legislation, corporate governance, best practices and the FCA Listing Rules	This Committee oversees the management and control of significant operational risks affecting the Group. The Committee ensures that the Group has risk management policies and procedures, including those covering project governance, sanctions and embargoes, crisis management, human rights, business continuity and business management	The principal remit of this Committee is to ensure that the voice of the workforce is considered in all aspects of the Board's thinking
Group Executive Committee				
The Board relies on the Group Executive Committee to implement the strategy and run the business by empowering our colleagues to do their part in the strategy execution. The emphasis is on growth and on an entrepreneurial approach with a strong governance		culture. The Board holds this team accountable against targets and standards and ensures that it has strong and effective leadership in place to execute the strategic plan		

Division of responsibilities continued

Board composition, succession and evaluation

We make sure that the Board is actively involved in all important Group matters and it is effective in fulfilling its role as a balanced Board

During 2022, in compliance with the Code, the number of Non-Executive Directors was always more than the number of Executive Directors (excluding the Chair). At the time of publication, our Board comprises two Executives, a Non-Executive Chair and a further six Non-Executive Directors. This ensures that no one person or group of individuals dominates the Board's decision-making. All our Non-Executive Directors, including the Chair, are considered independent.

Board succession and tenure

The Nomination Committee continuously reviews succession plans in light of strategy, business requirements, tenure and diversity. For more information on succession planning please see the Nomination Committee Report on pages 124 to 127. With regard to the appointment and replacement of Directors, the Company is governed by its Articles of Association (Articles), the UK Corporate Governance Code (the Code), the Companies Act 2006 (the Act) and related legislation. The Articles themselves may be amended by special resolution of the shareholders. The Articles provide that Directors may be appointed by an ordinary resolution of the Company's members or by a resolution of the Directors. With the exception of Olivia Qiu who stepped down as a director in January 2023 for personal reasons, all the Directors will retire at the 2023 AGM and all will stand for re-election as required by the Code.

The Board's recommendations concerning appointment or reappointment are contained in the Nomination Committee Report on page 126. The Executive Directors have service contracts that can be terminated on twelve months' notice. The appointments of the Non-Executive Directors can be terminated on three months' notice. The Chair's appointment can be terminated on six months' notice.

Details of the Directors service contracts can be found in the Directors Remuneration Report on page 159.

External listed company appointments

The Board believes that Directors should be able to accept other appointments where no significant actual or potential conflicts of interest arise and provided that the Director is able to maintain sufficient time available to discharge their duties effectively. These other appointments enable Directors to develop further skills and experience from which the Company benefits, provided that such commitments do not impinge on their duties to the Company.

Existing commitments of Directors are carefully reviewed prior to appointment and on an ongoing basis to ensure they can continue to deal appropriately with the affairs of the Group. If a Board member wishes to accept an additional position this must be reviewed and approved by the Chair. Significant changes in a Director's outside commitments are discussed with the Chair prior to a Director accepting further appointments.

At each Board meeting and also on an annual basis, each Director confirms their external appointments and commitments to the Board as part of the conflicts of interest check. Nicholas Anderson is also a non-executive director of BAE Systems plc, a FTSE 100 company, which is acceptable under the Code.

The number of external appointments held by our Non-Executive Directors and full-time Executive Directors, as at 31st December 2022, are provided in the table below, details can be found in the Directors biographies on pages 104 and 105. Only external positions of listed companies or equivalents in other jurisdictions are counted in accordance with the provisions of the guidelines published by Institutional Shareholder Services and other proxy advisers.

	No. of other Non-Executive roles	No. of other Executive roles
Listed Plc Directorships		
Independent Non-Executive Directors		
Jamie Pike (Chair)	1	—
Angela Archon	1	—
Peter France	—	1
Richard Gillingwater	1	—
Caroline Johnstone	1	—
Jane Kingston	1	—
Full-time Executive Directors		
Nicholas Anderson	1	—

Register of conflicts

The Board formally considers any potential conflicts between a Director and the Company. Any situational conflicts must be notified to the Board for authorisation as and when they arise, notwithstanding a Director's general duty to avoid such conflicts. Transactional conflicts must be notified to the Board in person or in writing at the next meeting, where the Board can decide, in the absence of the Director concerned, whether or not to authorise such conflict and how to manage the conflict if authorised.

Induction, development and information flows

New Directors receive formal induction training, including, when possible, site visits and meetings with the Company's advisers, brokers, auditor and where appropriate, major shareholders. Ongoing training is encouraged and provided upon request and as appropriate. This training is customised for each Director and varies depending upon their skills, experience and background. Governance training is undertaken annually by the Board and the Audit Committee also arranges ESG, financial and related training each year.

Directors also receive regular updates on changes and developments in the business, legislative and regulatory environments. The Anti-Bribery and Modern Slavery Policies were reviewed by the Board during the period. Each Board pack contains a copy of the Directors' statutory duties. Directors are encouraged to discuss with the Chair any further training requirements which they feel are needed. This is included in the discussions held during the annual performance evaluation.

Good information flows between the Board and management are essential for effective governance. The Board, together with senior management, ensures:

- the agendas are appropriate for the business and are forward looking as well as providing historical and current results data
- papers are of an appropriate length and content for the Non-Executive Directors to be able to understand and review
- sufficient time is given for Directors to read and review the papers prior to meetings.

Board diversity policy

We believe in a diverse and gender-balanced workforce. Our Equal Opportunities Policy ensures the provision of equal opportunities in all aspects of employment and applies equally to the Board and the wider employee workforce. Further information on diversity and succession planning can be found in the Nomination Committee Report on pages 124 to 127.

Board Evaluation

The evaluation process

The Code requires a company to evaluate its performance annually with an independent external evaluation conducted at least every three years. In the intervening years the Board conducts a self-evaluation. In addition to this, each Non-Executive Director, the Group Chief Executive and the Chief Financial Officer met with the Chair individually to discuss their personal performance. The Directors provided input to the Senior Independent Director (SID) on the performance of the Chair. On the basis of that feedback the SID reviews the performance of the Chair, including leadership of the Board and ensuring effectiveness.

Board Effectiveness

Following the external and independently facilitated Board evaluation by Egon Zehnder in 2021, the Nomination Committee conducted, with the assistance of Egon Zehnder again, an internal Board evaluation in 2022. Full details of the evaluation process and outcomes can be found in Nomination Committee Report on page 125 and 126.

Composition, succession and evaluation

Nomination Committee Report



“We have an established strong and diverse Board. The Group Executive team has made progress this year with diversity at senior executive levels. We have furthered our strategic plans through our succession policy.”

Jamie Pike
Chair of Nomination Committee

Members

Our Nomination Committee comprises:

Membership

Jamie Pike (Chair)

Angela Archon

Peter France

Richard Gillingwater

Caroline Johnstone

Jane Kingston

Olivia Qiu¹

Kevin Thompson

1 Olivia Qiu stepped down from the Board on 31st January 2023

Committee role and responsibilities

The main role of the Nomination Committee is to optimise Board performance, consider succession planning for the future and recommend changes to the Board to match the skills, knowledge and expertise of individuals to those needed to support the strategy and business requirements of the Company.

The Committee's responsibilities include:

- Making appropriate recommendations to the Board for the appointment, reappointment or replacement of Directors
- Reviewing the structure and composition of the Board with regard to the overall balance of skills, knowledge and experience against current and perceived future requirements of the Group
- Considering succession planning arrangements for the Executive Directors and more generally, senior executives
- Overseeing the annual evaluation of the Board and individual Directors, taking into account its composition, diversity and effectiveness

The full Committee terms of reference can be found on our website, www.spiraxsarcoengineering.com

Key activities undertaken

The Nomination Committee met five times in 2022, details of attendance can be found on page 107. The Group Chief Executive and Group Chief Financial Officer were invited to meetings where appropriate. A summary of the Committee's activities throughout the year is set out below.

February

- Executive succession planning
- Reappointment of Caroline Johnstone and Kevin Thompson for a further three-year tenure

June

- Executive succession planning for all senior levels
- Group Executive Committee (GEC) leadership development

August

- Reappointment of Jane Kingston for a further three-year tenure

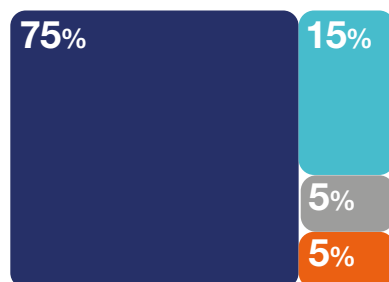
October

- Group Executive Committee (GEC) succession planning
- GEC Leadership development

December

- GEC and GEC+1 succession planning

How the Committee spent its time %



- Executive Succession
- Board Evaluation
- Non-Executive succession
- Diversity and Inclusion

This breakdown reflects topics addressed during Committee meetings, and does not include time spent during engagement events.

Chair's review of 2022

The Board's composition was stable during 2022, having strengthened the Board in 2021 to reflect more international experience in line with evolving societal needs. Our focus during the year was on Board consolidation and succession planning for both Executive and senior leadership.

Board and Group Executive Committee composition

We spent time looking at the composition of the Group Executive Committee (GEC). Given the increasing importance placed on sustainability by all our stakeholders it was considered that the GEC should have greater representation in this respect and so Sarah Peers, Group Director of Sustainability, became a member of the GEC effective 1st October 2022. Sarah joined the Company in 2013 as Corporate Communications Manager and took responsibility for improving many aspects of how the company communicated with our external stakeholders including our Annual Report. Sarah has a PhD in Geography from the University of Oxford, has always had a deep held interest in issues relating to the environment and was instrumental in describing how we could harness sustainability as an opportunity for the Group. From recognising the long-established role of the Steam Specialties Business in saving customers energy, through to how the Values of the Group align with a global shift in the mindset of all our stakeholders, Sarah has actively worked to make sustainability a core aspect of how we run the Group and to making sustainability integral to how we operate. Therefore, both the Board and the GEC have unanimously concluded that Sarah should join the GEC.

Details of the respective skills and experience of all Board and GEC members are set out on pages 104 to 106.

Chair of the Board tenure

As reported in 2021, Jamie Pike was reappointed as Chair of the Company with effect from 13th May 2021 for a further three years despite this taking him beyond nine years since appointed to the Board.

The Committee considered that the reappointment would be compliant with Provision 19 of the UK Corporate Governance Code 2018 (the Code), which allows for an extension beyond nine years' service, as although Jamie Pike has been a Non-Executive Director since 2014, he was only appointed as Chair four years ago, in 2018.

The Code also specifies that the Chair should have considerable leadership, corporate and commercial skills and experience which Jamie has. These qualities are important to the mix of the Board as a whole and assists with a diverse Board made up of people with a range of relevant skills and expertise, which will further the development of the Group.

In order to ensure a smooth and successful handover it was agreed that it was in the best interests of the business for Jamie to continue as Chair for a further three years, effective 13th May 2021, taking his total tenure to ten years. Further information on the succession plan for the Chair can be found below.

Succession planning and attracting talent

Egon Zehnder act as external advisers to the Nomination Committee, helping the Committee and the Board to make sure we are well positioned and have proper succession in place for all senior-level appointments across the Group. This ongoing search for the best people includes both internal and external candidates, in line with our Diversity and Inclusion Policy, to ensure that we attract and retain the best talent. The Board confirms that neither it, nor any of its Directors, have any connection with Egon Zehnder.

We confirm that Jamie will stand down as Chair in 2024. In accordance with our Board Succession plans, we will follow a Code-compliant, rigorous and independent procedure to determine Jamie's successor supported by our external advisers. The procedure will be led by a Nomination Sub-Committee made up entirely of independent Non-Executive Directors and chaired by the Senior Independent Non-Executive Director. The current Chair, Jamie Pike and any candidate who is a current member of the Board, will be excluded from the process in accordance with the Code. The Sub-Committee, working with Egon Zehnder, will develop a job specification which candidates will be evaluated against, and a shortlist drawn up. The appointment will be approved by the full Board following interviews with all Directors.

Following the resignation of Olivia Qiu in January 2023, due to personal reasons, we have initiated the process to appoint another Non-Executive Director with the skills and experience required to support the implementation of our strategies and our commitments to inclusion and diversity. Again, we will follow a Code-compliant, rigorous and independent procedure in making this appointment, supported by our external advisers.

Further information on how appointments to the Board are made can be found in the Governance statement on page 122.

Board and Committee evaluation

In 2021, we commissioned an external, independently facilitated Board effectiveness review conducted by Egon Zehnder. Our aim was to capture open and constructive feedback from Board members which would:

- provide insight into our effectiveness
- point to actions for improving our performance
- establish a benchmark for measuring future progress

The review was carried out in accordance with the guidance in the Code and the findings were published in last year's Annual Report. In 2022, we followed up on the recommendations of Egon Zehnder and the Board carried out an internal additional evaluation of the performance of the Board and the Board Committees, in accordance with the provisions of the Code. The Chair and Egon Zehnder supervised the use of the same survey from 2021 to each of the Board members. They were asked to respond to questions on both a quantitative and qualitative basis. The review considered the Board's strengths by looking at individual capabilities and contributions, what the Board does and the way in which the Board members work together. From comparing the results between 2021 and 2022, we were then able to evaluate areas where the Board has improved, as well as areas that still require development. The survey was a comprehensive questionnaire covering all issues related to the effective running of the Board and the functioning of the Committees. The responses were consolidated and anonymised, with common themes identified for the Board to determine key actions and next steps for improving Board and Committee effectiveness and performance. We were pleased to see that the conclusions of the 2022 review were positive, suggesting an overall improvement from the prior year across all the key dimensions.

The 2022 review emphasised the following strengths:

- Strong sense of team identity and collaboration with high levels of engagement. Trusted and respectful relationships
- The Board felt guided by a clearly defined vision and strategy for the Company
- The Board fulfils its role in keeping sustainability objectives top of mind for the Company

Composition, succession and evaluation continued

Nomination Committee Report continued

- The Committees are clearly defined and serve a distinct purpose

The review helped us to consider the following areas for improvement and these will continue to be addressed in the coming year:

- Sufficient time on keeping abreast of industry trends, competitor activity and where future threats may emerge
- An opportunity to allow for more strategic discussion and debate

Re-election of Directors

The Board has concluded that the performance of each of the Directors standing for re-election continues to be effective and that these Directors demonstrate commitment to their role, including commitment of time for the Board and Committee meetings and any other duties. With the exception of Olivia Qiu, who resigned on 31st January 2023, all Directors will stand for re-election at the 2023 Annual General Meeting and the explanation of how they contribute to the success of the Company can be found in the Notice of AGM.

Inclusion, equity and wellbeing

We believe that the Board's perspective and approach is greatly enhanced by gender, age and cultural diversity and we consider overall Board balance and diversity when appointing new Directors. We also undertake reviews each year of the bench strength of all senior executives and make sure that diversity is considered in our succession planning across senior roles.

Effective for financial periods starting on or after 1st April 2022, the Financial Conduct Authority has introduced new disclosure rules (LR 9.8.6R(9) and LR14.3.33R(1)) in connection with Diversity and inclusion. We already disclose much of the information but we have chosen this year to voluntarily disclose all the information, as set out in the rules, in the tables below. The Company captures gender and diversity data of colleagues through voluntary disclosure via the internal HR portal where possible or direct contact where not. Further information on diversity and inclusion can be found in our Sustainability Report on pages 46 to 73.

We have a strong focus on inclusion and are committed to improving diversity across our Group. As at 31st December 2022, the Company has met or exceeded two of the three diversity and inclusion targets, namely that it has met the 40% female representation target on the Board and three of the Board members are from a minority ethnic background exceeding the Parker Review target of at least one individual.

The third target requires that at least one of the senior Board positions (Chair, CEO, CFO or SID) is held by a woman, a target endorsed by the FTSE Women Leader's review that would like to see a woman in at least one of these roles by 2025. As at 31st December 2022, the Company has not met this target. The role of SID was previously held by a woman, Dr Trudy Schoolenberg, and it is the intention of the Board that one of these positions will be held by a woman again by the end of 2024. An explanation as to why we currently don't meet this requirement, our succession plans in respect of this and

the search for a new NED following the resignation of Olivia Qiu at the end of January 2023 follows.

We would, however, like to highlight that two of our Board Committees, the Remuneration and Colleague Engagement Committees, are chaired by women, namely Jane Kingston and Caroline Johnstone respectively.

In 2021, following a rigorous recruitment process during which both male and female candidates were considered, Richard Gillingwater was appointed to the position of SID as it was felt that his expertise and experience were best suited to the role and complemented the expertise of the current Board members. Diversity and inclusion is always a key consideration in the recruitment process and is at the forefront of the Committee's mind when making nominations to the Board and will continue to be going forward, including when considering succession into senior Board positions.

In addition, Sarah Peers, Group Director of Sustainability, was appointed to our Group Executive Committee (GEC). In 2022, we continued increasing the number of women in senior roles across the Group and improving gender balance in our senior leadership team (GEC plus their direct reports) which reached 34% female representation by October 2022. Although usual attrition and employee changes in the fourth quarter reduced this to 32% at the year-end, we anticipate female representation in our senior leadership will return to 34% by April 2023 and we remain committed to reaching at least 40% female representation across our senior leadership.

Table 1: Reporting table on sex/gender representation

	Number of Board members	Percentage of Board	Number of Senior positions on the Board*	Number in Executive Management	Percentage of executive management
Men	6	60%	4	7	87.5%
Women	4	40%	–	1	12.5%
Not Specified/prefer not to say	–	–	–	–	–

Table 2: Reporting table on ethnicity representation

	Number of Board members	Percentage of Board	Number of Senior positions on the Board*	Number in Executive Management	Percentage of executive management
White British or other White (including minority-white groups)	7	70.0%	3	7	87.5%
Mixed/Multiple Ethnic Groups	–	–	–	–	–
Asian/Asian British	2	20.0%	1	1	12.5%
Black/African/ Caribbean/Black British	1	10.0%	–	–	–
Other ethnic group, including Arab	–	–	–	–	–
Not specified/ prefer not to say	–	–	–	–	–

*CEO, CFO, SID & Chair

Our global graduate programme again achieved its goal of 50% female intake for the year.

As part of our wider commitment to gender equity, in 2022, our Group CFO, Nimesh Patel, was appointed Co-Chair of the FTSE Women Leaders Review which seeks to increase the representation of women in senior leadership roles in the FTSE 350. Our Group Chief Executive, Nicholas Anderson, also became an Ambassador for the 25x25 campaign which is initially seeking to achieve 25 female CEOs in the FTSE 100 by 2025.

Across our Group, our Women's Network continued to connect and support women on key topics related to careers, personal development and wellbeing, and we continued our Women's Executive Mentoring programme. In 2022, we signed the United Nations Women's Empowerment Principles, and joined both Women in Science and Engineering (WISE) and the Women's Engineering Society (WES) to further support and guide our gender journey.

In 2022, we rolled out our new Inclusion Plan and our Group Inclusion Commitments, approved by the Board, which is about creating long-term value for all our stakeholders by empowering an inclusive and equitable working culture where all our colleagues can be themselves and achieve their full potential. It is built on four pillars – (i) Inclusive Behaviours, (ii) Inclusive Leadership, (iii) Inclusive Processes and (iv) Inclusive Partnerships. It has also been designed to support the United Nations' Sustainable Development Goals 3 (Good Health and Wellbeing), 5 (Gender Equality), 8 (Decent Work and Economic Growth), 10 (Reduced Inequalities) and 16 (Peace, Justice and Strong Institutions).

Within the Global Inclusion Plan, we have outlined our Group Inclusion Commitments to ensure that wherever we work in the world, we will make our difference for our colleagues.

You can read more about the Inclusion Plan, our Commitments and our progress on pages 50 and 52 to 55. We have put inclusion, equity and wellbeing at the heart of the culture we are continuing to build, including the following initiatives in 2022:

- Unconscious bias online training for all colleagues in multiple languages, which was completed by our colleagues
- Succession planning and talent development activities designed to ensure we continue to have a strong, diverse

bench strength for the management and operation of our businesses, including a female executive mentoring programme and in-house leadership courses

- Our Global two-year graduate programme supporting our ability to hire the best graduates from all over the world who are often globally mobile and strive for leadership positions
- Sponsorship and promotion of multiple science, technology, engineering and mathematics (STEM) initiatives amongst schools in the communities in which we operate
- Ongoing commitment to undertaking a UK equal pay audit across all our UK Businesses
- Continuing expansion of our colleague networks, including our existing Women's Network and our new Working Families Forum, Mental Health First Aiders Network, Watson-Marlow Disability Forum and Steam Specialties EMEA LGBTQ+ and Friends Network

Diversity and Inclusion Policy

Our Board fully complies with the principles of our new Inclusion Plan and Commitments and our current Diversity and Inclusion Policy both of which can be found on the Group's website. During 2023, we will be updating this Policy, to better reflect the progress we have made and will include a repositioning of the Policy to align with our Group's focus on inclusion, equity and wellbeing. The new Policy document will reflect all the principles of our Group Inclusion Plan, including the ten Inclusion Commitments. It will also include the refreshed set of Diversity goals for our leadership, graduate and commercial roles. More information on these can be found in the Strategic Report on pages 50 to 55.

We firmly believe that we have furthered our strategic plans through our Succession and Inclusion Policies and our Diversity goals, looking forward a number of years. We remain committed to developing a strong and diverse Board and we have made progress in developing our internal talent at the executive senior leadership level.

Jamie Pike
Chair of Nomination Committee

Further reading

- ✚ Our Diversity and Inclusion Policy and our new Group Inclusion Plan and Commitments can be found on our website: www.spiraxsarcoengineering.com
- ✚ Watch our Everyone is Included video: www.spiraxsarcoengineering.com

Committee focus for 2023

- Executive succession at all senior levels
- Implementation of the Group Inclusion Plan within Vulcanic and Durex Industries
- Recruitment of new Non-Executive Director

Audit, risk and internal control

Audit Committee Report



“As I look back on the past year and consider the Committee’s achievements against the targets we set, I am pleased to be able to report a year of strong progress on behalf of all our stakeholders.”

Kevin Thompson
Chair of Audit Committee

Members

Our Audit Committee comprises:

Membership

Kevin Thompson (Chair)

Peter France

Richard Gillingwater

Caroline Johnstone

Olivia Qiu¹

¹ Olivia Qiu stepped down from the Board on 31st January 2023

Committee role and responsibilities

The overall purpose of the Audit Committee is to oversee and monitor the entire financial reporting and control process, to ensure the integrity of the Group’s published financial information and assurance over it.

The Committee’s published Terms of Reference are formally reviewed annually and were last amended in October 2022. A full copy can be found on the Group’s website, www.spiraxsarcoengineering.com.

Within the Terms of Reference the Committee’s responsibilities are separated into six areas:

- Financial Reporting
- Internal Controls
- Whistle-blowing
- Risk Management
- Internal Audit
- External Audit

The Committee meeting agendas are tailored to ensure all the identified areas are covered, while also allowing for emerging topics to be included and permitting time for sufficient discussion and review. A summary of the Committee’s activities across each area during 2022 is detailed on the following pages.

The Committee is comprised entirely of Non-Executive Directors with all members serving throughout 2022. All members of the Committee have a depth of financial and commercial experience in various industries, as well as the industrial engineering sector in which the Group operates. The expertise the Committee utilises, together with their independence, provides robust challenge to management as well as internal and external auditors to ensure their duties under the Terms of Reference are fulfilled. For the

purposes of the UK Corporate Governance Code 2018 (the Code) the Board is satisfied that Kevin Thompson (Chair), Richard Gillingwater and Caroline Johnstone have recent, extensive and relevant financial experience and the required competence in accounting.

A more detailed summary of the qualifications, skills and experience of each Committee member can be found on pages 104 and 105.

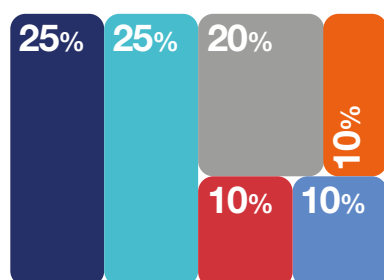
Meetings in 2022

The Committee held five scheduled meetings during 2022, noting that December had been added to the meeting roster (in response to comments arising during the Committee self-assessment process). In addition, the Committee hosted a ‘tender assessment day’, where three separate meetings were held as part of the external audit tender exercise. Different sub-groups of the Committee have also taken part in a number of working sessions with management across 2022. This included a meeting to discuss the Group’s ongoing workstreams relating to the requirements set out in the Department for Business, Energy & Industrial Strategy (BEIS) White Paper: Restoring trust in audit and corporate governance (BEIS Proposals).

As with prior years, relevant members of the Group’s senior management attended the Committee’s annual scheduled meetings, including the Group Chief Executive, the Chief Financial Officer, the Head of Internal Audit and the Director of Group Finance. Continuing the practice started in 2020, the Group’s Business Finance Directors were each invited to attend and present to the Committee during the year.

During 2022, the Committee received reports from External and Internal Auditors on the major findings of their work and the progress of management follow-up by way

How the Committee spent its time %



- Financial Resilience, Risk Management and Internal controls
- External Audit (including Audit tender) and Auditor effectiveness
- Corporate governance (including BEIS update) and whistle-blowing
- Internal Audit and fraud defences
- Results review and reporting
- Presentations by divisional Finance Directors

This breakdown reflects topics addressed during Committee meetings, and does not include time spent during engagement events.

of management reports. As a safeguard, the Committee holds separate meetings with the External and Internal Auditors without management present to discuss their respective areas and any issues arising from their audit work.

Committee members also attended two training sessions which were delivered by external providers in order to provide detailed insight into current areas of Committee focus, these covered: sustainability reporting frameworks and their associated assurance, and the anticipated impacts on the Committee resulting from the latest BEIS Proposals.

Key activities undertaken

March

- Reviewed the FY2021 Annual Report including:
 - Significant financial reporting judgements and the application of accounting policies
 - Going Concern basis, Viability Statement and financial resilience
 - Ensuring fair, balanced and understandable presentation
 - Report of the External Auditor
- Reviewed external quality assessment of Internal Audit
- Reviewed External Auditor independence and effectiveness
- Received an update on work relating to the Group's internal controls framework project (G3)
- Received an update on whistle-blowing calls made to the Group's Safecall service
- Received an update on the Group's sustainability reporting
- Confirmation of External Auditor reappointment for FY2022

April

- Hosted external audit firm 'tender assessment day'

May

- Update on planning for the half-year review including:
 - Approval of scope
 - Significant financial reporting judgements
 - Application of accounting policies
- Reviewed the policy on provision of non-audit services

May (continued)

- Received an update on the Group's G3 project and management of fraud risk
- Received an update from the Group's Tax and Treasury Committees
- Received an update on compliance to the Group's mandatory contract practices
- Received presentation from the Steam Specialties Business Finance Director

August

- Reviewed the Half Year results, including:
 - Impairment indicators
 - Key accounting judgement and estimates
 - Going concern
 - Results news release
- Reviewed the interim report of the External Auditor
- Received an update on the BEIS Proposals (and the Group's preparedness for them)
- Completed Committee self-assessment and performance evaluation
- Received an update on, and discussed Group's response to, the FRC's letter on the Group's 2021 Annual Report and Accounts

October

- External Audit planning for the Full Year results
- Reviewed schedule and preparations for the drafting of the 2022 Annual Report
- Carried out annual review of the Committee's Terms of Reference
- Reviewed Internal Audit function's self-assessment on effectiveness and external quality assessment update
- Approved the Internal Audit plan for 2023
- Received initial feedback on October 2022 fraud workshop
- Received an update on defined benefit pension schemes
- Received presentation from the Watson-Marlow Business Finance Director

December (New Annual Meeting)

- Update from External Auditor
- Received update on the G3 project (including on the Group's new Internal Controls function)
- Received update from Chair of the Group's Risk Committee
- Received cyber security update from the Group IT Director
- Reviewed Group Principal Risk – Loss of manufacturing output
- Received presentation from the Electric Thermal Solutions Business Finance Director

Chair's review of 2022

I am pleased to present the Audit Committee's report for the year ended 31st December 2022. The report is intended to describe how the Committee discharged its core responsibilities in overseeing and monitoring the Group's financial reporting and control processes to ensure the integrity of the published financial information. I would also like to highlight a number of important activities which the Committee have undertaken during the last year in order to meet the evolving requirements of the Group's stakeholders.

During the year the Committee successfully implemented the agreed actions resulting from the effectiveness review undertaken in 2021. These included scheduling an additional meeting to allow for deeper dives into specific risk areas and re-introducing formal, external, training opportunities for members, something which had reduced during the pandemic-related restrictions. A key area of focus for the Committee, which was covered during one such in-depth training session and discussion, is the reporting of the impact of climate change on the Group's business and the resulting implications on our reported financial risks, key judgements and related disclosures.

Audit, risk and internal control continued

Audit Committee Report continued

The Committee has been pleased with the quality and effectiveness of Deloitte's external audit. The insight, level of challenge, clear communication and understanding of the key drivers of our business have delivered high-quality audit insight as well as facilitating a productive relationship and valuable debate between management, the Committee and the External Auditor. The usage of data analytics within the external audit process has continued to expand in line with our planned roadmap, enabling further improvements in the efficiency and scope of the overall audit process. The Committee is committed to continuing progress in this area with the planned upgrades to the Group's key business information systems expected to facilitate wider opportunities for automation. In 2021, the Financial Reporting Council (FRC) invited the Committee to participate in a pilot engagement project around audit quality indicators. The Committee was pleased to be included in the pilot and defined a set of indicators, alongside Deloitte and management. The results provided another important mechanism for us to measure audit effectiveness while also delivering valuable feedback to help shape future market practice with the audit quality indicators being further enhanced and reported for the 2022 audit.

As detailed in last year's report, the Committee took the decision to tender our external audit during 2022. As Deloitte had not reached ten years in their current role as External Auditor, a tender was not required under Audit Regulations. Nonetheless, we took the decision to complete the tender process in advance of expected workstreams arising from requirements contained within the BEIS Proposals, in particular, the proposals for continuing improvements to internal controls and external assurance, which we anticipate will impact the future scope of the external audit process. I am pleased to report that the tender process was launched in March and culminated in the Committee receiving three high-quality tender proposals in a competitive process which was run in accordance with FRC best practice guidelines. At our May meeting the Committee proposed to the Board that Deloitte be reappointed as the Group's External Auditor. Despite electing not to propose a change in the external audit provider, the tender process enabled

the Committee to engage and strengthen relationships with other audit firms, including one outside of the 'Big Four' of Deloitte, EY, KPMG and PwC. Through this process we examined our current audit approach and identified additional areas of focus for the future. Further detail on the tender process is provided on page 138.

Throughout the year, the Committee has worked closely with management to support the continuing internal controls journey as the Group looks to move forward in line with the anticipated BEIS Proposal requirements. The work done to date is further increasing standards and levels of understanding across the Group, ensuring the project has strong momentum as we move forward in 2023. The additional investment made by the Group to support this journey, including the establishment of a central Internal Controls team, together with investments in Group-wide technology platforms, demonstrates the ongoing commitment to deliver against the agreed roadmap.

As part of a review of, and update to, the existing fraud risk assessment, I attended an internal fraud risk workshop alongside a number of senior functional and operational leaders from around the Group. The workshop facilitated a wide-ranging discussion and identified focus areas for the coming year. This workshop was an excellent example of the value of the Committee working alongside key stakeholders within the business to strengthen risk management practices.

During the second half of the year, the Group completed two acquisitions, the first being the purchase of the Vulcanic Group of companies (Vulcanic) in September and the second being the purchase of Durex Industries Corporation (Durex Industries) in November 2022. Both acquisitions sit within our Electric Thermal Solutions Business. The Committee has engaged with management, together with the Internal and External Audit functions, to examine the acquisition accounting alongside understanding the next steps in the integration of these businesses into the wider Group.

In addition to the workstreams detailed above, the Committee has requested additional items on its meeting agendas in response to stakeholder requirements and the constantly evolving internal and external environments in which the Group operates. Examples of such issues which we have responded to during the year include an FRC Corporate Reporting Review, monitoring the impact on the Group's UK defined benefit pension schemes in light of the bond market volatility experienced in the autumn and understanding the impacts of the decision to dispose of our business operations in Russia. The Committee also continues to monitor the Group's cyber security preparedness (including receiving updates on the Group's further investment into, and improvement plans for, this function).

As I look back on the past year and consider the Committee's achievements against the targets we set, I am pleased to be able to report a year of strong progress on behalf of all our stakeholders. I hope that this report provides appropriate context and understanding around the work undertaken, which together with our plans for 2023, should give all our stakeholders assurance that the Committee is delivering against our stated objectives. We remain committed to responding to the expectations of all our stakeholders and, as always, we welcome any feedback and look forward to continued engagement during the coming year.

Focus for 2023

- Continuing the Group's internal controls improvement project
- Developing the Group's Audit & Assurance Policy, including evaluating the levels of external assurance over non-financial reported information, including sustainability
- Upgrades to Business ERP systems
- Financial reporting and internal control workstreams involved in the integration of Vulcanic and Durex Industries
- Further development of the AQI review process

1. Financial Reporting

Committee role:

Monitor the integrity of the Group's published financial information and review and challenge the significant financial reporting issues and judgements made in connection with its preparation and presentation.

Actions and reviews undertaken during 2022:

- Reviewed all externally published Financial Statements and trading updates, along with the 2021 Annual Report and Accounts, prior to recommendation to the Board. Detailed papers prepared by management highlighting key issues, judgements and estimates contained within reported financials
- Detailed analysis of managements verification and internal review processes covering the factual content of the external reporting releases
- External Auditor reports and progress updates in relation to Interim results review and full year Group audit
- Detailed analysis of Going Concern and Viability reporting and underlying modelling assumptions, including assessment of suitability of time period covered and scenario assumptions against the context of the Group's identified Principal Risks
- Final draft of 2022 Annual Report & Accounts including fair, balanced and understandable assessment
- Pension accounting and strategy, including assessment of assumptions used to value the material schemes
- Assessment of the acquisition integration plans, alongside the associated acquisition accounting. In-depth acquisition reports were presented to the Committee covering the asset and liability valuations, together with the key assumptions used in arriving at the valuations, for both the Vulcanic and Durex Industries acquisitions
- Ongoing assessments of the appropriateness of the Group's use of Alternative Performance Measures (APMs)

Financial reporting matters and accounting judgements

The Committee is responsible for assessing whether suitable accounting policies have been adopted and whether management has made appropriate judgements and estimates when applying these policies. During 2022, the Committee considered and addressed the significant matters listed below in relation to the Group's Financial Statements and disclosures. The Committee received regular reports from management regarding these matters and they were the subject of detailed discussions by the Committee, management and the External Auditor. The Committee also received detailed external audit reports covering the work undertaken and the conclusions reached in relation to each of these areas. As a result, the Committee reached the conclusion that they were happy with the proposed accounting treatments and resultant financial reporting.

Revenue recognition

Issue:

In view of the profile of revenue and profit recognition in the final quarter of the year (a period when, in some Group companies, a higher proportion of the annual external revenue is recognised compared to the rest of the year), the need to focus on any new significant contracts and revenue cut-off for certain Businesses was highlighted to ensure the appropriate recognition of revenue for the year ended 31st December 2022.

How this was addressed:

The Committee receives updates from management on new significant contracts and monitors the adequacy of the control environment for revenue recognition. In particular, the Committee reviewed adherence to the Group's policy to recognise revenue when performance obligations have been fulfilled which, in the majority of cases, is at time of dispatch or delivery to the customer. After considering the combined evidence, the Committee was able to conclude that revenue recognition was appropriate during 2022 and at the year end.

Audit, risk and internal control continued

Audit Committee Report continued

Pensions

Issue:	How this was addressed:
<p>The Group operates four main defined benefit pension schemes (three in the UK and one in the US). The aggregate assets of the four schemes totalled £333.2 million as at 31st December 2022 while the aggregate liabilities totalled £367.2 million resulting in a net liability of £34.0 million. All four schemes are now closed to future accrual.</p> <p>There are judgements and estimates made in selecting appropriate assumptions in valuing the Group's defined benefit pension obligations, including discount rates, mortality and inflation (see note 23 on pages 216 to 220). These variables can have a material impact in calculating the quantum of the defined benefit pension liability.</p>	<p>The Committee considered reports by the Group, including those from independent external specialists used to prepare pension valuations. Management's selection of assumptions was challenged, and key assumptions were examined against observable external benchmarks and market practices.</p> <p>The Committee spent time during the second half of the year closely monitoring the funding position and impact on the pensions schemes and the valuation assumptions which resulted from the market volatility seen in the UK government debt markets and in liability driven investment funds.</p> <p>Based on this review (including reports from the External Auditor) and consideration of the valuation methods applied, the Committee is comfortable that the key assumptions and accounting treatment are reasonable and appropriate.</p>

Management override of controls

Issue:	How this was addressed:
<p>Internal controls are the safeguards put in place by the Group to protect its financial resources against external and potential internal fraud alongside ensuring the accuracy of reported financial information. Management is responsible for ensuring the internal controls are followed across the Group. As such, intervention by management in the handling of financial information, especially in relation to one-off or judgemental transactions and making decisions contrary to the internal control policy is a significant, if unlikely, risk.</p>	<p>The Committee discussed the mitigation of control risks, with a particular focus on the level of management reviews taking place within the Businesses, with both management and the Business Finance Directors in their regular Committee presentations. The Committee also noted the high quality of response by management to any deviations from Group policies.</p> <p>Regular cycles of internal and external audits by independent parties are in place to review financial information. The audits are objective reviews on compliance with the Group's accounting and internal control policies. The Group continued to invest in its Internal Audit function during 2022 and has increased the usage of data analytics in audits.</p> <p>As detailed previously, management has an ongoing internal controls improvement programme in order to further review and enhance the internal financial control environment and the Committee receives regular updates on progress. The Committee remains satisfied with the Group's monitoring of the effectiveness of the internal control systems and noting that no significant control deficiencies have been identified through this process, is supportive of the Group's continuous improvement journey in this area.</p>

Acquisitions – goodwill valuation

Issue:	How this was addressed:
<p>There is a high level of judgement surrounding the valuation of goodwill and the risk of impairment in respect of major acquisitions.</p> <p>As detailed in Note 15 to the Consolidated Financial Statements on page 211 the largest goodwill balance as at 31st December 2022 relates to the Electric Thermal Solutions Business of cash generating units (£514.9 million).</p>	<p>The Committee received detailed reports from management outlining their valuation of goodwill for any potential impairments and the basis for key assumptions used within their valuation models. The Committee focused on the key assumptions and the associated disclosures around the valuation of goodwill for the Electric Thermal Solutions Business, namely:</p> <ul style="list-style-type: none"> the appropriateness of the Group using a cash flow forecasting period longer than five years for estimating the value in use of the Electric Thermal Solutions Business the forecast operational performance in the business plan, in particular, sales and earnings before interest and tax (EBIT) growth and EBIT margin forecasts as well as cash generation assumptions the discount rates applied to the cashflows resulting from the business plan, specifically the determination of the input variables used to calculate the discount rate the modelling outcomes when sensitivities were applied to represent reasonably possible changes to key assumptions <p>The Committee concluded it was comfortable that key assumptions and associated disclosures were reasonable and that the resulting value in use exceeded the reported carrying values which led to no impairment being required, including when sensitivities were applied.</p>

During 2022, the Group received a request for information from the FRC in relation to the ongoing Corporate Reporting Review monitoring work which the FRC undertakes, detail of the review scope is provided on page 136. The review highlighted a point in relation to the Group's adoption of a cash flow forecasting period longer than five years for estimating the value in use of the Electric Thermal Solutions Business of cash generating units. The Group explained to the FRC that it considered it appropriate to utilise a time period greater than five years, as it anticipated growth in the period to 2030 in excess of the long-run growth rate used to estimate a terminal value, as a result of the demand for its products in customers' publicised decarbonisation initiatives.

Following the FRC review, the Committee supports the enhancements the Group has made to its disclosure of key assumptions (Note 15 page 211) to provide further detail on:

- the link to decarbonisation commitments within the market in which our Electric Thermal Solutions Business operates and the planned year-on-year reduction in the forecasting period
- the significance of the judgement made over the forecasting period
- management's experience of forecasting reliably over periods greater than five years

Acquisitions – intangible assets valuation

Issue:	How this was addressed:
There is a high level of judgement surrounding the valuation of acquired intangible assets in relation to major acquisitions. The associated valuation models contain judgements relating to future business performance and underlying economic conditions.	The Committee received detailed reports from management, supported by a third-party valuation specialist, outlining their proposed valuation methodology together with the basis for the key assumptions used within the valuation models. The Committee focused on the key assumptions and the associated impacts on the valuation of intangible assets for Vulcanic and Durex Industries, namely:
As detailed in Note 26 to the Consolidated Financial Statements on pages 223 and 224 as at 31st December 2022 the Group recognised intangible assets of £241.8 million in relation to the acquisitions of Vulcanic and Durex Industries.	<ul style="list-style-type: none"> • the forecast operational performance in the valuation model business plans used to value intangible assets, in particular, revenue growth, EBIT margin forecasts and long-term growth rate assumptions. • the discount rates applied to the cash flows resulting from the business plans • The reasonableness of assumptions when considered in the context of past actual performance and available third-party evidence, with a particular focus on the inputs which impact Vulcanic brand valuation • The proposed useful economic life over which each intangible asset is to be recognised • the impact on the valuation outcomes when sensitivities were applied to represent reasonably possible changes to key assumptions <p>Based on this review (including reports from the External Auditor) and consideration of the valuation methods and key assumptions applied, the Committee is comfortable that the key assumptions and the resulting intangible assets recognised are appropriate.</p>

Other significant financial reporting issues

Going Concern, Viability Statement and financial resilience

During 2022 the Committee remained focused on monitoring the Group's financial resilience and overall liquidity position, especially given the debt-financed acquisitions of Vulcanic and Durex Industries which completed in the second half of the year. The Committee noted that the Group operated throughout 2022 comfortably within the leverage ratio covenants contained within its external financing arrangements.

The Group has continued its Viability Statement reporting in line with best practice by (i) including an assessment period of five years, as started last year, and (ii) providing sufficient detail around the underlying scenario modelling undertaken to ensure an explicit link between how the scenarios relate to the Group's identified Principal Risks. The Committee reviewed the 2022 Going Concern and Viability Statements and were satisfied that these represented accurate assessments of the Company's position at the date of the Financial Statements. For further detail on the Going Concern and Viability Statements and for additional information on the financial resilience of the Group, please refer to pages 43 to 45.

Financial disclosures including Alternative Performance Measures (APMs)

In the year, the Committee reviewed a number of accounting treatments and disclosures alongside the treatment of specific adjusting items. These included:

- the disposal of the Group's Russian businesses
- the treatment and presentation of costs related to (i) significant restructuring of Group operations, particularly in relation to Electric Thermal Solutions' manufacturing operations in France and (ii) the acquisition of the Vulcanic and Durex Industries businesses
- the fair values applied to acquired assets and liabilities of the Vulcanic and Durex Industries businesses, alongside the alignment of these businesses to the Group's accounting policies

During 2022 the Group undertook certain transactions which were significant in nature and which management proposed be classified as an adjusting item to provide all our stakeholders with additional useful information in order to assess the period-on-period trading performance of

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the Group (see Note 2 on page 196). In line with best practice the Committee continued to closely monitor the Group's policy on such items, spending considerable time understanding, reviewing and challenging management's classification. The Committee also took account of the views of the External Auditor and arrived at the conclusion that they supported the enhanced disclosures made by management and considered the classifications to be appropriate in each case.

The Committee noted that it would continue to focus on the definitions and usage of APMs given the increased regulatory scrutiny on such measures.

2. Internal Controls

The Board has overall responsibility for the effectiveness of the Group's internal controls and risk management frameworks. Oversight of the Group's risk management procedures and the operation of controls is undertaken by the Risk Management Committee and the Group Executive Committee and further detail on these processes can be found on page 139 to 142. The Committee supports the Board and the Risk Management Committee by monitoring and assessing the effectiveness of the Group's internal controls processes as follows:

Committee role:	Actions and reviews undertaken during 2022:
Review the adequacy and effectiveness of the Group's internal financial control environment.	<ul style="list-style-type: none"> Review of all external and internal audit reports Update on Group-wide training programmes (including mandatory courses on Health & Safety, Anti-Bribery & Corruption and cyber security)
Receive reports from the Risk Management Committee on operational risks.	<ul style="list-style-type: none"> Annual reviews of the Group's Tax and Treasury policies with the Group Head of Tax and Group Treasurer attending the Committee meeting. Review of the minutes and actions of the Tax and Treasury Committee meetings that took place during the year
Review the Group's Tax and Treasury policies as well as debt financing facilities and the approach to management of foreign exchange risk.	<ul style="list-style-type: none"> Review and approval of all new Group external debt financing facilities entered into during the year, including the financing arrangements utilised in order to complete the acquisitions of Vulcanic and Durex Industries Review of annual management papers on how the Group monitors the effectiveness of the Group's internal control processes Detailed reports from the functional leaders with responsibility for managing Cyber security risk Detailed presentations from management, the External Auditor and an external third party on progress in relation to the BEIS Proposals. In-depth presentations from the Group Director of Sustainability and an external third party covering sustainability reporting requirements and frameworks Detailed reviews with the respective internal risk owner for each one of the Group's identified Principal Risks The Finance Director of each of the Group's three Businesses presented their internal control and governance structures to the Committee. These updates included detailed progress reports by each business around the programmes to upgrade their core Information Systems. Progress was compared to a series of identified critical success factors

During the year both management and the Committee continued to closely monitor the BEIS Proposals and in particular the response to the consultation around 'Restoring trust in audit and corporate governance' which was published by BEIS in May. Following on from the work undertaken in 2021, the Group has continued to invest significant time and resources in understanding and preparing the Group for the anticipated impact of the BEIS Proposals. The Group's Chief Financial Officer and his Finance Leadership Team have continued the development and implementation of their Group Governance Guidelines (G3) programme which is designed to deliver a risk-based approach to improving the overall internal financial controls within the Group. To support the Group's Businesses to successfully embed the G3 programme, the Group has established a central Internal Controls team whose role is to partner with the Group's Businesses in order to deliver a successful implementation. A sub-group of the Committee continued to work closely with management, as they had in 2021, to support the G3 programme and provide input to the Group's internal controls roadmap. The programme will focus on a number of key thematic areas:

- (i) the consistency and evidencing of key controls
- (ii) documenting and standardising the approach to control operation and
- (iii) tightening the general IT controls around core information systems

The G3 programme is supported by a library of training materials and a global online platform to track and monitor progress and milestones across the Group.

The Group has also continued to focus on analysing our current reporting processes alongside the level of assurance we currently obtain over our external disclosures. Supported by external advisers, the Group has undertaken a structured risk review of all our external disclosures, together with a review of best market practice in the FTSE100 peer group, to identify which areas the Group may wish to consider changing the current level of assurance around in response to increased regulatory scrutiny and changes in market practice. It is anticipated that this work will provide a framework upon which the Group will base its Audit and Assurance Policy as required under the BEIS proposals.

3. Whistle-blowing

The Group's Safecall facility, a confidential colleague whistle-blowing platform, continued to be used across the Group throughout 2022. The facility is actively advertised at all operating companies and allows any colleague to raise concerns, anonymously if needed, where they feel activity is being undertaken which conflicts with the Group Management Code or Values. Calls raised are investigated by the Group General Counsel and/or the Group Head of Internal Audit with the involvement of other senior colleagues as required.

Committee role:	Actions and reviews undertaken during 2022:
Review the adequacy and security of the whistle-blowing arrangements that the Group has in place for colleagues.	<ul style="list-style-type: none"> The Committee reviewed a summary of calls to the Group's whistle-blowing helpline which have been received and are being investigated.
Monitor colleague awareness of the whistle-blowing policies and procedures.	<ul style="list-style-type: none"> Reviewed the outcome of any identified cases where Group policies have been breached, together with details of the actions taken by management alongside consideration of any lessons learned.
Ensure appropriate processes are in place for the proportionate and independent investigation of any matters raised.	
Receive reports of non-compliance with the Group's policies around fraud, bribery and unethical behaviour.	

As a result of the Committee's review they were satisfied that all calls received via Safecall were dealt with appropriately by management. A small number of breaches of the Group policies were identified during 2022. There was no material financial loss in any of these instances and the Committee was supportive of the lessons learned during the year and the follow-up actions taken by management to support and reinforce Group policies.

4. Risk Management

Committee role:	Actions and reviews undertaken during 2022:
Review the Group's procedures and controls relating to:	<ul style="list-style-type: none"> Reviewed current approach to fraud risk management and participated in internal cross-function workshop
– Fraud	<ul style="list-style-type: none"> Received reports from management detailing any identified cases of fraud and the resulting actions being taken
– Bribery and unethical behaviour	<ul style="list-style-type: none"> Received input from the External Auditor and from the internal audit function as to their observations and findings
– Money laundering	<ul style="list-style-type: none"> Received updates from the Group Legal team on the training materials used across the Group to educate colleagues on anti-bribery, money laundering and legal compliance
– Compliance with legal and regulatory requirements	<ul style="list-style-type: none"> Received a detailed update from the Group Legal team leading the mandatory contract practices standardisation project across the Group

Fraud

The Committee monitors the effectiveness of measures in place to prevent, detect and manage fraud. While it is not possible to completely eliminate fraud risk from the organisation, the Committee is satisfied that measures currently in place are effective at managing and reducing fraud risk to an acceptable level.

During the year, the existing fraud risk assessment of the Group was reviewed and updated. In addition, in October 2022, a fraud risk workshop was held with a cross-function and business line group of senior leaders (including the Committee Chair). In the workshop, current fraud prevention measures were assessed. Management across the Businesses also held a fraud 'stand down' during 2022, where they reminded colleagues of the key fraud risks and the need for vigilance to ensure frauds are prevented/reported swiftly. Three key actions were agreed for 2023 to continue to improve fraud risk management in the Group: further strengthening third party due diligence processes; supplementing on-line Anti-Bribery & Corruption training with interactive group sessions; and building enhancements into current data loss prevention controls.

Audit, risk and internal control continued

Audit Committee Report continued

5. Internal Audit

The Committee is cognisant that the ongoing monitoring and review of the effectiveness of the Group's Internal Audit function is a key responsibility which all our stakeholders look to the Committee for. During the year the Committee undertook a number of actions in this area:

Committee role:	Actions and reviews undertaken during 2022:
Monitor and review the effectiveness of the Internal Audit function.	<ul style="list-style-type: none"> Assessed the independence and effectiveness of the Internal Audit function Reviewed the results of the annual self-assessment of the function
Review, assess and approve the annual internal audit plan.	<ul style="list-style-type: none"> Discussed the findings of the External Quality Assessment of the Internal Audit function and monitored progress on agreed improvement actions
Review the Internal Audit reports and monitor the key issues arising.	<ul style="list-style-type: none"> Monitored key performance indicators of the function against pre-agreed targets Monitored timely completion of internal audits against the 2022 audit plan and approved any changes to the plan Approved the internal audit activity plan and budget for 2023 Reviewed reports submitted periodically by the Head of Internal Audit of activities undertaken, key audit findings and remediation actions and status reports on completion of agreed action plans Reviewed and approved the Internal Audit Charter Held regular meetings with the Group Head of Internal Audit without management present

Throughout 2022, the Committee monitored the effectiveness of internal audit activity and the results of audits undertaken. This provided valuable input into the Committee's view on the effectiveness of the Group's risk management, control and governance framework.

During 2022, the Internal Audit team performed a total of 35 internal audits, which were all conducted through in-person visits. This ability for the team to physically visit the locations being audited provided a valuable opportunity to build strong relationships with the local operating companies and to gather additional insights which are not as easy to identify when auditing on a fully remote basis.

The majority of the operating companies audited were found to have an effective control environment. Where issues were found, remediation actions were agreed that were tracked to completion and validated before being closed. To the extent that any internal audit action items become overdue, the Business Finance Directors are engaged to assist with ensuring they are closed as soon as possible. The Committee was satisfied that throughout 2022 management devoted significant resource to the resolution of action items. The Committee receives regular reports on closure rates and will continue to monitor outstanding actions. During the year, progress was made in reducing open and overdue high priority items.

Thematic issues identified during audits are also reported, leading to a number of Group-wide control improvement initiatives being undertaken in areas such as those relating to third-party customer and supplier contracting, IT and financial controls.

The Committee is satisfied that the internal audit function has sufficient skills and resources to discharge its responsibilities effectively and a robust training programme is in place for ongoing development of technical and analytics capabilities.

The internal audit function has continued to develop its analytics capabilities, in alignment with the systems roll-outs in progress across the Group's Businesses. Activity to date has already led to improvements in the level of assurance the Internal Audit team has been able to provide. The target is for analytics to be fully embedded across the internal audit process including risk assessment, scoping, fieldwork testing and assessing the effectiveness of remediation actions implemented.

An external quality assessment of the Internal Audit function was carried out in December 2021 by an external provider, Protiviti. Overall, the function was considered to be performing strongly with all internal activities undertaken rated as 'Generally Conforms' to IIA Standards (the highest available rating). While there are established good practices, some opportunities were identified for further and ongoing improvement, such as reintroducing the guest auditor programme and amending elements of the audit methodology, which have been actioned.

FRC review scope

It should be noted that the FRC review was based on the Group's Annual Report and Accounts and does not benefit from detailed knowledge of the Group's business or an understanding of the underlying transactions entered into. It was, however, conducted by staff of the FRC who have an understanding of the relevant legal and accounting framework. The FRC supports continuous improvement in the quality of corporate reporting and recognises that those with more detailed knowledge of the business, including the Audit Committee and auditors, may have recommendations for future improvement.

The FRC review work undertaken provides no assurance that the Group's Report and Accounts are correct in all material respects; the FRC's role is not to verify the information provided but to consider compliance with reporting requirements.

The FRC's letters are written on the basis that the FRC (which includes the FRC's officers, employees and agents) accepts no liability for reliance on them by the Company or any third party, including but not limited to investors and shareholders.

6. External Audit

Committee role:	Actions and reviews undertaken during 2022:
Oversee the relationship with the Group's External Auditor.	<ul style="list-style-type: none"> • Deloitte's reports to the Committee covering their Interim review and Full Year audit outcome and opinion
Review the quality and effectiveness of the external audit, including approval of the scope of annual audit plan and associated fees, the underlying audit procedures and approach and the controls designed to ensure independence and govern the provision of non-audit services.	<ul style="list-style-type: none"> • Full external audit tender process undertaken • Recommendation to reappoint Deloitte at the 2023 AGM • Review, challenge and approval of Deloitte's 2022 audit plan and associated fees • Tracking Deloitte's progress against audit plan journey, specific areas of focus included data analytics usage
Make recommendations to the Board on the tendering of the external audit, the appointment process, remuneration and engagement terms of the External Auditor.	<ul style="list-style-type: none"> • Review and approval of proposed external audit quality indicators and subsequent consideration of performance against these post the FY21 audit • Approval of Non-Audit Services Policy alongside processes to govern auditor independence • Regular dialogue with Deloitte through the year, in addition to Committee meeting time allocated with External Auditor in the absence of management

External audit effectiveness and quality

A key responsibility of the Committee is overseeing the external audit process and assessing the audit quality. During the year the Committee engaged in a number of specific actions in order to improve the auditor effectiveness review process while ensuring it continues to fulfil its obligations in this area. These included:

- **External evaluation of FRC's Audit Quality Review (AQR):** The Committee reviewed the FRC's latest AQR report on audit quality as related to Deloitte. This review was followed up with a findings discussion with Deloitte at a Committee meeting. The Committee was satisfied with the outcome of this review.
- **Identification and introduction of Audit Quality Indicators (AQIs):** Following the publication of the FRC's thematic review on AQIs, the Group participated in the FRC's pilot review project on this area. The Committee agreed a set of AQIs against which Deloitte's external audit would be measured. The criteria covered various factors including: the experience of the audit team; the use of technology to automate the audit process; the level of input from technical specialists within Deloitte; and the overall communication process with the Committee. The Committee found the AQIs helpful in providing a defined structure against which the external audit could be assessed. The Committee, via the Chair, provided feedback to the FRC, particularly around the fact that they would find published, expected benchmarks for each AQI useful as a metric against which to compare the Group's specific results. Going forward, the Committee will maintain the AQI assessment process whilst looking to develop specific targets and to evolve and expand the criteria in order to maximise the assessment opportunity.
- **Audit plan and approach:** The Committee discussed Deloitte's detailed audit plan, proposed approach and the planned scope of the audit during the year, together with the proposed materiality and the identified significant audit risks. Given the scale of the number of operating companies within the Group's Businesses, detailed discussions were held around the entities to be covered within the scope of the audit in order to arrive at a suitable balance between the level of audit coverage and the rotation of operating companies into external audit scope within the Group. The scope of the audit was also updated later in the year to cover the acquisitions of Vulcanic and Durex Industries. As part of this detailed audit plan review, the Committee reviewed and approved the proposed audit fees. In reviewing the audit fees, the Committee received a detailed breakdown of the proposed fees and was able to satisfy themselves that the agreed amount represented fair value in order to deliver the quality and scale of audit sought.
- **Internal evaluation process:** The Committee considers it important to gather feedback from within the Group and specifically from the finance teams within the operating companies who interact with the various Deloitte teams as part of the audit process. Each local finance team is asked to provide feedback on the external audit process by scoring a series of review questions and providing rationale for the scores given. The results are then aggregated and presented to the Committee and Deloitte for discussion with year-on-year movements in the results tracked and detailed. While the overall results and audit experience was positive, a number of incremental opportunities to further improve the process have been identified and agreed with the Committee.
- **Interaction with the auditor:** Throughout the year, the Committee worked closely with Deloitte and was able to gather a good insight into the overall quality of the audit process and the performance of key individuals within the Deloitte team. Throughout these interactions the Committee felt that Deloitte delivered a consistently high-quality output and provided an appropriate challenge to management's assumptions, key judgements and estimates whilst ensuring their audit process focused on the key risk areas.

Via the combination of the activities described above, the Committee was able to conclude that Deloitte has provided a high-quality audit, appropriately questioned and challenged management and ensured that the Committee has received appropriate insight and feedback detailing the process and results. The Committee was also pleased to see (i) an increased use of data analytics by Deloitte within the audit process this year in order to increase efficiency and (ii) the level of audit work undertaken in order to review and suggest improvements to each of the Group's Businesses as they continue on the journey to upgrade their respective ERP systems.

Audit, risk and internal control continued

Audit Committee Report continued

External audit tender

Whilst not required under EU Audit Regulations, as it has only been eight years since Deloitte's appointment, the Committee announced in March 2022 that it intended to invite firms to tender for the external audit of the Group. The selected firm being proposed to shareholders for approval at the 2023 AGM, would undertake the 2023 Interim review and Full Year audit. This decision was taken in light of the significant schedule of work to be undertaken over the forthcoming years (in line with the BEIS Proposals for continuing improvements to internal controls and other areas of assurance which is anticipated to impact future external audit work).

Before commencing the tender process, the Group approached its top ten shareholders to gather their input and viewpoints, ensuring these could be taken into account during the tender process. The process was designed in line with FRC best practice guidelines and all participating firms were provided with clearly defined assessment criteria. The Committee's assessment criteria was based on audit quality (including technical competence), challenge and independence as well as a review of published reports on the quality of each firm's audits. The Committee invited several audit firms to tender and were pleased to include a firm, outside of the 'Big Four' as one of the final three participants in the proposal process. During the process all participating firms were provided with extensive access to the Group, including a comprehensive online data room, time with the Managing and Finance Directors of each of the Group's three Businesses, meetings with key Group function leaders, individual sessions with the Committee Chair and members as well as a guided tour of the Group's largest UK manufacturing site. The process helped develop our relationship with a broader range of audit firms, which we see as valuable in order to expand the choice of professional partnerships in the future.

Following the receipt of high-quality proposals and presentations from all three tender participants, the Committee took the decision to propose the reappointment of Deloitte as the Group's External Auditor. This recommendation is made by the Committee based on the audit tender process and has not been influenced by any third-party view. The Committee also confirms that no contractual term of the kind mentioned in Article 16(6) of the Audit Regulation had been imposed on the Group which placed any restriction on the Committee regarding firms that were able to participate in the tender process and

ultimately be proposed to shareholders to undertake the Group external audit. Given that the Group's current audit partner at Deloitte, Andrew Bond, will be no longer be able to lead the Group external audit in 2024 (as a result of the regulatory requirement to rotate every five years), the Committee used the audit tender process as an opportunity to select a proposed new lead audit partner from Deloitte for 2024 onwards.

Safeguarding auditor independence and objectivity

The Committee recognises that the independence of the External Auditor is an essential part of the audit framework and has adopted a policy for determining whether it is appropriate to engage the Group's auditor for non-audit services. The Auditor Engagement Policy was reviewed and updated during the year to align with the latest FRC Ethical Standards. A copy of the Auditor Engagement Policy can be found on the Group's website, www.spiraxsarcoengineering.com.

To safeguard independence and objectivity, the policy sets out that the maximum period of an audit engagement is to be ten years (calculated from the date of the first financial year covered by the audit engagement letter). Further and in line with the Ethical Standard, the policy details the non-audit services that the auditor can undertake and which of those services are subject to the non-audit services cap.

On non-audit service caps and approvals, the policy states that any expenditure with the Group's auditor on non-audit fees should not exceed 70% of the average audit fees charged in the last three-year period. Furthermore, (i) where the fees for any individual engagement in relation to the non-audit services are in excess of £100,000, pre-approval is required from the Committee and (ii) a cumulative annual cap of £300,000 is set in respect of non-audit services provided by the auditor, above which all individual engagements must be pre-approved by the Committee. In addition to the Group's Policy, the auditor performs its own independence and compliance checks, prior to accepting any engagement, to ensure that all non-audit work is compliant with the FRC's Ethical Standard in force and that there is no conflict of interest.

During the year, the Group spent £0.1 million on non-audit services provided by Deloitte LLP, which included work undertaken on the Interim review. These non-audit fees equate to 7% of the average Group audit fees charged over the past three years.

Further details can be found in Note 7 on page 203.

Ensuring a fair, balanced and understandable Annual Report

The Board is required to provide its opinion that it considers the Annual Report & Accounts, as a whole, to be fair, balanced and understandable and therefore provides the required information for shareholders to assess the Group's position, performance, business model and strategy.

During 2022, the Committee considered many components of business performance to ensure it has a full understanding of the operations of the Group. Key matters considered by the Committee include:

- reviewing, understanding and supporting the key judgements and estimates taken
- risk areas set out in the Risk Management Committee Report
- ensuring an appropriate balance of GAAP and non-GAAP financial measures and disclosures
- receipt of regular strategy reports from the Group Chief Executive and operational reports from the Business Managing Directors
- reviews of the budget and operational plan alongside the financial performance
- recognising the internal co-ordination and review of the Group-wide input into the Annual Report which runs alongside the formal audit process undertaken by the External Auditor

Through all the above, alongside its monitoring of the effectiveness of the Company's controls, internal audit and risk management, the Committee maintains a good understanding of business performance, key areas of judgement and decision-making processes within the Group.

As a result, the Committee advised the Board that they consider the Group's Annual Report to be fair, balanced and understandable.

Kevin Thompson Chair of Audit Committee

8th March 2023

Further reading

- ✚ **Resilience, Going Concern and viability statements on pages 43 to 45**

Audit, risk and internal control

Risk Management Committee Report



“Risk management is on the frontline in delivering sustainable value for all our stakeholders and aligning to our Purpose.”

Nicholas Anderson
Chair of Risk Management Committee

Members

Our Risk Management Committee comprises:

Membership	Attendance
Nicholas Anderson (Chair)	5/5
Nimesh Patel	5/5
Jim Devine (GEC)	5/5
Dan Harvey (Head of Internal Audit)	5/5
Andrew Mines (GEC)	5/5
Armando Pazos (GEC)	3/5
Sarah Peers (GEC)*	3/3
Maurizio Preziosa (GEC)	5/5
Andy Robson	5/5

*joined in May 2022

Committee role and responsibilities

The purpose of the Committee is to oversee the management and control of significant risks affecting the Group. The Committee ensures that the Group has robust risk management policies and procedures in place, covering all key areas of risk, such as project governance, sanctions and embargoes, crisis management, human rights, business continuity and business management.

The Committee's responsibilities include:

- Using top-down and bottom-up reviews to understand the risks facing the Group, including all workforce-related risks
- Determining the Group's appetite for risk
- Assessing the velocity of each risk
- Monitoring any emerging risks on the horizon
- Accepting and managing within the Businesses those risks which our colleagues have the skills and expertise to understand and leverage
- Identifying appropriate risk mitigation techniques and countermeasures

Key activities

The Committee met five times in 2022, details of attendance at meetings can be found to the left. A summary of the Committee's activities throughout the year is set out below.

January

- Final approval of 2021 Risk Register and Principal Risks
- Elevation of 'Loss of critical supplier' to Principal Risk 8 and a corresponding risk appetite rating approved
- Validation of all other risk appetite ratings

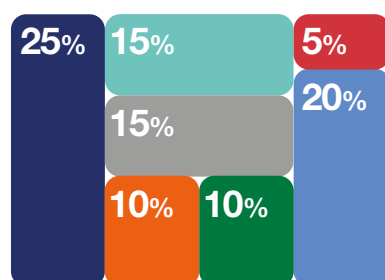
May

- The concept of risk velocity was deliberated and approved for inclusion in the Group's Risk Management Process
- The results of the Enterprise Risk Management Process were assessed and areas of improvements were discussed

August

- All operational risks were scored for risk velocity
- The responses to the top-down risk review were discussed and determined to be satisfactory

How the Committee spent its time %



- Risk management and controls
- Internal Audit
- Results review and reporting
- Financial resilience
- Presentations by Business unit Finance Directors
- External audit
- Corporate governance, training and whistle blowing

Audit, risk and internal control continued

Risk Management Committee Report continued

November

- Discussion of results of risk scoring and changes in year-on-year trend, principally resulting in 'Loss of critical supplier' being elevated to Principal Risk 6 and Climate Change being elevated to risk 9
- Review of, and agreement on, updates to the Risk Register arising from the top-down review

December

- Final approval of 2022 Risk Register and Principal Risks
- Risk appetite and risk velocity ratings validated for all Principal Risks

Chair's review of 2022

Summary of key focus areas

A key development of the Committee's work this year has been the introduction of risk velocity in the Group's risk management process. Risk velocity is a measure of the time that would lapse between the materialising of a risk and the point at which the Group would feel its impact. The business and regulatory frameworks have become increasingly complex and fast-paced. However, risk is rarely static and the COVID-19 pandemic has demonstrated the speed at which a risk can impact an organisation.

This has necessitated the addition of risk velocity as another dimension to our risk assessment framework. For those risks with high velocity, it is crucial that we ensure that the appropriate controls are in place in the event that such a risk does materialise. This confers a key advantage of enabling us to plan ahead and put in place pre-emptive and recovery processes today and ensure that we can thrive in an environment which is increasingly volatile. We have rated each of our Principal Risks for risk velocity with the same rigour as we measure the likelihood and impact of a risk.

In February 2022, Russia invaded Ukraine. This was followed by a unanimous decision of the major global powers to impose stringent economic and financial sanctions on Russia and we likewise suspended all trading with and within Russia. The Group took the view that Russia's ability to trade with the world would be restricted for many years to come. We therefore ultimately took the difficult decision to close our Russian businesses and cease all direct and indirect

trade with Russia. The disposal of our Russian businesses was concluded on 6th July 2022 and this was coupled with a global rollout of an updated sanctions policy relating to Russia. Having traded in Russia for more than 25 years this was a decision fraught with emotion, not least for the impact on our Russian colleagues, who we continued to support, including through paying salaries in the second quarter as we prepared the operations for disposal.

The conflict in Ukraine also triggered a global energy crisis and spiralling inflation in a number of countries. Recognising the severity of the impact on our workforce, we decided to revalidate our compensation parameters and bring forward our pay review date in 2023 from March to January, setting each country's pay increment at a level that is able to meaningfully replace most of the purchasing power eroded by the inflationary pressures in 2022.

In addition to completing its biennial top-down review of risks and the update of the Group Risk Register, the Committee also deliberated the findings of the Enterprise Risk Management Review undertaken with the support of external consultants PricewaterhouseCoopers LLP and will implement key findings during 2023.

Anti-Bribery and Corruption (ABC)

The Group has continued to reinforce the message of zero tolerance for bribery and corruption within its Businesses. Our ABC training, which is hosted by the Steam Specialties Academy as part of the Group Essentials training module is available in 16 key languages and around 6,350 colleagues (including Directors) worldwide have now taken part in the training.

The Group uses an independent, third-party whistle-blowing facility to enable colleagues to anonymously report any suspected unethical, illegal or otherwise concerning conduct. To ensure all colleagues continue to know how to access the facility, an internal awareness refresher campaign was launched in January 2023 in 16 languages and rolled out across the Group.

In line with our Gifts, Entertainment and Hospitality Policy, we also maintain an online gift register, where colleagues are expected to record gifts, to ensure our conduct is in keeping with the highest ethical expectations and always within the law. This year we reviewed and updated our Gifts, Entertainment and Hospitality Policy to ensure it was appropriate for the increasing size and complexity of our business.

Further updates on whistle-blowing and ABC can be found in our Sustainability Report on page 51.

Modern Slavery Statement

The Group's Modern Slavery Statement 2022 reflects the Group's Values and the interplay between those Values and our commitment to the mission behind the UK Modern Slavery Act. It explains how we operate to the highest ethical standards across our global businesses. We respect and protect human rights and will not tolerate modern slavery or human trafficking in any of our operations, including through our supply chain. The Statement can be found on the Group's website, at www.spiraxsarcoengineering.com/sustainability/supply-chain.

Identifying emerging and Principal Risks

We have a robust Risk Management Process in place through which we identify, evaluate and manage the Principal Risks and emerging risks that could impact the Group's performance.

During 2022, we reviewed the Group's exposure to risk using a top-down approach, where the Committee sought views of the Group companies on the risks that the Committee considered may affect their businesses to ensure new or emerging risks are not missed. Following this process, the Committee reviewed and confirmed the robustness of the countermeasures that Group companies have in place to mitigate the Principal Risks in the Group Risk Register. In addition, we continued to closely monitor certain changing emerging risks such as the rising cost of inflation and took appropriate mitigating actions through the bringing forward of our 2023 pay review date and effective price increases.

Our Principal Risks and the results of the 2022 review are set out in the Strategic Report on pages 92 to 99.

Climate change risk

Climate change continues to be an emerging risk that we continue to closely monitor in light of national and global developments. Climate Change risk is broken down into two categories: Physical risks (such as increased frequency and severity of extreme weather events), and the impacts of such events and climatic changes on the Group's operations (including supply chains); and transition risks (arising from political, economic and societal shifts to a low-carbon economy).

Attendance at the World Climate Summit, an important fringe event of the 27th Conference of the Parties of the UNFCCC (COP 27) corroborated our view that the risk will continue to dominate the global economic and political agendas in 2023 and we must continue to recognise the climate risks and opportunities in arriving at our business decisions. Our climate risk is managed holistically by the Committee with regular updates to the Group Executive Committee and the Board. The risk was elevated to risk 9 in our Risk Register this year following similar rises in the last two years.

Recognising the specialist knowledge and far-reaching implications of this risk, the Committee also invited our Group Director of Sustainability to join the Committee this year which makes us well placed to ensure we do not have any blind spots in our appraisal of the risk. We also continue to follow the framework set by the Task Force on Climate-related Financial Disclosures (TCFD) to enable the transition to a low-carbon economy. Our TCFD disclosures are set out on pages 59 to 61 of the Sustainability Report.

Monitoring effectiveness

(i) Risk management systems

The Committee is responsible for reporting to the Board the risks facing the Group and the mitigation measures for those risks. To fulfil that responsibility, the Committee oversees the Group's risk management processes and procedures, with support from the Audit Committee, through internal audit, who monitor Group companies' compliance with those processes and procedures.

The Committee is also charged with the ongoing monitoring of sufficient and effective mitigation plans for relevant risks at each Business together with all the operating companies in each of those three Businesses. Each operating company is required to undertake a formal review, at least once a year, of the risks which impact, or have the potential to impact, its business. This takes the form of a top-down or bottom-up review and includes all risks related to that company's workforce. The reviews are consolidated into Group-wide risk reports which are maintained and reviewed by the Committee on a regular basis. Additionally, the risk management processes are monitored on an on-going basis via internal and external audits of Group companies. Senior managers have full accountability for risk management within their businesses. This year also included an audit of the Group's Risk Management Process undertaken through an Enterprise Risk Management Review.

The governance structure provides three lines of defence in the Group's risk management, as illustrated below.



(ii) Internal control framework

The Group's internal controls framework is structured as follows:



Oversight of the Group's risk management frameworks and operation of controls is undertaken by the Risk Management and Group Executive Committees.

The Risk Management Committee regularly reviews the Group's Principal Risks, including emerging risks and defines appropriate risk appetite. The Group Executive Committee is responsible for the operation of controls to mitigate both the Principal Risks and other operational risks. The Board is actively involved in reviewing all risks.

The Audit Committee also undertakes 'deep dives' into the Principal Risk areas. In 2022 it reviewed Principal Risk 4: Loss of manufacturing output at any group factory, at its October meeting.

Underpinning the Group's control environment is our culture and the 'tone at the top' of the organisation, which sets the principles under which all Group business is conducted. These principles are captured in the six Values of the Group that have been communicated to all colleagues. These principles are also documented and reinforced through the Group Management Code and through annual mandatory training via the online Group Essentials programme. Colleague engagement surveys are also undertaken to validate organisational alignment to our Values and in 2022, a Values-based awards programme, the Spirit Awards, was launched, which received 633 applications in its first year.

The Group's documented policies and procedures, which are periodically reviewed and refreshed, set out our clear expectations of operating companies for the operation of controls. This includes the Group's Delegation of Authorities that has been approved by the Board and cascaded to our Business Executive teams and their respective operating companies.

Reviews over the effectiveness of the controls environment are performed through an annual Risk and Control Self-Assessment process and reviews of operating companies' activities undertaken by Group functions, including Internal Audit. Where appropriate, such as when reviewing specialist functions, independent reviews are sought from third parties and various regulatory and certification audits are also undertaken across the Group each year. Findings identified from these processes and reviews give rise to documented action items, which are tracked to completion.

Oversight of the financial and operational performance of our operating companies is provided at Business and Group levels and includes detailed quarterly financial reviews, reviews of monthly management accounts and weekly flash reporting. Key business decisions are approved by the Group Executive Committee, which meets monthly to review financial performance and receives reports on activity to manage our Principal Risks. Senior leaders and the Board visit Group operations, and regional and business leaders also present directly to the Board. Various Business and Functional conferences are held during the year to engage our global teams and help communicate Group expectations.

Audit, risk and internal control continued

Risk Management Committee Report continued

Safecall, our established independent whistle-blowing facility is managed by the Group General Counsel and is advertised at all operating sites and was recently reinforced through a Group-wide awareness campaign. Safecall helps us ensure that we are always acting with integrity and working in a way that is fair and honest and always doing the right thing. If colleagues are concerned about serious and wrongful conduct at work, they can use Safecall to report concerns confidentially and anonymously if they become aware of any activity that is inconsistent with our principles. Concerns are investigated by the Group General Counsel or another senior manager as appropriate.

(iii) Internal audit

The Group's standard policy regarding internal auditing is that each operating company is audited at least once every five years (most more frequently). Operating companies located in higher risk territories are audited more frequently, and businesses acquired by the Group are subject to internal audit within six months of acquisition.

The internal audit system is a crucial part of the risk management process. Internal audits are conducted by our Internal Audit team led by our Head of Internal Audit.

Internal audit reports are made to the Audit Committee and the Board as a whole. The Audit Committee has ensured compliance with centrally documented control procedures on such matters as capital expenditure, information and technology security and legal and regulatory compliance. The Audit Committee conducts 'deep dives' into Principal Risks.

Risk Appetite Statement

Risk is an inherent part of business and in order to achieve our business aims, we must accept certain risks. We seek to implement a balanced approach to risk, ensuring that our resources are protected while still pursuing opportunities to accelerate and deliver growth.

The decision to take opportunity-based risks should, to the greatest extent possible, be deliberate and calculated.

- We aim to confirm that the level of risk is commensurate with the strategic and economic benefits the risk might bring
- We evaluate our ability to control the risk or mitigate its effects, should that risk materialise
- We always assess the potential ethical considerations arising from knowingly accepting some level of risk

An informed and well-considered process is crucial to any decision to accept risk. The Committee has undertaken a thorough evaluation process to determine an appropriate Risk Appetite and Risk Velocity rating for each Principal Risk. These are set out in detail in the Risk management section of the Strategic Report which starts on page 92.

The Group has a very low appetite for risks that could lead to violations of health, safety and environmental legislation, breaches of legal and regulatory requirements and climate change that might affect its operations.

In contrast, the Group has a high risk appetite in relation to economic and political instability. With decades of experience in successfully managing operations in volatile markets, we have the control procedures in place to handle the challenges that come with those risks and we appreciate that without taking risks in new, sometimes unstable, territories we would miss out on valuable opportunities for growth.

As an organisation we are risk aware, but not risk averse. We continually monitor and assess the risks facing the Group and evaluate our ability to control them and mitigate their effects. Focusing on our strategic objectives, we evaluate our Risk Appetite and decisions to accept risk in a way that will ensure the on-going financial health of the Group.

Board and Audit Committee Oversight

The Board has overall responsibility for the effectiveness of the Group's internal controls and risk management frameworks. Oversight of the Group's risk management procedures and the operation of controls is undertaken by the Risk Management Committee and the Group Executive Committee. Further details on how the Board and Audit Committee manage this oversight can be found in the Audit Committee Report on pages 128 to 138.

Viability Statement

In accordance with provision 31 of the UK Corporate Governance Code 2018, the Board has assessed the viability of the Group, taking into account the Group's current financial position, business strategy, the Board's risk appetite and the potential impacts of the Group's Principal Risks. We set out the eight Principal Risks we have identified, along with our mitigation measures, in our Risk Management section of the Strategic Report which begins on page 92. Based on this assessment, the

Board has confirmed that it has a reasonable expectation that the Company will be able to continue in operation and meet its liabilities as they fall due over the five-year period to 31st December 2027.

Based on this assessment, the Board has confirmed that it has a reasonable expectation that the Company will be able to continue in operation and meet its liabilities as they fall due over the five-year period to 31st December 2027.

The Viability Statement is set out in full in our Financial review on pages 44 to 45.

Nicholas Anderson
Chair of Risk Management Committee

8th March 2023

Further reading

+ Risk management and Principal Risks
See pages 92 to 99

Focus for 2023

- Undertake a bottom-up risk review and annual review of the Risk Register
- Implement the actions identified during our Enterprise Risk Management review process undertaken in 2022
- Continue to assess and evaluate the impact of climate change in light of data collected and the corresponding risks and benefits to our Group
- Undertake an in-depth business continuity risk assessment for our supply companies as part of our analysis of the mitigation of the risk of 'Loss of manufacturing output'
- Closely monitor the rising costs of inflation and supply chain disruption and their associated impact on our Businesses
- Accelerate the implementation of our net zero roadmap and Digital Strategy, in alignment to achieve our goals by 2023

Remuneration

Remuneration Committee Report



“Together with management, the Committee closely reviewed all aspects of the cost-of-living challenges developing in almost all of our markets and were pleased to support management’s fair and consistent approach, as we outline below.”

Jane Kingston
Chair of Remuneration Committee

Members

Our Remuneration Committee comprises:

Membership

Jane Kingston (Chair)

Angela Archon

Richard Gillingwater

Kevin Thompson

Committee role and responsibilities

The main role of the Committee is to determine Executive remuneration policies, how they are applied and set targets for the short and long-term incentive schemes. It also monitors compliance with the presiding Remuneration Policy.

The Committee determines the philosophy, principles and policy of Executive and senior manager remuneration having regard to the latest legislation, corporate governance, best

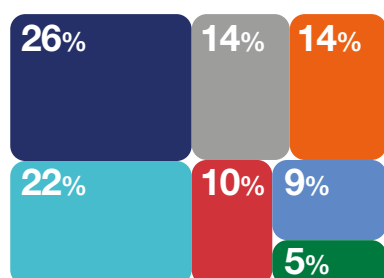
practice and the Financial Conduct Authority (FCA) Listing Rules.

The Committee takes account of workforce remuneration and related policies and the alignment of incentives and rewards with our Group culture.

Key activities undertaken

The Remuneration Committee met five times in 2022, details of attendance can be found on page 107. A summary of the Committee’s activities throughout the year is set out below.

How the Committee spent its time %



- Rem policy and market updates
- Bonus achievements and target setting
- Board and GEC pay
- PSP achievement and target setting
- Annual Report
- Shareholder consultation*
- Gender pay gap & wider workforce pay

*excludes consultation meetings

February and March

- Review and approval of Committee Chair’s report
- Annual Report on Remuneration 2021
- Annual bonus – 2021 outcome/2022 targets
- 2022 personal strategic objectives
- PSP – 2019 outcome/2022 targets (including ESG targets)
- Review of 2021 gender pay gap and Group Chief Executive pay ratio
- Review of pay and real living wage rates (UK)
- Shareholder Group Chief Executive pay consultation review and response
- Approval of increase to the Group Chief Executive’s 2022 PSP award and intended 2023 salary increase

August

- Market practice update
- Remuneration Policy review
- PSP plan rules review
- Review of all-employee share plans

October

- Remuneration Policy review
- 2023 Remuneration Policy shareholder consultation
- 2023 Company-wide salary review and cost of living challenge

December

- Impact of acquisitions and disposals on remuneration
- Pay review landscape and cost of living challenge
- 2023 annual pay review
- PSP plan rules review update
- 2023 Remuneration Policy shareholder consultation update
- Colleague consultation on Policy and Reward update
- Proxy and Shareholder Guidelines for 2023 AGM update
- Annual Report on Remuneration 2022 update

Remuneration continued

Remuneration Committee Report continued

Chair review of 2022

I am pleased to present the Directors' Report on Remuneration for the year ended 31st December 2022.

During the year, the Committee considered the impact of acquisitions and disposals on remuneration outcomes, focused on reviewing the Policy and its continuing fit to strategy and monitored the impact of economic events on remuneration across the Group. This included its plan to address the Group Chief Executive's salary as outlined to shareholders in 2021, as well as monitoring remuneration and employment decisions taken across the Group. We considered all decisions on Executive Director and senior management pay during 2022 in this context.

The Committee worked with management to address the cost-of-living challenges facing colleagues working across our Group companies to ensure this was appropriately addressed everywhere and more information on this can be found on pages 112 and 145. We also assessed the impact of our remuneration decisions on our other stakeholders, including shareholders, employees and the wider communities where we operate.

Outcomes for the year under review

Overall, the Group's performance in 2022 remained strong. Group organic sales growth was 14% and Group adjusted operating profit increased by 12% resulting in an adjusted operating profit margin of 23.6%. In view of this we determined that payments to senior managers and Executive Directors, under both our short-and long-term incentive plans, were appropriate in this context. These outcomes are fully detailed in the pages that follow with the highlights noted below.

Annual Incentive Plan (AIP)

The Group's operating profit target (70% of the opportunity) was set in January 2022 and has been exceeded (101.9% target), resulting in 75.14% of the metric maximum achieved. The Group's cash generation target (20% of the opportunity) was not met resulting in a nil pay-out in respect of this metric. The key driver behind the shortfall was planned record capital expenditure and investment in inventory rebuilding as global supply capacity restraints eased. Finally, strong progress has been made against personal strategic objectives (10% of the opportunity), full information can be found on pages 150 to 152.

Performance Share Plan (PSP) January 2020 – December 2022

During the three-year performance period ending 31st December 2022, earnings per share grew by 40.3% over the vesting period resulting in a 100% vesting for this element. The Group also delivered a total shareholder return (TSR) of 36.7% over this period (as determined under our PSP), placing us above upper quartile in the ranking of our TSR comparator group and thus qualifying participants for 100% vesting of this element of the 2020 PSP.

Consideration of performance outcomes

Our Remuneration Policy is designed to ensure that a percentage of Executive Director pay is based on the achievement of demanding performance targets and is therefore at risk of not being paid. Maximum pay-out under the AIP and PSP is only possible as a result of out-performance of demanding goals. As described above, the Committee has made a robust and full assessment of both financial and non-financial measures and I am pleased to confirm that the pay-out under the AIP to Executive Directors ranges from 59.3% to 61.8% of maximum, with a 100% of maximum vesting of the 2020 PSP award.

The Group's strong performance has delivered results in line with external expectations and our challenging internal goals. The Committee is especially pleased that progress has been made on the Group's key strategic projects for future growth and its core sustainability strategy. The performance delivered for the vesting of the 2020 PSP award is particularly notable given the impact of the pandemic and inflation on the external operating environment, with the Group continuing to operate safely in all of our markets without taking any state aid.

Recognising that the 2020 PSP targets were set in the pandemic year, the formulaic outcome of the results and the share price at grant have been discussed and assessed by the Committee with a view to any windfall gains that might have occurred. The share price increased approximately 40% from grant until the end of 2022 (using the average of Q4 2022 share price) and reflected the top quartile TSR performance achieved. The Committee is satisfied that a windfall has not occurred and so no adjustment to the outcomes is considered necessary. The Committee considers this a fair reflection of business performance throughout the performance period and in line with shareholder experience.

The Committee is satisfied that the total remuneration received by Executive Directors for 2022 (given as a single figure for each Director on page 149) appropriately reflects the Group's performance over the year and its progression over the last three years, as well as being in line with the Policy and consistent with the approach taken for other colleagues. It is also satisfied that the approach to setting remuneration underpins the effective and proper management of risk by rewarding fairly for sustainable profit growth and long-term return for shareholders.

Salary review

The Committee considers salary review arrangements planned across the Group and receives an update on broader remuneration arrangements as context for its decisions at the more senior levels. As previously reported, in January 2022 a 2.7% salary increase was awarded to the Executive Directors. Throughout autumn 2022 the Committee engaged with management on the cost-of-living challenges and explored options to ensure that for the 2023 salary reviews, appropriate support is given at different levels and in different countries across the Group as described next.

Cost-of-living challenges

As a result, in 2023 we revised our existing approach to setting country-specific percentage increases by looking at the projected Consumer Price Index in each country as opposed to market benchmark data. We also brought forward the normal date of the annual pay review from 1st March to 1st January 2023 so as to give an additional benefit for colleagues. We recognise that inflation does not impact senior leaders to the same degree, so they received three quarters of the agreed country increase. In the UK, this meant that Senior leaders received a cost-of-living increase circa 2% below the level for all other colleagues which was 7.1%. The majority of UK and international colleagues also benefited from the review being brought forward by two months (worth an additional 1.2%). The Chief Financial Officer and senior managers received a 2023 salary increase of 5.3% and did not benefit from an earlier review date which remained at 1st January.

Group Chief Executive 2023 Salary

Following a shareholder consultation in 2021, we informed shareholders in our Annual Report last year (the benchmarking tables for which are shown below), that it was the intention of the Committee to raise the Group Chief Executive's salary to £750k with effect from 1st January 2023, the level we considered reflected a fully experienced and proven Group Chief Executive. We received very positive support (both during the 2021 shareholder consultation and through voting at the 2022 AGM), full details of the rationale can be found on pages 135-136 and page 148 of the 2021 Annual Report.

FTSE 31 to 100 industrial, manufacturing & engineering

	Salary (£'000)	Total target remuneration (£'000)
Lower quartile	771	2,126
Median	859	3,132
Upper quartile	954	3,408

Spirax-Sarco Engineering Group Chief Executive

	Salary (£'000)	LTIP grant % of salary	Total target remuneration (£'000)
2021	614	200%	2,020
2022	630	250%	2,189
2023	750	200%	2,428

During 2022, the Committee re-examined the proposals in light of the cost-of-living challenges particularly in the UK where our Group Chief Executive is based and as described later in this report, we also spoke to shareholders in order to better understand their expectations around Executive pay increases in the current climate. A reminder of the background which led to this decision follows, together with a summary of why we believe this is still the correct course of action.

In 2019, shareholders strongly supported increases in Executive Directors' pay to bring packages to a below median but above lower quartile level. This was a significant reset, and we undertook not to increase the Executive Directors' salaries (other than annual inflationary increases) until 1st January 2023 unless there was a significant change in the scale of the Group.

In terms of the size and complexity of the Group, since 2019 colleague numbers have grown from 7,400 to over 10,400. This has been a result of both organic growth and through acquisitions. We now have direct operations in 67 countries. Group revenues have increased from £1,242m to £1,611m in 2022.

Since 2019, a number of Executive Directors have retired and we recruited our Group Chief Financial Officer which required increased salary and annual bonus (AIP) opportunity in order to compete in the market. This exercise brought into sharp focus that our Group Chief Executive's package had drifted materially below market levels and was creating an inequitable position that challenges our Values and creates unacceptable levels of risk.

Our policy on salaries envisages maintaining at least a lower quartile level, which we consider is suitably conservative. However, the 2022 below lower quartile level salary (£630,000) would make any future executive succession planning and attracting high calibre executives extremely difficult because it sends entirely the wrong message about whether we truly value our most senior executives. The Committee does not believe in positioning our Directors' remuneration at the median level or slavishly following benchmarking results, however, the Committee remained very concerned that we had fallen so far below the wider market for our Group Chief Executive.

Towards the end of 2022 we re-considered the realities of our business, relevant markets for talent and overall compensation and following advice from our Remuneration Consultants that the market had not significantly moved in the last year, we were confident that the 2022 Group Chief Executive salary of £630,000 remained below lower quartile for these companies and our position on this has not changed.

As a result of consultation in 2021 with our largest 20 shareholders and proxy agencies and confirmed in voting at the 2022 AGM meeting, as well as from the consultation in late 2022 (details below), we again received very positive support for these changes. Shareholders confirmed that our explanation in consultation letters was clear, compelling and recognised we had a genuine need

to address the situation in the interests of fairness and risk management. In 2022, the Company granted our Group Chief Executive an LTIP award at the maximum level permitted under the 2020 Remuneration Policy (2020 Policy) of 250% of salary. This was 50% of salary higher than his normal annual grant and was a one-off, only in 2022, in order to bridge the gap (caused by timing) and received the support of shareholders at the 2022 AGM for which we are grateful.

In determining the figure of £750,000 per annum, the Committee confirms that it had already built into the base salary proposal a cost-of-living increase of 3% for the year 2023. The Committee determined that this remains appropriate when compared with the larger increases of 7.1% in the UK for other colleagues and was implemented on 1st January 2023. The Group Chief Executive's PSP award returns to the normal 200% of salary for 2023.

Chief Financial Officer 2023 salary

With effect from 1st January 2023, the salary increase for the CFO was 5.3% (in line with other senior managers as noted above). This is below the average increase awarded in the UK to colleagues from 1st January 2023 of 7.1%, who also benefited from their pay review date being brought forward from 1st March (worth an additional 1.2% as described above). The Committee considered that this increase was appropriate in the light of the marketplace, but cognisant of the greater impact of cost-of-living increases on colleagues.

Plc Chair 2023 fee

The Committee also reviews the fee for the Chair and with effect from January 2023 this was increased by 3%.

Executive pensions

A plan to achieve pension equity across the Group continued to be accelerated in 2022, with the Group Chief Executive reducing his pension allowance from circa 24% of salary in 2021 to 10% at the start of 2023. In 2023, his pension allowance is now in line with the UK new joiner's maximum rate of 10% of salary. The CFO was appointed in 2020 with a 10% pension allowance.

Remuneration continued

Remuneration Committee Report continued

Key change	2020 Policy	Rationale/comment
An increase in annual bonus maximum opportunity to 200% of base salary	Maximum 150% of base salary	Included for flexibility for the next three years and to align with market comparability. No intention to utilise this currently but we will consult with leading shareholders beforehand should there be any desire to implement it in the future
Bonus (AIP) deferral is amended to 25% of any bonus received with a two-year holding period	Bonus award in excess of 80% of the maximum (or above 60% of maximum, if Share Ownership Guidelines have not been met) deferred into shares for a two-year holding period	Holding shares to a value of 50% above the Guideline allows for a fall in the share price of a third before the Guideline is no longer met. Executive Directors have historically been reluctant to sell any shares and so have built up significant holdings
No bonus deferral where an Executive Director has at least 1.5 times their Share Ownership Guideline		
The inclusion of a bonus threshold payout level of up to 20%	Silent on value of bonus threshold payment	This change confirms the threshold level currently operating
The inclusion of a PSP threshold payout level of up to 18%	Silent on value of PSP threshold payment	This change confirms the threshold level currently operating
Broader definition of when the Committee can override formulaic outcomes	Discretion based on business performance only	Broaden discretion to cover ability to adjust formulaic outcomes in relation to individual performance and broader shareholder and employee experience, in addition to business performance
Incumbent Executive Directors' maximum pension is in line with the UK workforce, currently 10% of salary	Incumbent Executive Directors' maximum pension to be, by 31st December 2022, the current blended average in the market in which the Executive Director is based (17% of salary in the UK), reducing to the New Executive Director level (same basis as the majority of newly appointed employees in the market in which the Executive Director is based) by 2025	This change brings forward the date by which all incumbent Executive Directors' pensions are in line with the majority of the colleagues in the UK, the market in which they are based and now fully aligns with the Corporate Governance Code requirements

Remuneration Policy review

During the year the Committee began its triennial review of the Directors' Remuneration Policy. The current Policy is due to expire at the 2023 AGM. The Committee Chair together with the Chairman of the Board consulted with the Group's top 20 shareholders and proxy agencies and the Committee Chair consulted with internal colleagues by way of focus groups as noted below.

It was felt that the overall structure of the current policy was fit for purpose and no radical changes are proposed for the new Policy or remuneration structure. The new Remuneration Policy can be found in full on pages 160 to 168, the proposed key changes are detailed on the left.

Shareholder consultation

During the last quarter of 2022, on behalf of the Committee, I wrote to our top 20 shareholders and major proxy agencies to consult on the proposed Policy changes and also reprise the rationale for the Group Chief Executive base salary reset as proposed in 2021 and recently reviewed in light of the current economic environment. Together with Jamie Pike (Chair of the Board) we met virtually with six organisations and received email feedback from a further six representing circa 38% of our share capital.

Proposed Group Chief Executive base salary increase in 2023

Feedback we received during consultation from shareholders and proxies confirmed that the underlying logic for the proposed increase to the Group Chief Executive's base salary was well explained a year ago and continued to make sense. Shareholders recognised that business and personal performance continued to be strong and were pleased that the Committee had reassessed the proposal recently in light of cost-of-living challenges and were keen to review our overall approach for the wider workforce as context. They noted that this proposal had already included a 3% annual inflationary increase for 2023 compared to the 7.1% that the wider UK-based workforce would receive. We have taken their advice to fully disclose all aspects of the proposal together with our approach to wider colleague pay which can be found in this report on page 145.

One organisation consulted did express a preference for phasing this circa 19% increase. However, in practice it has taken two years to address the below lower quartile situation and deliver the salary reset due to the Committee's desire to honour its previous commitment not to increase salaries above the workforce norm before 2023. The Committee judged that it would be unfair to postpone further the reset.

Finally, on this subject our shareholders requested confirmation that the one-off enhanced PSP award of 250% for our Group Chief Executive in 2022 (which was to compensate for the delay in addressing salary) would return to the normal level of 200% in 2023. The Committee can confirm that the Group Chief Executive's PSP award in 2023 will be 200% of base salary and the Chief Financial Officer's PSP award remains at 175% of base salary.

Proposed policy changes

Shareholders advised us to provide rationale on the proposal to increase the policy AIP maximum from 150% base salary to 200% of base salary. They were pleased to note our commitment that neither Executive Director would benefit from increased potential in 2023 and a further commitment to consult before any such increases were implemented in the future. Our rationale is to ensure the whole package is competitive for a FTSE 100 Company and we hope shareholders appreciate our track record in fully consulting should any circumstance develop, which might require us to use this headroom (as we demonstrated with the additional PSP grant in 2022 to the Group Chief Executive).

Those shareholders consulted were comfortable with the move to standardise deferral at 25% of bonus (AIP) earned into shares for two years alongside its removal if the director owns at least 1.5 x their shareholding guideline. One noted that this level of deferral was at the lower end of the market and another questioned whether the pay-out level at target would be reviewed given the increased bonus maximum. Having considered this point, the Committee is able to confirm that in the event bonus levels are increased from the current levels then we would consult on the appropriate pay-out at target and level of deferral.

Continuing wider workforce engagement on remuneration

Whilst developing our new 2023 Remuneration Policy, we held two colleague focus groups in the last year to gather views on the current policy and the proposed changes. Colleagues drawn from different Businesses, geographies, functions and jobs came together to hear more about how our Executives and senior managers are rewarded to learn more about the role of the Board and Remuneration Committee. We discussed the wider framework for pay and benefits across the Group. Engagement was high and we gained valuable insights around views on bonus objective setting throughout the business as well as more general comments on the availability of global employee share schemes and the cost-of-living challenges currently faced by many. This feedback helped shape our approach to the cost of living challenge in the 2023 reviews.

Annual Incentive Plan (AIP) and LTIP 2023

The maximum AIP opportunity will remain unchanged at 150% and 125% of base salary for the Group Chief Executive and CFO respectively. The maximum LTIP opportunity will be 200% of base salary for the Group Chief Executive (down from a one-off increase to 250% in 2022) and 175% of base salary for the CFO. AIP measures, weightings and ranges are unchanged and will continue to be operating profit (70%), cash generation (20%) and personal strategic objectives (10%). The AIP targets and achievement will be published retrospectively due to market sensitivity.

Reflecting the central importance of the Group-wide **One Planet: Engineering with Purpose** Sustainability Strategy to all of our forward-looking plans, the measures for the 2022 PSP were changed to include a sustainability measure accounting for 20% of the opportunity. The Committee decided that this would continue for 2023 reflecting our continued commitment to the One Planet Strategy.

The EPS performance range for the 2023 PSP grant will be adjusted slightly at the upper level reducing from IP+8% to IP+7%, for maximum vesting. Threshold vesting remains at IP+2 %, continuing to reflect our margin progression ambition but at a steadier, incremental rate.

As an established FTSE 100 Company, the Committee considered it was appropriate to revise the TSR comparator group from a subset of the FTSE 350 to a subset of the FTSE 100 (excluding Mining, Oil & Gas, and Financial Services) with effect from 2023.

PSP Rules Renewal

We are also taking the opportunity to refresh and update our PSP rules at the 2023 AGM. The current rules are close to expiring as they are nearly ten years old. There are no material changes being made to the rules, a summary of which has been included in the Notice of AGM.

Looking forward

The Committee is committed to ensuring the remuneration arrangements continue to support the efforts of the workforce and the objectives of the strategy, whilst aligning pay with strong performance. The Group Executive Committee made a commitment to its One Planet Strategy we are already reflecting that in our Executive and senior manager reward framework which will continue to develop.

Jane Kingston Chair of Remuneration Committee

8th March 2023

Committee focus for 2023

- Continue to review the cost-of-living challenges and the resulting impact on colleagues
- Continue to reflect sustainability, diversity, inclusion and equity in reward arrangements
- Facilitate further colleague engagement on remuneration issues
- Implement the revised 2023 Remuneration Policy
- Implement Group Chief Executive's revised pay arrangements
- Adoption of refreshed Performance Share Plan (PSP) rules

Remuneration continued

Remuneration at a glance 2022

Our Purpose	Group Strategy	2022 bonus metrics	2022 PSP metrics
To create sustainable value for all our stakeholders as we engineer a more efficient, safer and sustainable world.	To deliver self-generated growth that outperforms our markets. One Planet: Engineering with Purpose Sustainability Strategy	Delivery of 2022 operating profit targets Delivery of 2022 cash generation Delivery of 2022 personal objectives	Adjusted EPS and relative TSR Greenhouse gas intensity emissions 2024 v 2021

Key Strategic highlights

Group operating profit*
(2022 v 2021)

£370.9m
v **£340.3m**

EPS Growth*
(2020-22 v 2019-21)

+40.3%
v **+35.6%**

Group cash generation*
(2022 v 2021)

£206.3m
v **£278.5m**

Relative TSR
(Percentile TSR achieved)

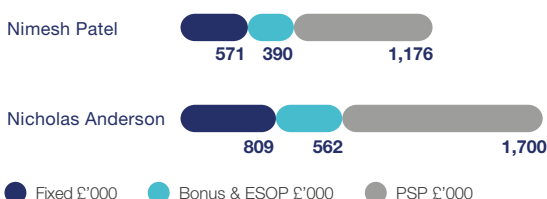
8th of 47

*adjusted in accordance with AIP rules

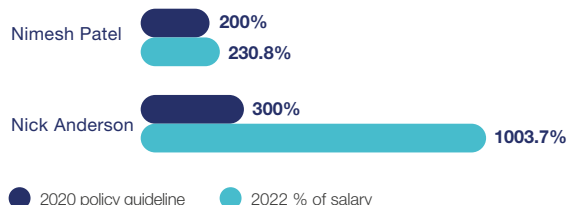
Outcomes in 2022

Bonus	Group Chief Executive		CFO
Financial	Group operating profit	70%	52.6%
	Group cash generation	20%	0%
Non-Financial	Personal objectives	10%	6.7%
			59.3% achieved
			61.8% achieved

Single total remuneration (£'000)



Actual shareholding



Package for 2023

Salary	The Group Chief Executive's base salary has increased to £750,000 (includes an assumed 3% inflation rise) in order to ensure it maintains parity with market levels. The Chief Financial Officer's base salary is £529,448 (5.3% inflation rise, which is below the rate of the wider employee base).	See page 145 for more information
Pension and Benefits	Both the CEO and CFO rate is 10% of salary in line with the wider workforce maximum. No change to benefits provided for both the CEO and CFO	See page 145 for more information
Annual bonus	Maximum opportunity is unchanged at 150% of base salary for the CEO and 125% for the CFO. Measures are unchanged, being: • 70% Operating profit / 20% cash generation / 10% personal objectives	See page 147 for more information
PSP	Maximum opportunity is 200% of base salary for the CEO and 175% of base salary for the CFO. Measures are unchanged, being: • relative TSR, adjusted EPS and greenhouse gas intensity emissions	See page 147 for more information

Remuneration continued

Annual Report on Remuneration

Annual remuneration report

Governance

Details of the Committee membership can be found in the Committee Chair's report on page 143 and full biographies of the Committee members can be found on pages 104 and 105. Each Committee member is an independent Non-Executive Director and brings independence to all aspects of Board remuneration and the application of professional advice to matters relating to remuneration. The General Counsel and Company Secretary acted as Secretary to the Committee with support from Corporate Divisional Counsel and the Assistant Company Secretary. The Committee met five times during the year ended 31st December 2022. Details of meeting attendance can be found in the Corporate Governance statement on page 107.

No conflicts of interest with respect to the work of the Committee have arisen during the period and none of the members of the Committee have any personal financial interest in the matters discussed, other than as shareholders. The fees of the Non-Executive Directors are determined by the Board on the joint recommendation of the Chair and the CEO. The fees of the Chair are determined by the Committee.

The Committee is formally constituted and operates on written terms of reference, which are modelled on the Code and are available on our website www.spiraxsarcoengineering.com.

Advice to the Committee

The Committee takes account of information from both internal and independent sources. During the year it received external advice from Korn Ferry who was appointed by the Committee in 2019. Korn Ferry advises on all aspects of the Company's Remuneration Policy and reviews our remuneration structures against corporate governance best practice. Korn Ferry also provides support to the Company and management more generally with the monitoring of TSR performance for the LTIP, Executive remuneration levels and structure, non-Board benchmarking and salary surveys. The Committee confirms that neither it, nor any of its Directors, have any connection with Korn Ferry, which is a member of the Remuneration Consultants Group and complies with its Code of Conduct, which sets out guidelines to ensure that its advice is independent and objective. The Committee reviews the performance and independence of its adviser on an annual basis. During the period, Spirax incurred fees of £108,135 (plus VAT) from Korn Ferry, which included £35,070 of fees in support of the Committee's annual agenda and £72,595 of ad hoc project-based work including the Policy review.

The Group's HR Director provides updates to the Committee, as required, to ensure that the Committee is fully informed about pay and performance issues throughout the Group. The Committee takes these factors into account when determining the remuneration of the Executive Directors and senior executives. The CEO also attends at the Committee's request but does not participate in discussions regarding their own individual remuneration. The Committee also ran two focus groups during the year, facilitated by the Colleague Engagement Committee, as part of the review of the Remuneration Policy, see page 147 for more details on these.

Audited information

The information that follows is subject to audit until otherwise indicated.

Single total figure of remuneration (£)

	N.J. Anderson		N.B. Patel	
	2021	2022	2021	2022
Executive Directors				
Salary	614,000	630,500	489,600	502,800
Pension	150,500	150,500	48,960	50,280
Benefits	27,401	28,119	26,894	17,911
Total fixed pay	791,901	809,119	565,454	570,991
Annual bonus	902,580	560,531	612,000	388,413
PSP	1,628,456	1,699,634	1,390,578	1,175,639
ESOP	2,362	1,837	2,362	1,729
Total variable pay	2,533,398	2,262,002	2,004,940	1,565,782
Single total figure	3,325,299	3,071,121	2,570,394	2,136,773

	J. Pike		J.S. Kingston		K.J. Thompson		C.A. Johnstone	
	2021	2022	2021	2022	2021	2022	2021	2022
Chair and Non-Executive Directors								
Fees	226,810	300,000	64,330	75,000	64,330	75,000	64,330	75,000
Single total figure	226,810	300,000	64,330	75,000	64,330	75,000	64,330	75,000

	P. France		A. Archon		O. Qiu		R. Gillingwater	
	2021	2022	2021	2022	2021	2022	2021	2022
Fees	54,330	60,000	54,330	60,000	54,330	60,000	48,466 ¹	75,000
Other			21,470	31,292	23,360	8,599		
Single total figure	54,330	60,000	75,800	91,292	77,690	68,599	48,466	75,000

¹ R. Gillingwater was appointed to the Board on 9th March 2021 and as Senior Independent Director (SID) on 1st August 2021. In addition to his pro-rated NED fee of £44,299, he received £4,167 pro-rated from 1st August 2021 in respect of his duty as SID.

Remuneration continued

Annual Report on Remuneration continued

Notes to the remuneration table

(a) This is the amount earned in respect of the financial period.

(b) This is the taxable value of benefits paid or payable in respect of the financial period. These benefits typically relate to car allowance and medical insurance.

(c) This is the total bonus earned under the annual bonus scheme in respect of the financial year.

(d) The amount shown relates to the market value of PSP awards whose performance period ended during the relevant financial year. Refer to page 153 and 154 for details of PSP awards made during 2022.

Over the 2020 PSP vesting period the share price increased from £77.75 at grant (13th March 2020) for N J Anderson and from £78.42 (1st April 2020) the date of appointment for N B Patel, to £109.76, which was the average share price over October, November and December 2022; an increase in value of the vesting shares of around £32 and £31 per share respectively. As the award will not vest before the publication of the 2022 annual results and therefore the value at vesting will not be known, the value will be restated next year in the single figure table when the share price at vesting is known.

(e) The benefit of the ESOP awards is calculated as the number of shares awarded multiplied by the share price on the date of the award.

(f) UK tax legislation imposes penalty taxes on annual pension contributions where prescribed maximum amounts are exceeded. The Committee has previously determined that impacted Executive Directors would receive pension benefits limited to the prescribed maximum amounts and an additional taxable supplementary cash payment equal to the cost to the Group of the pension benefit forgone.

(g) Following a review of our reporting processes, we have this year included benefit figures for certain Non-Executive Directors relating to the reimbursement, in accordance with our Policy, of international travel expenses incurred by Non-Executive Directors in performance of their duties, which are deemed by HMRC to be taxable benefits in kind and are declared on PAYE settlement agreements. We have included last year's figure for consistency.

Additional requirements in respect of the single total figure table of remuneration

Performance related pay earned in the year to 31st December 2022

Annual bonus

Executive Directors participate in the annual bonus plan, which rewards them for financial and non-financial performance of the Group. Targets are reviewed annually to ensure continuing alignment with strategy and are agreed at the start of the year. Resulting awards are determined following the end of the financial year by the Committee, based on performance against these targets.

For the Group Chief Executive, achievement of target performance results in a bonus of 90% of salary, increasing to 150% of salary for maximum performance. For the Chief Financial Officer, achievement of target performance results in a bonus of 75% of salary, increasing to 125% of salary for maximum performance.

For the 2022 bonus Executive Directors were measured against the following financial and non-financial objectives:

The performance measured is adjusted to reflect certain items including the amortisation of acquisition-related intangible assets and exceptional reorganisational costs and to exclude any profit contribution and other impacts such as major acquisitions or disposals during the period as these were not included within the targets when set by the Committee. The Committee assessed the metrics as follows:

Financial metrics

The table below summarises the achieved performance in 2022 in respect of each of the financial measures used in the determination of annual bonus, together with an indication of actual performance relative to target.

For the 2022 bonus, Executive Directors were measured against the following financial and non-financial objectives:

Financial	Group operating profit	70%
	Group cash generation	20%
Non-financial	Personal objectives	10%

2022 Measures		Actual performance	Achieved (% of target)	Threshold	Target	Maximum
Group operating profit ¹ (70% weighting)	Operating profit (£m)	£370.9m	101.9%	£345.8m	£364.0m	£382.2m
	% of metric achieved	75.14%		18%	60%	100%
Group cash generation (20% weighting) ¹	Cash generation	£206.3m	83.1%	£235.7m	£248.1m	£260.5m
	% of metric achieved	0%		18%	60%	100%
% of total financial metrics achieved (90%)		52.6%				

1 In line with annual bonus plan rules these metrics have been adjusted to reflect all acquisitions and disposals made during the year therefore differ from the equivalent reported statutory and adjusted figures in the income statement.

Non-financial metrics – personal objectives

The Executive Directors were each obliged to complete a self-assessed appraisal on their performance against each of their personal strategic objectives. The Group Chief Executive reviewed this self-assessment with the Chief Financial Officer and made his own assessment. In the case of the Group Chief Executive, the Chair of the Board conducted the assessment. A report was submitted to the Committee at its March 2023 meeting, the Committee reviewed the recommendations and approved a final decision.

Personal strategic objective 2022	Description	Commentary
Nicholas Anderson		
Health, Safety and Sustainability (HS&S) • Not achieved	Improve the Group's Health and Safety performance	The Group's Health and Safety performance suffered a setback in 2022 as the accident rate per 100,000 work hours rose marginally to 2.43 compared to 2.22 in 2021. The Lost Time Accident rate was still very low at 1.2 for every million hours worked, our second-best annual performance on record. Notwithstanding this, continual improvement has been made to cultural and behavioral aspects of safety. Notwithstanding the above, Nick continued to champion improved cultural and behavioural safety across the Group including the launch and implementation of a refreshed Group H&S framework.
Sustainability • Achieved	Improve the Group's Sustainability performance	Good progress was made in the implementation of the One Planet: Engineering with Purpose Sustainability Strategy in 2022. Greenhouse Gas emissions were 30% below those in 2021. Energy usage was 4% lower than 2021. Colleague volunteering was encouraged with 81% increase in hours. The Group's Education Fund was launched with over £1m in grants to over 50 projects approved by the Trustees.
Inclusion, Equity and Wellbeing • Achieved	Implement the Group's Inclusion, Equity and Wellbeing plan	The Group's Global Inclusion Plan was launched in 2022, providing minimum standards across the Group on key inclusion topics including parental leave, caregiver leave and 'safe leave' for those suffering domestic abuse. There was a continued increase in the number of women in senior roles across the Group and improved gender balance in our senior leadership team (GEC plus their direct reports) which reached 34% female representation by October 2022. Although usual attrition and employee changes in the fourth quarter reduced this to 32% at the year-end, we anticipate female representation in our senior leadership will return to 34% by April 2023 and we remain committed to reaching at least 40% female representation across our senior leadership.
Result	Based on the above assessments, 67% of this metric was achieved.	
Nimesh Patel		
Health, Safety and Sustainability (HS&S) • Partially achieved	Actively support the improvement of the Group's H&S performance, strengthening the H&S awareness and culture	The Group's Health and Safety performance suffered a setback in 2022 as the accident rate per 100,000 work hours rose marginally to 2.43 compared to 2.22 in 2021. The Lost Time Accident rate was still very low at 1.2 for every million hours worked, our second-best annual performance on record. Championed efforts to improve our safety conscious culture both on site visits and during the Global Finance Forum.
Sustainability • Achieved	Actively support the implementation of the Group's One Planet Sustainability Strategy, with special emphasis on your personal leadership of Strategic Initiative #1 – Net Zero – on a Group-wide basis	As a leader of the group-wide Net Zero initiative, good progress was made in the implementation of the One Planet strategy in 2022. Greenhouse Gas emissions were 30% below those in 2021. Energy usage was 4% lower than 2021. Led major investment in Running Road UK site to advance further decarbonisation. Developed an Electric vehicle employee purchase scheme now being piloted. Supported initiatives to define Scope 3 targets and prioritise external reporting and improve data collection.

Remuneration continued

Annual Report on Remuneration continued

Personal strategic objective 2022	Description	Commentary
Inclusion, Equity and Wellbeing • Achieved	Actively support the implementation of the Group's Everyone is Included Plan, with special emphasis on achieving further gender and ethnicity diversity	Acted as the champion internally and externally for the Group's Global Inclusion Plan, launched in 2022, which provides minimum standards across the Group on key inclusion topics. There was a continued increase in the number of women in senior roles across the Group and improved gender balance in our senior leadership team (GEC plus their direct reports) which reached 34% female representation by October 2022. Although usual attrition and employee changes in the fourth quarter reduced this to 32% at the year-end, we anticipate female representation in our senior leadership will return to 34% by April 2023 and we remain committed to reaching at least 40% female representation across our senior leadership.
Continuous Improvement in Governance and Control Environment • Achieved	Lead the implementation of the G3 Project on a Group-wide basis, with special emphasis on improvement of governance and control structures, embedding changes in the policy framework and control processes, as well as development of Fraud prevention frameworks.	Launched the Group's internal controls framework project (G3) to roll-out revised policy, processes, training and documentation portal to improve efficiency and reduce risks through standardisation of enhanced controls. Conducted a fraud risk workshop and review of prevention controls, reinforcing the 'Tone from the Top' and Group Values.
Information Technology and Systems • Achieved	Advance the Group's global cyber security infrastructure, processes and responsiveness. Support the development of global ERPs, CRM & BI across our three Businesses and the implementation of our Digital Strategy	Ensured development of Cyber Security plans and resources. Development and implementation of new single platform for Groupwide collaboration. Enhanced focus on key projects and initiatives such as the global ERPs, CRM and BI, improving use of resources and outcomes. Ensured development of Cyber Security plans and resources. Including the appointment of Group IT Director and developed Cyber security road map and ensured appropriate resource.
Result	Based on the above assessments, 92% of this metric was achieved.	

	Performance targets			% of maximum bonus (10%) achieved
	Fully achieved	Partly achieved	Not achieved	
N.J. Anderson	2	0	1	6.7%
N.B. Patel	4	1	0	9.2%

The Committee is of the view that these outcomes accurately reflect the performance of the Executive Directors and the Company, consequently no discretion was exercised by the Committee.

As a result of this performance in 2022, the following bonuses were earned:

Executive Directors	Bonus achieved (£)	Actual % of maximum	Maximum bonus opportunity	Bonus (% of salary)
N.J. Anderson	£560,531	59.3%	150%	88.9%
N.B. Patel	£388,413	61.8%	125%	77.3%

Under the 2020 Remuneration Policy Executive directors are required to defer any bonus achieved over 80% of maximum opportunity (60% if shareholding guidelines have not been met) into shares, which they are required to hold for a minimum of two years. Both have met the shareholding guidelines and as the bonus achieved is less than the 80% threshold for deferral, no portion of the bonus will be deferred into shares.

Spirax Sarco Performance Share Plan (PSP) – Scheme interests vested during the period

PSP awards vesting over 2020-2022

In March 2020 the Executive Directors received share awards under the PSP, with vesting subject to EPS growth and relative TSR performance. The following tables set out details of the performance measures and targets that applied, along with the actual performance during the period 1st January 2020 to 31st December 2022.

Relative TSR performance (40% of PSP award)

Over the three-year period to 31st December 2022, the Company delivered a TSR of 36.7%. This ranked in the top decile TSR of the comparator group, significantly above the level required for full vesting. The comparator group, comprising 47 companies, for the purpose of measuring relative TSR performance was the FTSE 350 Industrial Goods and Services Supersector constituents at the start and end of the performance period.

	Target	TSR	Vesting
Threshold	Median TSR	-0.8%	18.0%
Maximum	Upper quartile TSR or above	18.6%	100.0%
Spirax-Sarco Engineering plc	Actual	36.7%	100.0%

EPS growth (60% of PSP award)

Over the three-year period to 31st December 2022, the Company delivered adjusted EPS growth of 40.3%. Over the three years, adjusted EPS in line with scheme rules equates to a compound annual growth of 16.3% per annum. EPS is derived from the audited Annual Report for the relevant financial year but adjusted to exclude the items shown separately on the face of the Consolidated Income Statement. EPS was adjusted for the acquisitions of Durex Industries and the Vulcanic Group and the disposal of the Russian business.

	Performance (over 3 years)	Vesting
Threshold	15.0%	18.0%
Maximum	37.2%	100.0%
Actual	40.3%	100.0%

Recognising that the 2020 PSP targets were set in the pandemic year, the formulaic outcome of the results and the share price at grant have been discussed and assessed by the Committee with a view to any windfall gains that might have occurred. The share price increased 40% from grant until the end of 2022 (using the average of £109.76) and reflected the top quartile TSR performance achieved. The Committee is satisfied that a windfall has not occurred and so no adjustment to the outcomes is considered necessary and therefore 100% of the shares awarded under the 2020 PSP vested for Nicholas Anderson and Nimesh Patel. The Committee considers this a fair reflection of business performance throughout the performance period and in line with shareholder experience.

Executive Directors	No. shares granted ¹	Price at Grant	Value at grant	No. shares vesting	Vesting price ²	Vesting value	Amount attributable to growth in share price
N.J. Anderson	15,485	£77.75	£1,203,959	15,485	£109.76	£1,699,634	£495,675
N.B. Patel	10,711	£78.42	£ 839,957	10,711	£109.76	£1,175,639	£335,683

1 Nicholas Anderson's 2020 PSP award was granted on 13th March 2020. Nimesh Patel's award was made on 27th July 2020, his date of appointment, using the share price on 1st April 2020, the date of his service agreement.

2 Based on share price of £109.76, which was the average share price over October, November and December 2022. As the award vests after the publication of the 2022 annual results, figures will be restated for actual value in next year's Annual Report.

Scheme interests awarded during the period

The awards were granted under the PSP as a contingent right to receive shares, with the face value calculated as a percentage (250% for the Group Chief Executive and 175% for the Chief Financial Officer) of base salary, using the share price at date of award. Awards were made on 14th March 2022.

For awards made in 2022, vesting is based on three performance conditions measured over a three-year period, which have been chosen as they are aligned with our Strategy. In addition to the three-year vesting period, a two-year holding period applies. These performance conditions are explained further on page 154.

Executive Directors	PSP award	Face value ¹	Last day of the performance period	Vesting at threshold performance
N.J. Anderson	13,234 shares	£1,576,169	31.12.24	18%
N.B. Patel	7,387 shares	£ 879,792	31.12.24	18%

1 Based on share price at date of award of £119.10.

The Committee makes an annual conditional award of shares to each Executive Director under the PSP. Prior to award, the Committee reviews the performance targets for each measure to ensure they remain sufficiently stretching. For EPS this includes a review of analysts' forecasts.

Performance measure	Weight	Threshold requirement	Maximum requirement
EPS growth	50%	Global IP +2% pa ¹	Global IP +8% pa
Relative TSR	30%	Median TSR	Upper quartile TSR
Reduction in greenhouse gas emissions from 2021 to 2023	20%	24% reduction	31% reduction

1 The Global Industrial Production (IP) data source is the CHR Metals Global IP Index, providing data that incorporates over 90% of global industrial output.

The value that can be earned for threshold performance is 18%. In 2022 for the measurement of EPS growth, the Committee set the vesting curve slightly steeper from threshold to around the middle of the range, to allow for improved vesting levels for meeting challenging growth and margin targets. Vesting levels for Relative TSR and GHG emissions remains a straight line between threshold and maximum.

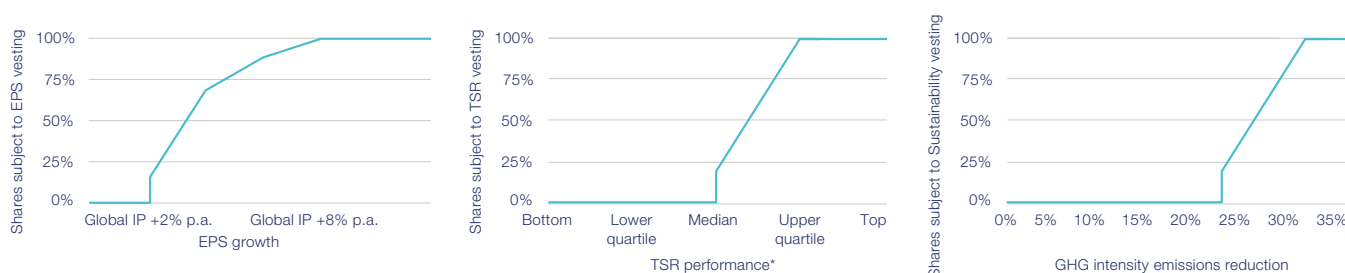
*Vesting is calculated based on Spirax Sarco's TSR relative to the median and upper quartile TSR of the peer group

Remuneration continued

Annual Report on Remuneration continued

The EPS element of the PSP is based on growth in excess of global industrial production growth rates, often referred to in our industry as 'Global IP', rather than UK RPI. Global IP is a measure that the Board and management have used for some time as there is well documented evidence that it is the best predictor of the global and industrial markets within which the Group operates. For these reasons, Global IP was used in the formulation of the long-term strategic plan and targets for EPS growth approved by the Board. In setting the initial performance range in 2017, which was intended to be long-term in nature, the Committee reviewed the historical and projected data (2008 to 2021), including the Group's performance, market benchmarks and analysts' consensus. The Committee was confident that this range was sufficiently challenging across various market environments. Adjustments are made to reflect businesses acquired and sold.

The TSR element of the PSP assesses TSR performance relative to a comparator group of companies that comprises the constituents of the FTSE 350 Industrial Goods and Services Supersector at the start of the performance period. This is the same sector classification as Spirax-Sarco Engineering and was selected as it objectively provides a sufficiently robust number of companies to compare performance against, that also operate in the industrial goods and services arena. While the exact number of companies varies from year-to-year, the comparator group for the 2022 award was 49 companies.



The environmental element of the PSP assesses the extent to which we are meeting our sustainability goals. We have targeted management through the PSP to reduce greenhouse gas emissions by between 24% and 31% between 2021 and 2024 for this part of the award to vest, which will be on a straight line basis.

Employee Share Ownership Plan (ESOP)

Executive Directors are eligible to participate in an HMRC-approved Share Incentive Plan known as the ESOP.

During the year ended 31st December 2022, Nicholas Anderson purchased 17 partnership shares and was awarded 17 matching shares. Nimesh Patel purchased 16 partnership shares and was awarded 16 matching shares. Further information is set out in the table on page 155.

The maximum annual investment in shares is £1,800 (the HMRC limit) for Executive Directors (and eligible UK employees). This can be matched by the Company on a one-for-one basis for each share that is purchased. Dividends paid can be reinvested as shares.

Shares acquired under the ESOP are not subject to performance measures as the aim of the ESOP is to encourage increased shareholding in the Company by all eligible UK employees. In 2022, around 92% of eligible UK employees purchased partnership shares and were awarded matching shares under the ESOP.

Benefits (excluding pension)

Benefits	N.J. Anderson	N.B. Patel
Company car and associated running costs or cash alternative allowance	£27,725	£17,517
Private health insurance	£ 394	£ 394

Pension

Nicholas Anderson's pension allowance has been frozen since 2020 and for the year ended 31st December 2022, he received £150,500.

The plan to achieve pension equity across the Group was accelerated in 2020. This included the closure of the UK final salary scheme during the year. The Committee reviewed the impact of this decision in the UK and under the 2020 Policy, the maximum pension contribution for new Executive Directors is the same as the majority of newly appointed employees receive in the market in which the Executive Director is based. Therefore, Nimesh Patel receives 10% of his basic salary in cash which, in the year ended 31st December 2022, amounted to £50,280.

Payments to past Directors

There were no salary payments made to past Directors during the year ending 31st December 2022. However the 2020 PSP awards held by Neil Daws and Kevin Boyd which have been pro-rated to their leaving date, will vest in the same proportions as other PSP holders at 100% vesting. This will result in the vesting of 2,842 and 2,203 shares with an approximate value of £311,938 and £241,801 respectively, based on the three-month average share price from October to December 2022. These shares have a two-year holding period (net of sales to pay taxes).

Payments for loss of office

There were no payments made to Directors for loss of office during the year ended 31st December 2022.

External Directorships

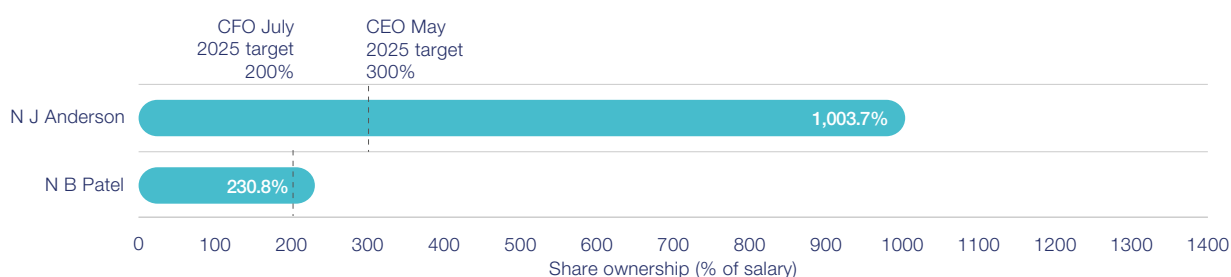
Nicholas Anderson served as a Non-Executive Director at BAE Systems plc during 2022, for which he received and retained total fees of £85,000.

Statement of Directors' shareholding and share interests

Share ownership guideline

The Executive Directors' share ownership guidelines are 300% of base salary for the Group Chief Executive and 200% of base salary for other Executive Directors.

The share ownership guidelines have been exceeded by both the Group Chief Executive and the Chief Financial Officer, who joined the Company on 27th July 2020. The value of the shareholding is taken at 31st December 2022 as a percentage of 2022 base salary. The mid-market share price on 31st December 2022 was £106.15.



Outstanding share interests

The following table summarises the total interests of the Directors in shares of the Company as at 31st December 2022. These cover beneficial and conditional interests. No Director had any dealing in the shares of the Company between 31st December 2022 and 28 February 2023 (being the latest practicable date prior to publication).

	Beneficial ¹	PSP awards ²	Other awards ³	ESOP shares	Total 31.12.22	Total 28.02.23
J. Pike	9,946	–	–	–	9,946	9,946
N.J. Anderson	59,618	39,152	–	797	99,567	99,567
N.B. Patel	10,932	25,377	7,105	64	43,478	43,478
R. Gillingwater	600	–	–	–	600	600
J.S. Kingston	5,480	–	–	–	5,480	5,480
K.J. Thompson	4,900	–	–	–	4,900	4,900
C.A. Johnstone	451	–	–	–	451	451
P. France	980	–	–	–	980	980
A. Archon	255	–	–	–	255	255
O. Qiu	800	–	–	–	800	800

¹ Shares include any owned by connected persons

² Subject to the performance measures

³ See pages 143 and 145 of the 2021 Annual Report

Unvested share awards (included in the above table)

	PSP subject to performance conditions			Share awards not subject to performance conditions	
	2020	2021	2022	Recruitment ¹	ESOP
N.J. Anderson	15,485	10,433	13,234		797
N.B. Patel	10,711	7,279	7,387	7,105	64

¹ This includes a nil cost option for 3,835 shares and a conditional award of 3,270 shares which vests in March 2023. See pages 143 and 145 of the 2021 Annual Report for more information.

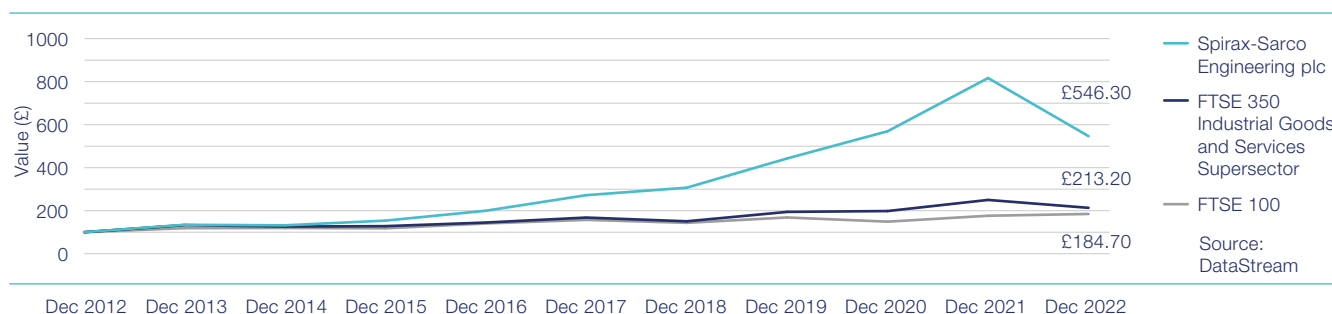
Remuneration continued

Annual Report on Remuneration continued

Un-audited information

TSR performance graph

This graph demonstrates the growth in value of a £100 investment in the Company compared to the FTSE 350 Industrial Goods and Services Supersector from December 2012 to December 2022. This comparison is chosen as it is the supersector within which the Company is classified and it is a broad equity market index including companies of a similar size, complexity and sector. The graph also includes a comparison to the FTSE 100 as this is the Index within which Spirax-Sarco Engineering is currently placed, and it shows a similar level of out-performance.



Aligning pay with performance

The table below shows the historic levels of the Group Chief Executive's pay (single figure of total remuneration) and annual variable and PSP awards as a percentage of maximum.

Group Chief Executive	Single figure of annual remuneration	Annual variable pay as % of maximum	Vested PSP awards value as % of maximum
2022	£3,071,121	59.27%	100.00%
2021	£3,325,299	98.00%	100.00%
2020	£2,219,764	30.00%	73.90%
2019	£2,788,251	82.60%	100.00%
2018	£2,323,478	92.48%	100.00%
2017	£2,172,620	100.00%	100.00%
2016	£1,610,891	99.20%	40.00%
2015	£1,191,137	61.39%	80.33%
2014 (N.J. Anderson appointed Group Chief Executive in January 2014)	£1,000,115	55.76%	33.06%
2013	£1,593,150	95.24%	29.93%

Percentage change in remuneration of the Directors and employees

The following table provides a summary of the increases in base salary, benefits and bonus for the Directors compared to the average increase employees in the same period, for the last three years. The regulations require disclosure of the change in remuneration of the employees of the parent company. As Spirax-Sarco Engineering plc only employs the Executive Directors (whose individual information is already included below), the general UK employee population comparator group has been used to give a more meaningful disclosure.

	2022 change			2021 change			2020 change		
	Base salary/fee	Benefits	Bonus	Base salary/fee	Benefits	Bonus	Base salary/fee	Benefits	Bonus
General UK employee population	2.7%	2.7%	-26.2%	2.0%	2.0%	120.7%	2.9%	2.9%	-32.1%
N J Anderson	2.7%	2.6%	-37.9%	2.0%	2.0%	233.2%	2.9%	2.9%	-62.6%
N B Patel	2.7%	-33.4%	-36.5%	2.0%	2.0%	240.0%	N/A	N/A	N/A
J Pike	32.3%		N/A	2.0%	N/A	N/A	2.9%	N/A	N/A
J S Kingston ²	16.6%		N/A	2.0%	N/A	N/A	2.9%	N/A	N/A
K J Thompson ²	16.6%		N/A	2.0%	N/A	N/A	2.9%	N/A	N/A
C A Johnstone ²	16.6%		N/A	2.0%	N/A	N/A	2.9%	N/A	N/A
P France	10.4%		N/A	2.0%	N/A	N/A	2.9%	N/A	N/A
A Archon	10.4%		N/A	2.0%	N/A	N/A	N/A	N/A	N/A
O Qiu	10.4%		N/A	2.0%	N/A	N/A	N/A	N/A	N/A
R Gillingwater ^{1,2}	16.6%		N/A	N/A	N/A	N/A	N/A	N/A	N/A

1 Assumes fees for full year. The actual 2021 fee received was pro-rated from date appointed

2 The Chair and SID additional fees were increased from £10,000 to £15,000 in 2022

Group Chief Executive pay ratio

The table below details the ratio of the Group Chief Executive's single figure of total remuneration to the median, 25th and 75th percentile total remuneration of the Group's full-time equivalent UK employees. As in previous years, Option B has been chosen for these calculations as the data used is consistent with that collected to inform the Group's UK gender pay gap. To ensure that the individuals identified at the three quartiles are representative of the UK workforce, the total pay and benefits for a small number of employees centred around each quartile were also considered to confirm there were no anomalies. The individuals identified were deemed appropriately representative.

Financial year	25th percentile pay ratio	50th median pay ratio	75th percentile pay ratio
2022	91:1	65:1	51:1
2021	111:1	83:1	62:1
2020	76:1	66:1	45:1
2019	110:1	74:1	46:1

Single figure total remuneration

	CEO	25th (lower quartile)	50th (median)	75th (upper quartile)
Salary	£630,500	£29,836	£37,187	£51,438
Benefits	£28,119	£394	£394	£394
Bonus	£560,531	£408	£1,200	£1,761
PSP	£1,699,634	—	—	—
Pension	£150,500	£2,984	£7,662	£5,144
ESOP	£1,837	—	£973	£1,513
Total pay	£3,071,121	£33,622	£47,416	£60,250

Year-on-year commentary

Our median CEO to Employee Pay Ratio in 2020 decreased due to CEO pay being impacted by the trading environment of 2020, a year when the Group had not met its planned profit targets and EPS growth had performed to a lesser extent, therefore incentives were lower. Group performance recovered in 2021 and this is reflected in the higher pay ratio figure. The decrease in CEO pay ratio for 2022 is primarily attributed to a lower CEO bonus due to profit and cash generation performance.

Relative importance of spend on pay

The table below demonstrates the relative importance of total pay spend relative to total employee numbers, profit before tax (selected as the best measure of efficiency) and dividends payable in respect of the year.

	2022	2021	Change
Total employee pay spend	£572.3m	£481.2m	18.95%
Group average headcount	9,368	8,202	14.22%
Adjusted profit before tax	£370.6m	£333.9m	10.98%
Dividends payable	£112.0m	£100.2m	11.78%

Statement of voting at the Annual General Meeting

At the AGM in 2020, shareholders approved the Remuneration Policy 2020 (mandatory) and at the AGM in 2022, shareholders approved the Annual Report on Remuneration 2020 (advisory). The following table shows the results which required a simple majority (i.e. 50%) of the votes cast to be in favour for the resolutions to be passed.

	Votes for	%	Votes against	%	Votes withheld ¹
Remuneration Policy 2020 (2020 AGM)	60,088,522	95.71	2,690,784	4.29	378,510
Annual Report on Remuneration 2021 (2022 AGM)	59,727,069	97.37	1,610,654	2.63	241,438

¹ A vote withheld does not constitute a vote in law and therefore has not been included when calculating the percentages above.

Remuneration continued

Annual Report on Remuneration continued

Operation of Policy for 2023

The table below summarises how we will implement each element of remuneration under the 2023 Remuneration Policy assuming its adoption by shareholders at the AGM on 10th May 2023.

Element of remuneration	How we will implement the Policy in 2023																
Salary	<p>Following the shareholder consultation as reported in the Remuneration Committee Chair's letter, it was agreed that the CEO's base salary would be increased in 2023 in order to ensure it maintains parity with market levels. Therefore, as previously disclosed, the CEO's salary was raised to £750,000 per annum. The CFO has received a salary increase of 5.3%. The salaries effective 1st January 2023 are:</p> <ul style="list-style-type: none">– Group Chief Executive: £750,000– Chief Financial Officer: £529,448																
Pension	<p>Pension contributions for the Executive Directors will be:</p> <ul style="list-style-type: none">– Group Chief Executive: 10% of salary– Chief Financial Officer: 10% of salary <p>As indicated in the 2021 Annual Report the 2023 pension rate for the CEO has been aligned to the maximum pension contribution rate available to the UK workforce of 10% of salary.</p>																
Annual bonus	<p>The annual bonus opportunities for the Executive Directors will be:</p> <ul style="list-style-type: none">– Group Chief Executive: 150% of salary– Chief Financial Officer: 125% of salary <p>The performance measures will be unchanged from 2022:</p> <table><tr><th>Performance measure</th><th>Weighting (% of bonus)</th></tr><tr><td>Group operating profit</td><td>70%</td></tr><tr><td>Cash generation</td><td>20%</td></tr><tr><td>Personal strategic objectives</td><td>10%</td></tr></table> <p>The targets for the personal performance measures are considered to be commercially sensitive and therefore will be disclosed in next year's Directors' Remuneration Report.</p> <p>The Committee has discretion to adjust the formulaic outcome if it is not representative of the performance delivered.</p> <p>Executive Directors will be required to use 25% of any bonus received to purchase shares in the Company which must be held for a further two years. The exception to this rule is if a Director's shareholding is already 150% above their shareholding requirement, no deferral into shares will be required.</p>	Performance measure	Weighting (% of bonus)	Group operating profit	70%	Cash generation	20%	Personal strategic objectives	10%								
Performance measure	Weighting (% of bonus)																
Group operating profit	70%																
Cash generation	20%																
Personal strategic objectives	10%																
Performance Share Plan awards	<p>The 2023 PSP award levels will be:</p> <ul style="list-style-type: none">– Group Chief Executive: 200% of base salary.– Chief Financial Officer: 175% of base salary. <p>Only minor changes to the performance measures are taking place for 2023, as summarised below with further explanation in the Chair's Statement on page 147.</p> <ul style="list-style-type: none">• The EPS performance range for the 2023 PSP grant will start at IP+2% pa for threshold vesting rising to IP+7% pa for maximum vesting. The top of the range is 1% lower than in 2022 continuing to reflect our margin progression ambition but at a steadier, incremental rate, which is considered to be as stretching given the current market forecasts as the previous top of the range.• As an established FTSE 100 Company, the Committee considered it was appropriate to refine the TSR comparator group from General Industrial companies in the FTSE 350 to a subset of the FTSE 100, excluding Mining, Oil & Gas, and Financial Services with effect from 2023.• The sustainability metric continues to reflect the central importance of the Group-wide One Planet Strategy to all plans. In 2022 the first sustainability metric for GHG emissions reduction, was set as an intensity target (taking into account the effect of planned sales growth). Improved understanding of the factors required to manage GHG emissions allows us to move to an absolute target for the 2023 LTIP. The midpoint of the range set for 2025 is to half our GHG emissions in absolute terms from our 2019 base. The impact of acquisitions and disposals may be adjusted for by the Committee. <table><tr><th>Performance measure</th><th>Weight</th><th>Threshold requirement (18% vests)</th><th>Maximum requirement (100% vests)</th></tr><tr><td>EPS growth</td><td>50%</td><td>Global IP +2% pa</td><td>Global IP +7% pa</td></tr><tr><td>Relative TSR</td><td>30%</td><td>Median TSR</td><td>Upper quartile TSR</td></tr><tr><td>Greenhouse Gas emissions 2025</td><td>20%</td><td>24,273 tonnes</td><td>21,962 tonnes</td></tr></table>	Performance measure	Weight	Threshold requirement (18% vests)	Maximum requirement (100% vests)	EPS growth	50%	Global IP +2% pa	Global IP +7% pa	Relative TSR	30%	Median TSR	Upper quartile TSR	Greenhouse Gas emissions 2025	20%	24,273 tonnes	21,962 tonnes
Performance measure	Weight	Threshold requirement (18% vests)	Maximum requirement (100% vests)														
EPS growth	50%	Global IP +2% pa	Global IP +7% pa														
Relative TSR	30%	Median TSR	Upper quartile TSR														
Greenhouse Gas emissions 2025	20%	24,273 tonnes	21,962 tonnes														

Element of remuneration	How we will implement the Policy in 2023
	The Committee has discretion to adjust the formulaic outcome if it is not representative of the Company performance delivered. A two-year post-vesting holding period will apply to the awards.
Non-Executive Director fees	Effective from 1st January 2023, the Non-Executive Director basic fee was increased by 3.00%.

Directors' service agreements and letters of appointment

	Original appointment date	Current agreement/appointment/ reappointment letter	Expiry date	Notice period	No. years service as at 31 December 2022
Executive Directors					
N.J. Anderson	15/03/2012	13/12/2013	N/A	12 months	10 Years, 9 Months
N.B. Patel	27/07/2020	01/04/2020	N/A	12 months	2 Years, 5 Months
Chair and Non-Executive Directors					
J. Pike	01/05/2014	12/05/2021	11/05/2024	1 month	8 Years, 7 Months
A. Archon	01/12/2020	30/10/2020	30/11/2023	1 month	2 Years, 0 Months
P. France	06/03/2018	04/03/2021	05/03/2024	1 month	4 Years, 9 Months
R. Gillingwater	09/03/2021	01/03/2021	08/03/2024	1 month	1 Years, 9 Months
C.A. Johnstone	05/03/2019	04/03/2022	04/03/2025	1 month	3 Years, 9 Months
J.S. Kingston	01/09/2016	09/08/2022	31/08/2025	1 month	6 Years, 3 Months
O. Qiu	01/12/2020	27/10/2020	30/11/2023	1 month	2 Years, 0 Months
K.J. Thompson	15/05/2019	08/03/2022	14/05/2025	1 month	3 Years, 7 Months

Chair and Non-Executive Directors

The Chair and Non-Executive Directors have letters of appointment with the Company for a period of three years, subject to annual re-election at the AGM. Appointments may be terminated by the Company or individual with one month's notice. The appointment letters for the Chair and Non-Executive Directors provide that no compensation is payable on termination, other than accrued fees and expenses.

Remuneration Policy

The 2020 Remuneration Policy, which applies to this year's Directors Remuneration Report, was approved on 13th May 2020 and can be found in full in our 2021 Annual Report on pages 152 to 160. The proposed 2023 Remuneration Policy follows the Directors Remuneration Report on pages 160 to 168 of this Annual Report and on our website www.spiraxsarcoengineering.com.

This Annual Report on Remuneration 2022 has been approved by the Board of Directors of Spirax-Sarco Engineering plc and signed on its behalf by:

Jane Kingston
Chair of Remuneration Committee

8th March 2023

Remuneration continued

Remuneration Policy

Remuneration Policy 2023

The table on page 146 summarises the Remuneration Policy which, if approved, will be effective from the conclusion of the Group's Annual General Meeting (AGM) to be held on Wednesday 10th May 2023.

Changes to the Remuneration Policy

The main proposed changes to the Remuneration Policy are as follows:

- Salary: Permit salaries to be reviewed other than on 1st January in any year
- Annual Incentive Plan (AIP) award: Increase the maximum opportunity to 200% of salary; limit the percentage of the bonus payable for meeting threshold performance to 20% (current practice); simplify and increase deferral into shares to 25% of any part of the bonus earned, but only require this where the individual owns less than 1.5 times their shareholding requirement
- Performance Share Plan (PSP) award: Limit the weighting on non-financial measures to 30% of the award; limit the percentage of the bonus payable for meeting threshold performance to 18% (current practice); as part of the updating of the PSP rules, include standard flexibility on treatment of leavers' awards
- Pensions and benefits: Simplify pensions so that there is alignment to the rate available to the majority of the relevant country's workforce; allow greater flexibility for any future non-UK appointments
- Recovery provisions and Committee discretion: Increase the period of potential clawback for PSP awards to two years after vesting and broaden the Committee's ability to exercise discretion from just business performance to include individual performance and broader shareholder experience

Additional details and an explanation of the changes can be found in the Statement by the Remuneration Committee Chair on page 146.

Policy review process

In order to avoid any conflict of interest, remuneration is managed through well-defined processes ensuring that no individual is involved in the decision-making process related to their own remuneration. In particular, the remuneration of all Executive Directors is set and approved by the Committee and none of the Executive Directors are involved in the determination of their own remuneration arrangements.

Subject to approval by shareholders at the 2023 AGM, this Policy will be effective for the 2023 financial year and so will apply to incentive awards with performance periods beginning on 1st January 2023. Payments to Directors can only be made if they are consistent with a shareholder-approved Policy or amendment to the Policy.

Statement of consideration of employment conditions elsewhere in the Group

When determining the remuneration of Executive Directors, the Committee considers the pay of colleagues across the Group. When conducting the annual salary review, the average base salary increase awarded to the UK workforce and senior managers across the Group provides a key reference point when determining levels of increase for Executive Director remuneration. The Remuneration Policy was drawn up by the Committee with the benefit of prior engagement with colleagues.

The Committee also determines the principles and policy of remuneration which shall apply to the Group's senior managers. The responsibility for determining precise compensation packages that meet local practice and performance targets lies with the Group Chief Executive and the responsible Executive Director.

To ensure consistency in Remuneration Policy across the Group and to encourage a performance culture, senior managers participate in the PSP. The Board believes that share ownership is an effective way of aligning the interests of managers and shareholders and to strengthen the development of the business.

Remuneration policy for other colleagues

The Company's approach to annual salary reviews is consistent across the Group, with consideration given to the scope of the role, level of experience, responsibility, individual performance and market pay levels. The most senior managers in the business (approximately 350 people globally) participate in bonus arrangements with similar targets, measures and relative weightings to that of the Executive Directors.

Target and maximum potential values are lower and determined by the grade of the manager's role. Performance targets are based on an appropriate combination of Group, Business and local operating company financial measures, in addition to personal strategic objectives.

Contractual terms and benefits for the wider workforce are subject to local employment legislation and best practice.

Statement of consideration of colleague views

In our open culture, we welcome and encourage feedback from: colleagues in one-to-one performance reviews; Works Council meetings in countries where they operate as a collective voice; engagement surveys; through line manager dialogue; and up through the HR function to the Group Executive Committee and Remuneration Committee.

We have continued to develop our Group-wide engagement activities including via the Colleague Engagement Committee and in the last year we held two focus groups to discuss Executive and Colleague Reward arrangements. Colleagues drawn from different businesses, geographies, functions and job roles came together to hear more about how our Executives and senior managers are rewarded as well as learning more about the role of the Group's Board and Remuneration Committee. We discussed the wider framework for pay and benefits across the Group. We gained some valuable insights, including the importance of continuing to develop our understanding of gender and ethnicity data on pay and the importance of holding more regular surgeries to help colleagues understand the benefits options open to them, give better insight into grading systems and the need to think creatively about long-term retention tools. We were also pleased to have feedback on how our reward frameworks could better reflect our Group's Values and to receive feedback on our emerging Group reward principles.

Statement of consideration of shareholder views

In developing and reviewing the Company's Remuneration Policy for Executive Directors and other senior executives, the Committee seeks and takes into account the range of views of shareholders and institutional shareholder advisers. The Committee Chair actively engages with major shareholders and institutional shareholder advisers when appropriate.

The Committee considers shareholder feedback received in relation to the AGM each year and guidance from institutional shareholder advisers more generally. This feedback, plus any additional feedback received during the year at meetings with shareholders, is considered as part of the Company's annual Remuneration Policy review. At the AGMs in 2022 and 2021, the advisory votes on the 2020 and 2019 Annual Reports on Remuneration received 97.37% and 95.93% in favour respectively. At the AGM in 2020 the Remuneration Policy received 95.71% in favour.

Specifically in relation to the renewal of this Policy, as set out in the statement by the Committee Chair on pages 144 to 147, engagement was conducted with the Company's largest shareholders and major proxy agencies. The views expressed were considered by the Committee and helped in determining the proposed changes to the Policy.

Remuneration principles

Our remuneration principles are to maintain a competitive remuneration package that promotes the long-term success of the Group, avoids excessive or inappropriate risk-taking and aligns management's interests with those of shareholders.

Below is how remuneration is aligned with the principles of the Code.

Clarity	Predictability	Simplicity
Our remuneration framework is structured to support the financial and strategic objectives of the Company, aligning the interests of our Executive Directors with those of our shareholders. We are committed to transparent communication with all our stakeholders, including our shareholders.	The long-term PSP has a range of reward and performance outcomes to align with our business model and strategy.	We operate a simple but effective remuneration framework which is applied on a consistent basis for all colleagues. The annual bonus rewards performance against key performance indicators, while the PSP provides long-term sustainable alignment with our shareholders. There is clear line of sight for management and shareholders.
Risk	Proportionality	Alignment to culture
Our incentives are structured to align with the Company's risk management framework. The annual bonus and PSP also incorporate malus and clawback provisions, and there is overarching Committee discretion to adjust formulaic outcomes in certain circumstances.	There is clear alignment between the performance of the Company, the business strategy, and the reward paid to Executive Directors. We endeavour to ensure that our target total compensation levels are set competitively compared to other companies of similar size and complexity to ensure we can attract and retain the executives needed to deliver the business strategy.	When considering performance, the Committee takes account of the Group values, strategies and the views of wider stakeholders including shareholders and colleagues. Having no release of PSP awards until five years from the date of award creates long-term alignment, as do our in- and post-employment shareholding requirements.

Remuneration continued

Remuneration Policy continued

Measure selection and the target-setting process

Measures are selected taking into account the key strategic priorities of the Company, shareholder expectations and factors that sit within an individual's span of control.

Targets are set with reference to internal and external forecasts to ensure that they are realistic, yet sufficiently stretching. An appropriate mix of long- and short-term targets will be used, informed by the nature of the measure.

2023 Remuneration Policy table

The table below summarises the Remuneration Policy which will take effect, if approved, from the AGM to be held on 10th May 2023.

Fixed elements of Executive Director remuneration

Purpose and link to strategy	Operation	Performance measures	Maximum potential value
Base salary			
To enable the Group to attract, retain and motivate high performing Executive Directors of the calibre required to meet the Group's strategic objectives	<p>Normally reviewed on an annual basis by the Committee, taking into account:</p> <ul style="list-style-type: none"> • scale, scope and complexity of the role • skills and experience of the individual • wider workforce comparisons • market benchmarking, within defined external comparator groups. The Committee uses this information with caution, given the limited number of direct comparators and to avoid remuneration inflation as a result of benchmarking exercises with no corresponding improvement in performance <p>The Committee considers the impact of any base salary increase on the total remuneration package.</p>	Reviews take into account Company and individual performance.	<p>Ordinarily, salary increases will not exceed the average increase awarded to other Group colleagues from the same country/region.</p> <p>A salary increase may be higher than the average increase awarded to colleagues in circumstances such as (i) where a new recruit or promoted Executive Director's salary has been set lower than the market level for such a role; (ii) where there is a significant increase in the size and responsibilities of the Executive Director's role; or (iii) where the salary level has fallen below the lower quartile level against market benchmarks.</p>

Fixed elements of Executive Director remuneration

Purpose and link to strategy	Operation	Performance measures	Maximum potential value
Pension			
To offer appropriate levels of pension and benefit.	For UK nationals, the Company provides a defined contribution pension arrangement (DC plan) and/or contributions to a private pension and/or a cash allowance.	N/A	The maximum pension contribution for Executive Directors will be the same basis as is available to the majority of colleagues in the market in which the Executive Director is based.
To attract and retain individuals with the personal attributes, skills and experience required to deliver Group strategy.			Incumbent Executive Directors' maximum pension is in line with the UK workforce, currently 10% of salary.
			No element other than base salary is pensionable.

Fixed elements of Executive Director remuneration

Purpose and link to strategy	Operation	Performance measures	Maximum potential value
Common benefits			
To provide market competitive benefits.	The Company provides common benefits including:	N/A	The aggregate maximum cash cost of providing all common benefits will not exceed 20% of base salary.
To enable the Executive Directors to undertake their roles through ensuring their wellbeing and security.	<ul style="list-style-type: none"> • Company car and associated running costs or cash alternative allowance • private health insurance, telecommunications and computer equipment • life assurance • long-term disability insurance 		
Mobility-related benefits			
To ensure that Executive Directors who have relocated nationally or internationally are compensated for costs incurred.	<p>The Company will pay all reasonable expenses and applicable tax N/A due for the Executive Director and his/her family to relocate on appointment and for repatriation to the original home country at the end of their assignment and/or employment.</p> <p>Executive Directors are personally responsible for all taxes and social charges incurred in the home and host locations as a result of their appointment. The Company will pay for reasonable tax advice and filing support in relation to work-related income for international Executive Directors.</p> <p>Executive Directors may be reimbursed under a Tax Treaty Adjustment for any double tax they might be liable for as a result of being subject to home country and host country taxation typically for days worked in the home location.</p> <p>Executive Directors are not entitled to tax equalisation.</p>		<p>Based on individual circumstances and subject to written agreement.</p> <p>Maximum values will not exceed the normal market practice of companies of a similar size and nature at the time of relocation.</p>

Variable elements of Executive Director remuneration

Purpose and link to strategy	Operation	Performance measures	Maximum potential value
Annual bonus			
To incentivise and reward performance against selected KPIs which are directly linked to business strategy.	Measures, targets and their relative weightings are reviewed regularly by the Committee to ensure continuing alignment with strategic objectives and will be detailed in the relevant Annual Report on Remuneration. Bonus is delivered in cash. If an Executive Director has not reached the level of 1.5 times their shareholding requirement, then they must use the net of tax amount of 25% of their bonus opportunity to increase the level of shareholding they have and to hold these shares for two years.	Any measure can be incorporated at the Committee's discretion provided it is aligned to the Group's strategic objectives.	200% of salary.
To recognise performance through variable remuneration and enable the Company to flexibly control its cost base and react to events and market circumstances.	Bonus is subject to clawback and/or malus for up to three years following payment. Circumstances include financial misstatement, erroneous calculations determining bonus payments, gross misconduct, corporate failure and reputational damage.	At least 70% of the bonus opportunity will be governed by financial performance measures.	Currently the maximum award level is 150% of salary. Any increase beyond this level will only take place following consultation with leading shareholders.
To ensure a significant proportion of Executive Director remuneration is directly linked to business performance.	The Committee can adjust some performance targets to reflect certain non-operating items and retains the ability to adjust the amount of a bonus if the formulaic outcome is not reflective of the individual or business performance or the broader shareholder experience.		No more than 60% of the bonus opportunity can be earned for target performance in any year.
			No more than 20% of maximum will be paid for threshold performance.

Remuneration continued

Remuneration Policy continued

Variable elements of Executive Director remuneration

Purpose and link to strategy	Operation	Performance measures	Maximum potential value
Performance Share Plan (PSP)			
To incentivise and reward Executive Directors for delivery against long-term Group performance.	The Committee makes conditional awards of rights over shares to Executive Directors. Annual participation is subject to Committee approval.	Vesting for awards to be granted in 2023 will be based on three performance measures, which have been chosen as they are clearly aligned with our strategic objectives:	250% of the annual rate of salary at the time of award. Currently the maximum award level is 200% of salary. Any increase beyond this level will only take place following consultation with leading shareholders.
To align Executive Directors' interests to those of shareholders.	Measures, targets and their relative weightings are reviewed regularly by the Committee to ensure continuing alignment with strategic objectives and will be detailed in the relevant Annual Report on Remuneration.	<ul style="list-style-type: none"> • EPS growth • TSR • Sustainability 	
To drive sustainable Company performance.	Performance is measured over a three-year period, normally starting at the beginning of the financial year in which awards are granted.	To ensure continued alignment with the Company's strategic priorities, the Committee may, at its discretion, vary the measures and their weightings for future grants from time to time including the consideration of financial and non-financial measures.	The threshold vesting level will be no higher than 18% of maximum.
To retain key executive talent.	An additional two-year post-vesting holding period will apply. Awards can vest in the form of shares, a nil-cost option or, exceptionally, cash. Share awards are subject to clawback and/or malus for up to five years following initial award. Circumstances include financial misstatement, erroneous calculations determining payments, gross misconduct, corporate failure and reputational damage. The Committee retains the ability to adjust awards if the formulaic outcome is not reflective of the individual or business performance or broader shareholder experience. The Committee will be able to add dividend equivalents accrued during vesting and holding periods (which will normally be delivered in shares) to any award granted under this policy.	At least 70% of the award will be based on financial and/or share price related metrics. The Committee reserves the right to adjust targets, for example for the effects of divestments or major acquisitions, to ensure that those results are in line with the principles that supported the targets when they were originally set.	
Employee Share Ownership Plan (ESOP)			
To offer all eligible UK-based colleagues the opportunity to build a shareholding in a tax-efficient way.	Eligible UK Executive Directors are entitled to participate in an HMRC-approved Share Incentive Plan known as the ESOP. Whilst not currently operated, if in the future colleague share plans are offered outside the UK, or if alternative or additional plans are operated within the UK, eligible Executive Directors will be entitled to participate on the same basis as all other eligible colleagues.	N/A	Executive Directors will be subject to the same limitations as all other participants.
To align Executive Director interests to those of shareholders.	Awards granted under the ESOP are not subject to clawback or malus. The ESOP operates over a five-year period.		

Other

Purpose and link to strategy	Operation	Performance measures	Maximum potential value
Share ownership guidelines			
To provide alignment with shareholder interests.	Executive Directors are generally required to accumulate a shareholding in the Company worth a minimum of 200% of their annual salary. The Committee will determine the operation of the guidelines from time to time and has determined that the level for the Group Chief Executive is 300%. On ceasing to be an Executive Director, the required shareholding (or level of holding achieved by the date of ceasing) normally has to be retained for two years.	N/A	N/A

Chair and Non-Executive Directors

Purpose and link to strategy	Operation	Performance measures	Maximum potential value
Fees			
To attract and retain high calibre individuals, with appropriate experience or industry-related skills, by offering market competitive fee levels.	<p>The Chair is paid a single fee for all responsibilities.</p> <p>The Non-Executive Directors are paid a basic fee. Additional fees may be paid for additional responsibilities and time commitment (e.g. the Chairs of the main Board Committees, the Senior Independent Director and any individual with other separate responsibilities are paid an additional fee to reflect their extra responsibilities).</p> <p>Fees for the Chair and the Non-Executive Directors are reviewed annually by the Remuneration Committee and Board respectively, with reference to any change in the time commitment required, UK market levels and the average base salary increase across the wider workforce.</p> <p>The Chair and the Non-Executive Directors do not participate in any annual bonus or incentive plans, pension schemes, healthcare benefit arrangements, the Company's PSP or ESOP. They are not prohibited from participating in other benefit arrangements that are available to substantially all UK-based colleagues so long as there is no additional cost to the Company in them doing so.</p> <p>The Company repays the reasonable expenses (including any tax due thereon) that the Chair and the Non-Executive Directors incur in carrying out their duties as Directors.</p>	N/A	The aggregate value of fees paid to the Chair and Non-Executive Directors will not exceed the amount set out in the Articles of Association.

Notes to the Policy table

Outstanding incentive awards and minor amendments

All incentive awards granted prior to this Policy coming into force will continue on their existing terms, including the exercise of discretion to amend such awards.

The Committee may make minor amendments to the Policy set out in this Policy Report (for regulatory, exchange control, tax or administrative purposes or to take account of a change in legislation) without obtaining shareholder approval for that amendment.

External directorships

Directors are permitted to hold external directorships in order to broaden their experience, to the benefit of the Company. Such appointments are subject to approval by the Board and the Director may retain any fees paid in respect of such directorships. The Board ensures compliance by Directors with Code provision 16.

Approach to recruitment and promotion remuneration

When appointing external hires, promoting executives, or an Executive Director internally, the Committee will continue to act in the best interests of shareholders when determining remuneration, in line with the stated policy. The main elements of the Remuneration Policy for Executive Director appointments are:

- base salary will be set on appointment taking into account the factors set out in the Policy table, but also the individual's experience. Depending on an individual's prior experience, the Committee may set salary below market norms, with the intention that it is realigned over time, typically two to three years, subject to performance in the role

Remuneration continued

Remuneration Policy continued

- pension benefits will not exceed the rate applicable to the relevant country's workforce, as determined by the Committee; Executive Directors who have transferred internally from overseas may continue to participate in home country pension arrangements and/or receive a cash allowance in line with the relevant country's workforce
- mobility-related benefits may include the payment of some or all of an individual's tax on relocation expenses incurred within 12 months of joining
- on-going annual incentive pay opportunity will not exceed the maximums stated in the Policy table (up to 200% of salary for annual bonus and an award of up to 250% of salary under the PSP). In the year of appointment an off-cycle award under the PSP and different annual bonus conditions may be made by the Committee to ensure an immediate alignment of individual interests
- in addition to the standard elements of remuneration, on the appointment of an external candidate, the Committee reserves the right to buy out remuneration that the individual has foregone by accepting the appointment, if appropriate. The terms of such awards would be informed by the amounts being forfeited and the associated terms (for example the extent to which the outstanding awards were subject to performance, the vehicles and the associated time horizons). Awards would be made either through the existing share plans or in accordance with the relevant provisions contained within the Listing Rules
- when an internal appointment to the Board is made, any pre-existing obligations may be honoured by the Committee and payment will be permitted under this Remuneration Policy

Details of the remuneration for any new Chair or Executive Director appointed to the Board will be disclosed on the Group's website, www.spiraxsarcoengineering.com.

Service agreements and termination policy

The Company's policy on service agreements and termination arrangements for Executive Directors is set out below. Service agreements are designed to reflect the interests of the Company, as well as the individual concerned. Executive Directors' service agreements are kept at the Company's headquarters in Cheltenham.

In accordance with the Code and guidelines issued by institutional investors, Executive Directors have service agreements that are terminable by either the Company or the Executive Director on 12 months' notice. In the event of termination or resignation, and subject to business reasons, the Company would not necessarily hold the Executive Director to his or her full notice period. All Directors are subject to election (if newly appointed in the year) or re-election at the AGM.

Service agreements set out restrictions on the ability of the Executive Director to participate in businesses competing with those of the Group or to entice or solicit away from the Group any senior colleagues or to solicit/deal with clients of the Group or interfere with supply, in the 12 months following the cessation of employment.

Salary, pension and benefits are included in the agreements and are treated as described in the policy table on pages 162 to 165. There is no contractual entitlement to payment of an annual bonus or granting of an award under the PSP, until individual participation, level of award, measures and targets have been set for a particular year.

The Chair and Non-Executive Directors do not have service agreements but serve the Company under letters of appointment, for an initial period of normally three years, subject to annual re-election at the AGM. Appointments may be terminated by the Company or individual with up to three months' notice for a Non-Executive Director and up to six months' notice for the Chair. Currently, notice periods are for one month only.

Current Executive Directors and policy for new appointments

The details of the service agreements of the Group Chief Executive and Chief Financial Officer and for new appointments to the Board, which includes appointing an individual who is not an Executive Director but who still falls within this Policy, are outlined on the following page and comply with best practice.

Treatment of leavers under the incentive plans

Whilst it is not an entitlement, it is expected that where an Executive Director is a 'good leaver' (i.e. where the cessation of employment is due to death, disability, redundancy, retirement or the company business in which he/she works being disposed of or where the ending of employment is instigated by the Company and is not for cause), payments will be made under the annual bonus plan if performance targets are met subject to, and in accordance with, the plan rules and the Policy. If the Executive Director is not a 'good leaver' it is expected that no bonus will be paid.

The treatment of leavers under the PSP is determined in accordance with the shareholder-approved PSP rules. (i) For awards granted under the 2015 Performance Share Plan, any awards granted within six months prior to termination (or the giving or receiving of notice) will lapse and any awards granted six months or longer prior to termination of employment (but prior to the end of the performance period) will lapse unless the Executive Director is considered to be a 'good leaver'. (ii) For awards granted under the 2023 PSP Plan, any awards will normally lapse unless the Executive Director is considered to be a 'good leaver'. In the case of such a 'good leaver' the award will normally vest on the normal vesting date. Unless the Committee determines otherwise, vesting will be subject to the Committee's assessment of performance and a pro-rata reduction in the number of shares to take account the period employed within the performance period.

If the Executive Director is a 'good leaver' where the ending of employment is not for cause, the number of shares vested may be reduced (including to zero) by the Committee in its absolute discretion.

Where an Executive Director ceases employment (or notice is given) on or after the end of the performance period but prior to the date on which the Committee has determined the extent to which the award has vested, if the Executive Director is a 'good leaver', his/her award will be preserved and will be treated in the same way as if his/her employment had continued, whereas if the Executive Director is not a 'good leaver', his/her award will normally lapse on the earlier of his/her cessation of employment and the giving of notice.

In relation to the ESOP, as an HMRC-approved plan, where an Executive Director leaves the treatment will be in line with the approved plan rules and HMRC guidance.

Change of control

Bonus: Bonus in the year of change of control may be paid based on the Committee's assessment of performance and, unless the Committee determines otherwise, pro-rata for the portion of the year elapsed prior to the change of control.

If termination occurs within 12 months following a change of control, the Executive Director is entitled to (i) a lump sum payment in lieu of notice and (ii) receive a full bonus payment calculated by reference to the average of the preceding three years' bonus payments (without any reduction or enhancement for performance).

PSP: The rules may provide that in the event of a change of control, outstanding share-based awards vest to the extent that the Committee determines that performance targets are met shortly before the date of the event. Any such vesting would normally have regard to time pro-rating. The Committee may, at its discretion, increase the level of vesting if it believes that exceptional circumstances warrant such treatment. The Committee may replace one or more of the performance criteria or assess the extent to which it determines that targets have been met on a basis that it deems is reasonable in the circumstances.

In each case, the Committee is the Remuneration Committee shortly before the change of control takes place.

Details of service agreement clauses

Notice period	12 months by the Executive Director and 12 months by the Company
Termination	<p>No payment if Executive Director commits a repudiatory breach of the service agreement or for gross misconduct or in certain circumstances.</p> <p>No additional termination payment if notice worked.</p> <p>If notice only part worked/part on garden leave, payment in respect of unexpired period of notice, otherwise 12 months' base salary only.</p> <p>Company discretion to pay in lieu of notice in lump sum or monthly except within 12 months of a change of control, when a lump sum will be paid.</p> <p>If paid monthly, payment will be reduced by the value of any salary, fees and benefits, excluding long-term incentives, earned in new paid employment in that period (mitigation clause).</p> <p>No automatic entitlement to payments under the annual bonus or PSP (further details below).</p> <p>Payment of reasonable legal fees and any legally enforceable entitlements.</p> <p>Garden leave clause.</p> <p>Robust post-termination restrictions on confidentiality, non-compete, non-solicitation and non-interference with customers or suppliers.</p> <p>Service agreements may be terminated without notice and without payment of compensation on the occurrence of certain events, such as gross misconduct or financial misstatement.</p>
Clawback or malus	<p>Bonus payments and PSP awards are subject to clawback or malus until the third anniversary of bonus payment and the fifth anniversary of PSP grant respectively. Circumstances include financial misstatement, erroneous calculations determining bonus payment, gross misconduct, reputational damage and corporate failure.</p>

Remuneration continued

Remuneration Policy continued

Illustrations of application of the Remuneration Policy

Under the Remuneration Policy, a significant portion of remuneration is variable and depends on the Company's performance. Below we illustrate how the total pay opportunity for the Executive Directors varies under four performance scenarios: below threshold, on target, maximum and maximum with a 50% share price increase.

The scenarios for 2023, informed by the current application of our pay policy, are as follows:

Element

Fixed pay, benefits and ESOP

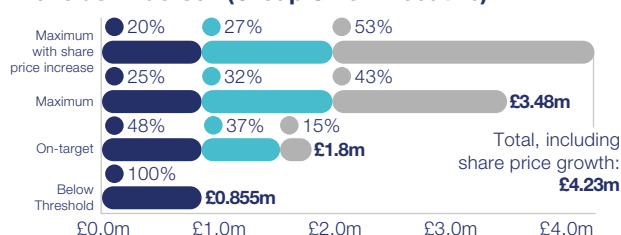
Fixed pay and ESOP does not vary with performance and comprises:

- base salary effective 1st January 2023
- benefits value based on 2022 disclosure
- pension value (cash allowance: rate applied to 2023 salary)
- ESOP participation of up to £1,800 1:1 matching shares for eligible Executive Directors

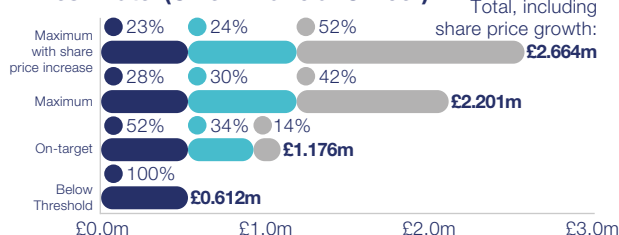
	Percentage of base salary			
	Below threshold	On target	Maximum	Maximum with share price increase
Annual bonus (% of salary)	0%	CEO: 90% CFO: 75%	CEO: 150% CFO: 125%	As for maximum
PSP ¹ (% of salary at award)	0%	CEO: 36.0% CFO: 31.5%	CEO: 200% CFO: 175%	As for maximum, with illustration of the value assuming a 50% increase in share price

¹ A level of 18% vesting for on-target performance is equivalent to threshold performance under the PSP and annual bonus, which the Committee believes to be a fair assumption for on-target performance given the approach taken to setting performance targets.

Nicholas Anderson (Group Chief Executive)



Nimesh Patel (Chief Financial Officer)



● Fixed pay, benefits and ESOP ● Annual bonus ● PSP

Regulatory disclosures



“We regard compliance with all standards of governance as critical.”

Andy Robson
Group General Counsel and Company Secretary

The Directors present their report and the audited financial statements of the Group for the year ended 31st December 2022. The following Regulatory disclosures are made in compliance with the Companies Act 2006 (the Act), the Listing Rules (LR), the Disclosure Guidance and Transparency Rules (DTR) and the 2018 UK Corporate Governance Code (the Code).

The Board has taken advantage of section 414C (11) of the Act to include disclosures in the Strategic Report on those items indicated in the table at the end of this report. These, together with this report comprise the Directors' Report (Report).

Scope of the reporting in this Annual Report

The Board has prepared a Strategic Report (including the Chair's Statement, the Chief Executive's Review, the Financial Review and the Operating Review) which provides an overview of the development and performance of the Group's business in the year ended 31st December 2022 and its position at the end of that year, which covers likely future developments in the business of the Company and the Group. The Strategic Report can be found on pages 1 to 99.

For the purposes of compliance with DTR 4.1.5 R (2) and DTR 4.1.8 R, the required content of the management report can be found in the Strategic Report and these Regulatory disclosures, including the sections of the Annual Report incorporated by reference.

For the purposes of LR 9.8.4C R, the information required to be disclosed by LR 9.8.4 R, that is not covered in this Report, is set out in the table at the end of this report.

DTR 7.2 requires certain information to be included in a corporate governance statement in the Directors' Report. Information that fulfils these requirements can be found in the Corporate Governance Statement on pages 100 to 127 and are incorporated into this Report by reference.

Directors

The Directors who served during the year were Jamie Pike, Richard Gillingwater, Angela Archon, Peter France, Caroline Johnstone, Jane Kingston, Olivia Qiu, Kevin Thompson, Nicholas Anderson and Nimesh Patel.

We have exceeded the Board composition requirements of the Parker Review on ethnic diversity and the Women FTSE Leaders Review on gender diversity.

Biographies of the Directors and details of the gender and ethnic diversity of the Board can be found on pages 104 to 107.

Results

The Group's results for the year have been prepared in accordance with the International Financial Reporting Standards. They are set out in the Consolidated Income Statement, which appears on page 185.

Dividend

As at 31st December 2022, the Company has distributable reserves of £581.8m (see the Company Statement of Financial Position on page 232). The Directors are proposing the payment of a final dividend of 109.5p (2021: 97.5p) which, together with the interim dividend of 42.5p (2021: 38.5p), makes a total distribution for the year of 152.0p (2021: 136.0p). If approved at the Annual

General Meeting (AGM), the final dividend will be paid on 29th May 2023 to shareholders on the register at the close of business on 21st April 2023.

Directors' and Officers' Insurance

The Company provides Directors' and Officers' Insurance for Board members, Directors of the Group's Operating Companies and senior officers.

The Company has also provided each Director with an indemnity to the extent permitted by law in respect of the liabilities incurred as a result of their holding office as a Director of the Company.

Appointment, replacement and powers of Directors

Subject to the provisions of the Articles of Association, the Directors may exercise all the powers of the Company.

The appointment and replacement of Directors is governed by the Company's Articles of Association, the Code, the Companies Act 2006 and related legislation.

The Directors stand for election or re-election on an annual basis at each AGM, in accordance with the Code.

All current Directors will seek re-election at the AGM. The Board considers that all Directors standing for re-election continue to perform effectively and demonstrate commitment to their roles. In addition, the Board considers that all Directors have the necessary skills and experience, as set out in their biographies on pages 104 and 105.

Regulatory disclosures continued

Conflicts of interest

Under the Companies Act 2006 and the provisions of the Company's Articles of Association, the Board is required to consider potential conflicts of interest. The Company has established formal procedures for the disclosure and review of any conflicts and potential conflicts of interest which the Directors may have and for the authorisation of such matters of conflict by the Board. To this end the Board considers and, if appropriate, authorises any conflicts, or potential conflicts of interest as they arise and reviews any such authorisation annually.

New Directors are required to declare any conflicts and/or potential conflicts of interest to the Board at the first Board meeting after their appointment. The Board believes that the procedures established to deal with conflicts of interest are operating effectively.

Capital Structure

As at 31st December 2022, the Company's share capital was made up of ordinary shares which each carry one vote at general meetings of the Company. Except as set out in the Articles of Association or in applicable legislation, there are no restrictions on the transfer of shares in the Company and there are no restrictions on the voting rights in the Company's shares.

As at 28th February 2023, there were no treasury shares held by the Company. Movements in the Company's issued share capital, listed on the London Stock Exchange, during the year are set out in Note 21 on page 215.

The Directors have been authorised to issue and allot ordinary shares, pursuant to the Articles. These powers are referred to Shareholders at each AGM for renewal.

The total number of ordinary shares in issue as at 31st December 2022 was 73,776,048.

Share Capital – special rights and restrictions

Pursuant to the general provisions of the Articles and prevailing legislation, there are no specific restrictions on the size of a shareholding or on voting rights of holders of ordinary shares. The Directors are not aware of any restrictions on the transfer of ordinary shares in the Company other than certain restrictions which may from time to time be imposed by law and regulations, e.g. insider trading laws, and pursuant to the Listing Rules of the Financial Conduct Authority (FCA) whereby certain employees of the Company require the prior approval from the Company to deal in the Company's securities.

The Company is not aware of any agreements entered into between any shareholders which restrict the transfer of shares or the exercise of any voting rights attached to the shares. No person has any special rights of control over the Company's share capital and all issued shares are fully paid.

Articles of Association

The Company's Articles of Association are available from Companies House in the UK or by writing to the Group General Counsel at the Group's registered office in Cheltenham. They are also available on the Company's website. Amendments to the Articles of Association can only be made by means of a special resolution at a general meeting of the shareholders of the Company.

Change of Control

The Company is not a party to any significant agreements that take effect, alter, or terminate upon a change of control of the Company following a takeover bid.

There are provisions in the Executive Directors' service agreements which state that following a takeover or change of control, if the Executive Director's employment is terminated then both salary/benefits and a sum in respect of lost future bonus opportunity become payable as a lump sum.

Substantial shareholdings

The voting rights in the table below have been determined in accordance with the requirements of the UK Listing Authority's Disclosure and Transparency Rules DTR 5 and represent 3% or more of the voting rights attached to issued shares in the Company as at 28th February 2023 and 31st December 2022. There are no Controlling Founder Shareholders.

Purchase of own shares

A shareholder's authority for the purchase by the Company of a maximum of 10% of its own shares was in existence during the year. However, the Company did not purchase any of its shares during that time.

This authority expires at the forthcoming AGM and it is proposed that a similar authority be approved.

Employee Benefit Trust (EBT)

The number of shares held in the EBT at 31st December 2022 was 179,632 for the purpose of satisfying the vesting of awards and options granted to employees under the various Company schemes. Dividends on shares in the EBT are waived.

	As at 31st December 2022		As at 28th February 2023	
	Number of ordinary shares	% of issued share capital	Number of ordinary shares	% of issued share capital
Substantial shareholdings				
BlackRock, Inc.	7,527,441	10.2%	7,649,604	10.4%
The Capital Group Companies, Inc.	3,956,837	5.4%	3,975,137	5.4%
Fiera Capital Corporation	3,806,277	5.2%	3,714,311	5.0%
APG Groep N.V.	3,439,780	4.7%	3,481,909	4.7%
Vanguard Group Holdings	3,131,866	4.2%	3,141,882	4.3%
Impax Asset Management Group plc	2,788,891	3.8%	2,911,791	3.9%
Sun Life Financial, Inc.	2,195,165	3.0%	1,896,917	2.6%

Auditor

The Company's auditor throughout the period of this Annual Report was Deloitte LLP, having initially been appointed on 20th May 2014.

During 2022, a competitive tender was undertaken in relation to the Auditor appointment. Full details of this can be found in the Audit Committee Report on page 138. Deloitte LLP was successful in the tender and has expressed its willingness to continue in office as auditor. A resolution to re-appoint Deloitte LLP will be proposed at the forthcoming AGM.

Disclosure of information to the auditor

As at the date of the approval of this Annual Report, as far as each Director is aware, there is no relevant audit information of which the Company's auditor is unaware. Each Director has taken all such steps as 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.

This confirmation is given and should be interpreted in accordance with the provisions of Section 418 of the Companies Act 2006.

Research and development (R&D)

The Group continues to devote significant resources to the research and development and the updating and expansion of its range of products to remain at the forefront of its world markets.

The R&D functions in Steam Specialties: Spirax Sarco, Cheltenham (UK) and Gestra, Bremen (Germany); Electric Thermal Solutions: Vulcanic, Neuilly-sur-Marne (France) and Thermocoax, Normandy (France); Watson-Marlow: Falmouth (UK) and Aflex Hose, Huddersfield (UK); and the Product Development functions in Chromalox, Pittsburgh (USA) and Durex Industries, Cary (USA) are tasked with improving the Group's pipeline of new products, decreasing the time to launch, expanding the Group's addressable market and realising additional sales. Further information on the expenditure on R&D is contained in Note 7 on page 203. The amount of R&D expenditure capitalised, and the amount amortised, in the year, are given in Note 15 on page 209.

Treasury and foreign exchange

The Group has in place appropriate treasury policies and procedures, which are approved by the Board. The treasury function manages interest rates for both borrowings and cash deposits for the Group. It is also responsible for ensuring there is sufficient headroom against any banking covenants contained within its credit facilities and for ensuring there are appropriate facilities available to meet the Group's strategic plans. The Group's Treasury Policy was reviewed, updated and approved in May 2022 by the Audit Committee and the Board.

To mitigate and manage exchange rate risk, the Group routinely enters into forward contracts and continues to monitor exchange rate risk in respect of foreign currency exposures.

All these treasury policies and procedures are regularly monitored and reviewed. It is the Group's policy not to undertake speculative transactions which create additional exposures over and above those arising from normal trading activity.

Additional information

Disclosure	Page(s)	Location in Annual Report
Asset values	184	Consolidated Statement of Financial Position ¹
Charitable donations	67	Strategic Report: Sustainability Report ¹
Risk management and Principal Risks	92-99	Strategic Report ¹
Financial instruments and financial risk management	225-230	Note 28, financial statements ¹
Future developments of the Group's business	81, 86, 90	Strategic Report ¹
Employee culture and engagement (includes employee investment and reward)	49-55 and 114-117	Strategic Report: Sustainability Report ¹ and Colleague Engagement Report
Employee share schemes (includes Long-Term Incentive Plans)	154 and 220-221	Directors' Remuneration Report and note 23, financial statements ²
Health and safety and employee-related policies including diversity and disability	48-50	Strategic Report: Sustainability Report ¹
Movements in share capital	186	Consolidated Statement of Changes in Equity
Greenhouse gas emissions	56	Strategic Report: Sustainability Report ¹
Going Concern statement	43	Strategic Report: Financial Review
Directors' responsibility statement	173	Directors' Statement of Responsibilities
Directors' interests	155	Directors' Remuneration Report
Stakeholder consideration and engagement	111-113	Corporate Governance Report: Section 172 statement ¹

¹ The Board has taken advantage of section 414C(11) of the Act to include disclosures in the Strategic Report on these items.

² Information required to be disclosed by LR 9.8.4 R

Regulatory disclosures continued

Political donations

The Group has a policy of not making political donations and no political donations were made during the year (2021: nil).

Annual General Meeting

The Notice of Meeting convening the AGM, to be held on Wednesday, 10th May 2023 and an explanation of the resolutions sought, is set out in the Circular posted on our website and sent to shareholders in the format selected by them.

This year we are pleased to be able to hold a physical meeting and welcome our shareholders to the AGM in person. The meeting will be held in the Cotswold Suite, Tewkesbury Park Hotel, Lincoln Green Lane, Tewkesbury, Gloucestershire, GL20 7DN, as our Group Headquarters at Charlton House, Cheltenham, UK continues its upgrade for the future in accordance with our sustainability and business requirements.

While we are always delighted to meet with our shareholders at our AGMs, all shareholders are still able to vote by submitting a Form of Proxy, in line with the instructions set out in the Circular.

In 2022, 91.94% of the proxy votes received were lodged electronically through the CREST system.

The results of the votes will be announced to the London Stock Exchange and posted on the Group's website, www.spiraxsarcoengineering.com, shortly after the conclusion of the meeting.

We appreciate your understanding. For up-to-date information, please refer to our website: <https://www.spiraxsarcoengineering.com/investors/shareholder-information/agm-notices>.

The Strategic Report and this Directors' Report were approved by the Board on 8th March 2023. Pages 169 to 172 form the Directors' Report for the purposes of the Companies Act 2006.

By order of the Board

Andy Robson
Group General Counsel and
Company Secretary

8th March 2023

Spirax-Sarco Engineering plc

Registered no. 596337

Statement of Directors' responsibilities



“The Group’s strong financial position underpins our stability and viability, while supporting investments to secure our future.”

Nimesh Patel
Chief Financial Officer

Board of Directors

The Directors are responsible for preparing the Annual Report and the Financial Statements in accordance with applicable laws and regulations.

Company law requires the Directors to prepare consolidated Group Financial Statements for each financial year in accordance with IFRS as adopted by the UK. Parent Company Financial Statements are prepared under FRS 101.

In addition, by 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 these Financial Statements, the Directors are required to:

- properly select and apply accounting policies,
- present information, including accounting policies, in a manner which is relevant, reliable, comparable and understandable;
- provide additional disclosures when compliance with the specific requirements in IFRS are insufficient to enable users to understand the impact of particular transactions, other events and conditions on the entity's financial position and financial performance; and
- make an assessment of the Company's ability to continue as a going concern.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions and disclose with reasonable accuracy at any time the financial position

of the Company and enable them to ensure that its Financial Statements comply with the Companies Act 2006.

They are also responsible for safeguarding the assets of the Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Directors are responsible for the maintenance and integrity of the corporate and financial information included on the Group's website, www.spiraxsarcoengineering.com. Legislation in the UK governing the preparation and dissemination of Financial Statements may differ from legislation in other jurisdictions.

Cautionary statement

All statements other than statements of historical fact included in this document, including those regarding the financial condition, results, operations and Businesses of Spirax-Sarco Engineering plc (its strategy, plans and objectives), are forward-looking statements.

These forward-looking statements reflect management's assumptions made based on information available at this time. They involve known and unknown risks, uncertainties and other important factors which could cause the actual results, performance or achievements of Spirax-Sarco Engineering plc to be materially different from future results, performance or achievements expressed or implied by such forward-looking statements. Spirax-Sarco Engineering plc and its Directors accept no liability to third parties in respect of this Report save as would arise under English law.

Any liability to a person who has demonstrated reliance on any untrue or misleading statement or omission shall be determined in accordance with schedule 10A of the Financial Services and Markets Act 2000. Schedule 10A contains limits on the liability of the Directors of Spirax-Sarco Engineering plc and their liability is solely to Spirax-Sarco Engineering plc.

Responsibility statement

We confirm that to the best of our knowledge:

- the Financial Statements, prepared in accordance with IFRS as adopted by the UK, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and the undertakings included in the consolidation taken as a whole
- the Strategic Report includes a fair review of the development and performance of the business and the position of the Company and the undertakings included in the consolidation taken as a whole, together with a description of the Principal Risks and uncertainties that they face
- the Annual Report 2022 taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Company's financial position, performance, business model and strategy

This responsibility statement was approved by the Board of Directors on 8th March 2023 and is signed on its behalf by:

Nimesh Patel
Chief Financial Officer

8th March 2023

Financial Statements

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Independent Auditor's Report

To the members of Spirax-Sarco Engineering plc

Report on the audit of the financial statements

1. Opinion

In our opinion:

- the financial statements of Spirax-Sarco Engineering plc (the 'Parent Company') and its subsidiaries (the give a true and fair view of the state of the Group's and of the Parent Company's affairs as at 31 December 2022 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 and International Financial Reporting Standards (IFRSs) as issued by the International Accounting Standards Board (IASB);
- the Parent company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice, including Financial Reporting Standard 101 "Reduced Disclosure Framework"; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006.

We have audited the Financial Statements which comprise:

- the Consolidated and Parent Company Statements of Financial Position;
- the Consolidated Income Statement;
- the Consolidated Statement of Comprehensive Income;
- the Consolidated and Parent Company Statements of Changes in Equity;
- the Consolidated Statement of Cash Flows;
- the related notes 1 to 28 to the Consolidated Financial Statements and 1 to 11 for the Parent 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 and IFRSs as issued by the IASB. The financial reporting framework that has been applied in the preparation of the Parent Company Financial Statements is applicable law and United Kingdom Accounting Standards, including FRS 101 "Reduced Disclosure Framework" (United Kingdom Generally Accepted Accounting Practice).

2. Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the auditor's responsibilities for the audit of the financial statements section of our report.

We are independent of the Group and Parent company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the Financial Reporting Council's (the 'FRC's') Ethical Standard as applied to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements. The non-audit services provided to the Group and Parent company for the year are disclosed in note 7 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 Parent Company.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

3. Summary of our audit approach

Key audit matters	<p>The key audit matters that we identified in the current year were:</p> <ul style="list-style-type: none"> • goodwill impairment review for the Electric Thermal Solutions (ETS) cash generating unit (CGU); • the purchase price accounting for the acquisition of Vulcanic; • defined benefit pension liability valuation; and • revenue recognition in relation to cut off for certain components. <p>All key audit matters have remained at a similar risk level to the prior year, except for the key audit matter in relation to the acquisition of Vulcanic which is new in the year.</p>
Materiality	The materiality that we used in the current year was £17.8m (2021: £15.0m) which was determined on the basis of 5% of forecast adjusted profit before tax.
Scoping	We completed full scope audit work on 17 (2021: 18) reporting entities and specified audit procedures were performed on 9 (2021: 6) reporting entities. Our full scope and specified audit procedures covered 73% (2021: 75%) of total Group revenue, 75% (2021: 86%) of the Group's net assets and 80% (2021: 73%) of adjusted profit before tax.
Significant changes in our approach	<p>Given the significant acquisition of Vulcanic during 2022, the purchase price accounting for the valuation of the Vulcanic brand asset has been identified as a new key audit matter.</p> <p>We have revised our materiality benchmark in 2022 to adjusted profit before tax as defined in note 2 of the consolidated financial statements. In 2021, we adjusted statutory profit before tax for a one-off gain of £2.0m from the closure of the pension scheme in Germany to future accruals. We consider the adjusted profit before tax benchmark to be more consistent with the metrics used by shareholders in the current year.</p>

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 company's ability to continue to adopt the going concern basis of accounting included:

- evaluated the financing facilities available to the Group including nature of facilities, repayment terms and covenants;
- considered the business model and Principal Risks and uncertainties;
- challenged the assumptions used in the forecasts by reference to historical performance, trading run rate, and other supporting evidence, such as the current macroeconomic environment;
- recalculated and assessed the amount of headroom in the forecasts (cash and covenants);
- performed a sensitivity analysis to consider specific scenarios including a reverse stress test; and
- evaluated appropriateness of the related disclosures.

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 company's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

In relation to the reporting on how the group has applied the UK Corporate Governance Code, we have nothing material to add or draw attention to in relation to the Directors' statement in the financial statements about whether the Directors considered it appropriate to adopt the going concern basis of accounting.

Our responsibilities and the responsibilities of the Directors with respect to going concern are described in the relevant sections of this report.

5. Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) that we identified. These matters included those which had the greatest effect on: the overall audit strategy, the allocation of resources in the audit; and directing the efforts of the engagement team.

These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

5.1. Goodwill impairment review for the Electric Thermal Solutions cash generating unit (CGU)

Key audit matter description	<p>The Group holds £703.3m (2021: £411.2m) of Goodwill. The value of goodwill for the ETS CGU as at the balance sheet date was £514.9m (2021: £241.0m).</p> <p>There is a high level of judgement surrounding the valuation of goodwill due to the significant growth anticipated in management forecasts. Key judgements include assumptions in estimating future revenue and earnings before interest and tax (EBIT) margins, alongside setting an appropriate discount rate. We have identified a key audit matter relating to the impairment of goodwill and intangibles for the ETS CGU, due to sensitivity of the assumptions relating to the short term (2023-2027) revenue growth and the discount rate.</p> <p>The Audit Committee Report on page 132 refers to impairment of goodwill and other intangibles 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 goodwill and intangibles for impairment. The basis for the impairment reviews is outlined in Note 15 to the Consolidated Financial Statements, including details of the discount rates and growth rates used. Note 15 to the Consolidated Financial Statements also includes details of the extent to which the CGUs to which the goodwill and other intangible assets are allocated are sensitive to changes in the key inputs.</p>
How the scope of our audit responded to the key audit matter	<p>In response to the key audit matter identified, we performed the following procedures to challenge management's assumptions and assessment:</p> <ul style="list-style-type: none"> • obtained an understanding of the relevant controls relating to the impairment review process, including assumption setting for future cash flows, discount rates and an overarching review by the CFO of the impairment models; • assessed the integrity of management's impairment model through testing of the mechanical accuracy and evaluating the application of the input assumptions; • to assess the revenue and EBIT growth assumptions, held meetings with finance and commercial management and visited the Durex facility to challenge and understand the growth assumptions within the impairment model; • considered external evidence, such as forecast IP and GDP growth, market reports and order intake, to assess accuracy and reasonableness of management's forecasts; • compared the change in model assumptions from 2021 and understood the driver of any variances; • evaluated historical forecasting accuracy by comparing prior year plans to actual results achieved; • challenged the discount rate used with input from our valuations specialists, utilising their knowledge and expertise; • ran sensitivities on the assumptions within the model; and • completed a stand back review by evaluating the reasonableness of the assumptions in aggregate, by comparing the EBIT multiple of ETS to the EBIT multiple of the Group and enterprise value to the value in use; • considered the appropriateness of the related disclosures.

5.1. Goodwill impairment review for the Electric Thermal Solutions cash generating unit (CGU)

Key observations	From the work performed above we are satisfied that the value in use supports the carrying value. This was on the basis that the key assumptions, applied, when taken in aggregate, are within our acceptable range. We consider the related disclosures to be appropriate.
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5.2. The purchase price accounting for the acquisitions of Vulcanic

Key audit matter description	<p>On 30 September 2022, the Group announced the completion of the acquisition of 100% of Vulcanic for consideration of £176.5m.</p> <p>As a part of the accounting for the acquisition, the Directors performed a valuation of the assets and liabilities acquired and as a result identified total intangible assets of £115.6m which included £107.4m in relation to the brand asset. The goodwill arising from the acquisition is £119.2m.</p> <p>The valuation of the brand asset is based on certain assumptions and estimates which require judgement and therefore increases the risk of possible misstatement. We have identified a key audit matter relating to the valuation of Vulcanic brand asset, in particular the future revenue growth rates assumption used in the valuation. This is due to the inherent uncertainty in estimating these assumptions which require a higher degree of management judgement and auditor effort, including the use of valuation specialists.</p> <p>The Audit Committee Report on page 133 refers to Acquisitions – intangible assets valuations as an area considered by the Audit Committee. This includes the acquisition of Vulcanic. Note 1 to the Consolidated Financial Statements sets out the Group's accounting policy for business combinations and note 26 includes details of fair values of acquired assets at the acquisition date.</p>
How the scope of our audit responded to the key audit matter	<p>In response to the key audit matter identified, we performed the following procedures to challenge management's assumptions and assessment which are applicable for both acquisitions:</p> <ul style="list-style-type: none"> • Obtained an understanding of relevant controls in relation to management's identification and valuation of acquired intangible assets; • Understood and challenged the key assumptions underpinning management's forecast revenue growth, including by reference to past performance and available third-party evidence; • Evaluated management's historical accuracy in forecasting revenues of newly acquired entities by comparing the forecast revenues made for recent acquisitions to the actual performance; • Involved valuation specialists to help assess the appropriateness and application of management's valuation methodology; • Tested the integrity of the model through testing mechanical accuracy, formulae and inputs; • Tested the accuracy and completeness of the underlying data used in the calculation of the customer attrition rates; • Tested the opening balance sheet as of acquisition date and related accounting policy and fair value adjustments; • Performed independent sensitivity analysis on the model; • Evaluated the internal consistency between the forecast assumptions with other forecast assumptions such as impairment; and • Considered the appropriateness of the related disclosures.
Key observations	Our audit procedures did not identify any material misstatement within the brand intangible asset, and we are satisfied that assumptions used in the valuation are within an acceptable range. We consider the disclosure in relation to the acquisition to be appropriate.

5.3. Defined benefit pension liability valuation

Key audit matter description	<p>At 31st December 2022 the gross retirement benefit liability recognised in the Consolidated Statement of Financial Position was £393.3m (2021: £605.5m). There is a risk of material misstatement relating to the judgements made by management in valuing the defined benefit pension liabilities including the use of key model input assumptions specifically the discount rates, mortality assumptions and inflation rates over the four main schemes (three in the UK and one in the USA). These variables can have a material impact in calculating the quantum of the retirement benefit liability. Management involved third party actuaries to complete valuations of the pension liabilities.</p> <p>Refer to Note 1 for the Group's policy on defined benefit plans and post-retirement benefit key sources of estimation uncertainty, note 23 for the financial disclosure including the key estimates and assumptions used in the defined benefit pension plan valuation and the significant issues section of the Audit Committee Report on page 132.</p>
How the scope of our audit responded to the key audit matter	<p>Working with our internal actuarial specialists we assessed the key assumptions applied in determining the pension obligations for the four main pension schemes, and determined whether the key assumptions are reasonable. Testing covered 93.9% (2021: 95.5%) of defined benefit pension liabilities.</p> <p>For each of the four schemes, we challenged management's key assumptions by reference to illustrative benchmark rates, sensitising any difference between management's rates and the illustrative benchmark rates. Additionally we benchmarked the key assumptions against other listed companies to check for any outliers in the data used.</p> <p>We also evaluated the management expert's competence, capabilities and objectivity and assessed their reports considering compliance with IAS 19 and IFRIC 14 and have considered the appropriateness of the related disclosures.</p>
Key observations	From the work performed above we are satisfied that the key assumptions applied in respect of the valuation of the schemes' liabilities are appropriate.

Independent Auditor's Report continued

5.4. Revenue Recognition

Key audit matter description	<p>The Group policy is to recognise revenue when performance obligations have been fulfilled which, in the majority of cases, is at time of dispatch ('ex works') or at time of delivery ('FOB'). We have identified a key audit matter relating to a risk of material misstatement, whether due to fraud or error, in relation to cut off for revenue recognition.</p> <p>In particular, we pinpointed the risk to the potential overstatement of revenue in components where external revenue recognised in December 2022 is both above the component's materiality and contributes a higher proportion (10% or more) of annual external revenue compared to the rest of the year. The risk for these components focuses on the recognition of revenue by reference to the contracted shipping terms and meeting the performance obligations for product despatches and deliveries spanning year end.</p> <p>Refer to Note 1 for the Group's revenue recognition policy and the significant issues section of the Audit Committee Report on page 131.</p>
How the scope of our audit responded to the key audit matter	<p>In response to the key audit matter described above, we performed a risk assessment across the Group to identify specific areas of risk, focusing our testing accordingly. Our audit response at the relevant components consisted of several procedures including:</p> <ul style="list-style-type: none"> • performance of walkthroughs to obtain an understanding of the relevant controls relating to the revenue cycle; and • review of the product despatch cycle and revenue recognition profile across the year-end period; • testing of a sample of items by assessing whether the performance obligation was met in line with the revenue recognition date in accordance with the terms of trade with customers. • considered the appropriateness of the related disclosures.
Key observations	From the work performed above we are satisfied that there are no material cut-off errors.

6. Our application of materiality

6.1. Materiality

We define materiality as the magnitude of misstatement in the financial statements that makes it probable that the economic decisions of a reasonably knowledgeable person would be changed or influenced. We use materiality both in planning the scope of our audit work and in evaluating the results of our work.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

	Group Financial Statements	Parent Company Financial Statements
Materiality	£17.8m (2021: £15.0m)	£6.2m (2021: £5.3m)
Basis for determining materiality	We determined materiality on the basis of 5% of forecasted adjusted profit before tax, this represents 4.8% of final adjusted profit before tax, as defined in note 2. (2021: 4.8% of statutory profit before tax adjusted for a one-off gain of £2.0m from the closure of the pension scheme in Germany to future accruals).	Parent Company materiality is set at 3% of net assets, which is capped at 50% of the Group performance materiality. This is consistent with prior year.
Rationale for the benchmark applied	We have used adjusted profit before tax for determining materiality. This is considered to be a key benchmark as this metric is important to the users of the Financial Statements (investors and analysts being the key users for a listed entity) because it portrays the performance of the business and hence its ability to pay a return on investment to the investors.	We have considered net assets as the appropriate measure given the Parent Company is primarily a holding Company for the Group.



6.2. Performance materiality

We set performance materiality at a level lower than materiality to reduce the probability that, in aggregate, uncorrected and undetected misstatements exceed the materiality for the Financial Statements as a whole.

	Group Financial Statements	Parent Company Financial Statements
Performance materiality	70% (2021: 70%) of Group materiality	70% (2021: 70%) of Parent Company materiality
Basis and rationale for determining performance materiality	In determining performance materiality, we considered our risk assessment, including our assessment of the Group's overall control environment and the level of misstatements identified in previous audits. We have also considered changes in key management personnel of the Group.	

6.3. Error reporting threshold

We agreed with the Audit Committee that we would report to the Committee all audit differences in excess of £890,000 (2021: £750,000), 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

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 level. Based on that assessment, we focused our Group audit scope primarily on the audit work at 26 (2021: 24) components. 17 (2021: 18) of these were subject to a full audit, whilst the remaining 9 components (2021: 6 components) were subject to specified audit procedures where the extent of our testing was based on our assessment of the risks of material misstatement and of the materiality of the Group's operations at those components. These components represent the principal business units and account for 75% (2021: 86%) of the Group's net assets, 73% (2021: 75%) of the Group's revenue and 80% (2021: 73%) of the adjusted profit before tax. They were also selected to provide an appropriate basis for undertaking audit work to address the risks of material misstatement identified above. The Parent Company is located in the UK and is audited directly by the Group audit team. Our work on the components, including the Parent Company, was executed at levels of materiality applicable to each individual component, which were lower than Group materiality and ranged from £5.0m to £6.2m (2021: £4.2m to £5.3m).

At the Parent Company level, we also tested the consolidation process and carried out analytical procedures to confirm our conclusion that there were no significant risks of material misstatement of the aggregated financial information of the remaining components not subject to audit or audit of specified account balances.



7.2. Our consideration of the control environment

The Group operates a range of IT systems which underpin the financial reporting processes. This can vary by geography and/or reporting entity. For certain components subject to full scope audits, we identified relevant IT systems for the purpose of our audit work. These were typically the principal Enterprise Resource Planning (ERP) systems for each relevant component that govern the general ledger and transaction accounting balances and also included the Group's consolidation system. Our approach was principally designed to inform our risk assessment and, as such, we obtained an understanding of relevant IT controls and tested the general IT controls for some operating entities using our IT specialists.

In the current year we did not plan to rely on the operating effectiveness of controls. This strategy reflected our historic knowledge of the control environment, which we reconfirmed in the current year, as well as our understanding of the Group's business transformation programme. This programme seeks to enhance the internal control framework and has both IT and business control aspects. Therefore, in addition to the audit work on IT controls described above, additional audit work on controls was limited to obtaining an understanding of the relevant controls in key financial reporting process cycles to inform our risk assessment.

Independent Auditor's Report continued

7.2. Our consideration of the control environment continued

The Group continues to invest time in responding to and addressing our observations on IT and entity level controls. Management determines their response to these observations and continues to monitor their resolution with reporting to and oversight from the Audit Committee as explained in the Audit Committee report on page 136. As management develops and completes the business transformation project, we expect our audit approach to evolve in future years alongside these developments in the internal control environment.

7.3. Our consideration 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 has assessed the risk and opportunities relevant to climate change which has been included as an emerging risk across the group. This risk has also been considered and embedded into the businesses as explained in the Strategic Report on page 95 to 99.

As a part of our audit procedures, we have obtained management's risk register 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 management has 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 2022 as explained in note 1 on page 189.

We performed our own qualitative risk assessment of the potential impact of climate change on the Group's account balances and classes of transaction, and did not identify any additional risks of material misstatement. Our procedures included 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 Group audit was conducted exclusively by a global network of Deloitte member firms under the direction and supervision of the UK Group audit team. Dedicated members of the Group audit team were assigned to each component to facilitate an effective and consistent approach to component oversight. We reviewed the work performed by component teams and discussed the results with them. We maintained regular communication between the Group and component teams and remote access to relevant documents was provided.

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 and the Parent Company's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group and Parent Company or to cease operations, or have no realistic alternative but to do so.

10. Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the FRC's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

11. Extent to which the audit was considered capable of detecting irregularities, including fraud

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud is detailed below.

11.1. Identifying and assessing potential risks related to irregularities

In identifying and assessing risks of material misstatement in respect of irregularities, including fraud and non-compliance with laws and regulations, we considered the following:

- the nature of the industry and sector, control environment and business performance including the design of the Group's remuneration policies, key drivers for Directors' remuneration, bonus levels and performance targets;
- Group's own assessment of the risks that irregularities may occur either as a result of fraud or error that was approved by the board on 6 March 2023;
- results of our enquiries of management, internal audit, the Directors, 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;
 - the internal controls established to mitigate risks of fraud or non-compliance with laws and regulations; and
- 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: revenue recognition in relation to cut-off for certain components. In common with all audits under ISAs (UK), we are also required to perform specific procedures to respond to the risk of management override.

We also obtained an understanding of the legal and regulatory frameworks that the Group operates in, focusing on provisions of those laws and regulations that had a direct effect on the determination of material amounts and disclosures in the Financial Statements. The key laws and regulations we considered in this context included the UK Companies Act, Listing Rules, pensions legislation and tax legislation.

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.

11.2. Audit response to risks identified

As a result of performing the above, we identified revenue recognition in relation to cut-off for certain components as a key audit matter related to the potential risk of fraud. The key audit matters section of our report explains the matter in more detail and also describes the specific procedures we performed in response to that key audit matter.

In addition to the above, our procedures to respond to risks identified included the following:

- reviewing the Financial Statement disclosures and testing to supporting documentation to assess compliance with provisions of relevant laws and regulations described as having a direct effect on the Financial Statements;
- enquiring of management, the Audit Committee and in-house legal counsel concerning actual and potential litigation and claims;
- performing 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; and
- in addressing the risk of fraud through management override of controls, testing the appropriateness of journal entries and other adjustments; assessing whether the judgements made in making accounting estimates are indicative of a potential bias; and evaluating the business rationale of any significant transactions that are unusual or outside the normal course of business.

We also communicated relevant identified laws and regulations and potential fraud risks to all engagement team members including internal specialists and significant component audit teams and remained alert to any indications of fraud or non-compliance with laws and regulations throughout the audit.

Independent Auditor's Report continued

Report on other legal and regulatory requirements

12. Opinions on other matters prescribed by the Companies Act 2006

In our opinion the part of the Directors' remuneration report to be audited has been properly prepared in accordance with the Companies Act 2006.

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the Strategic Report and the Directors' Report for the financial year for which the Financial Statements are prepared is consistent with the Financial Statements; and
- the strategic report and the Directors' report have been prepared in accordance with applicable legal requirements.

In the light of the knowledge and understanding of the Group and the Parent Company and their environment obtained in the course of the audit, we have not identified any material misstatements in the strategic report or the Directors' report.

13. Corporate Governance Statement

The Listing Rules require us to review the Directors' statement in relation to going concern, longer-term viability and that part of the Corporate Governance Statement relating to the group's compliance with the provisions of the UK Corporate Governance Code specified for our review.

Based on the work undertaken as part of our audit, we have concluded that each of the following elements of the Corporate Governance Statement is materially consistent with the Financial Statements and our knowledge obtained during the audit:

- the Directors' statement with regards to the appropriateness of adopting the going concern basis of accounting and any material uncertainties identified set out on pages 43 and 44;
- 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 44;
- the Directors' statement on fair, balanced and understandable set out on page 103;
- the Board's confirmation that it has carried out a robust assessment of the emerging and Principal Risks set out on page 140;
- the section of the Annual Report that describes the review of effectiveness of risk management and internal control systems set out on pages 141 and 142; and
- the section describing the work of the Audit Committee set out on page 128.

14. Matters on which we are required to report by exception

14.1. Adequacy of explanations received and accounting records

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- we have not received all the information and explanations we require for our audit; or
- adequate accounting records have not been kept by the parent company, or returns adequate for our audit have not been received from branches not visited by us; or
- the parent company financial statements are not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

14.2. Directors' remuneration

Under the Companies Act 2006 we are also required to report if in our opinion certain disclosures of Directors' remuneration have not been made or the part of the Directors' remuneration report to be audited is not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

15. Other matters which we are required to address

15.1. Auditor tenure

Following the recommendation of the Audit Committee, we were appointed by the Directors and subsequently at the Annual General Meeting on 11 May 2014 to audit the Financial Statements for the year ending 31 December 2014 and subsequent financial periods. The period of total uninterrupted engagement including previous renewals and reappointments of the firm is nine years, covering the years ending 31 December 2014 to 31 December 2022.

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) 4.1.14R, these financial statements form part of the European Single Electronic Format (ESEF) prepared Annual Financial Report filed on the National Storage Mechanism of the UK FCA in accordance with the ESEF Regulatory Technical Standard ('ESEF RTS'). This auditor's report provides no assurance over whether the annual financial report has been prepared using the single electronic format specified in the ESEF RTS. We have provided assurance on whether the annual financial report has been prepared using the single electronic format specified in the ESEF RTS and have reported separately to the members on this.

Andrew Bond, FCA

(Senior statutory auditor)

For and on behalf of Deloitte LLP
Statutory Auditor
London, United Kingdom

8 March 2023

Consolidated Statement of Financial Position

at 31st December 2022

	Notes	2022 £m	2021 £m
Assets			
Non-current assets			
Property, plant and equipment	13	384.5	277.4
Right-of-use assets	14	67.2	62.9
Goodwill	15	703.3	411.2
Other intangible assets	15	500.3	255.7
Prepayments		2.0	1.3
Investment in Associate	12	–	–
Taxation recoverable		5.1	4.9
Deferred tax assets	16	69.0	46.1
		1,731.4	1,059.5
Current assets			
Inventories	17	290.0	201.3
Trade receivables	28	341.1	272.3
Other current assets	18	79.6	44.7
Taxation recoverable		13.9	10.8
Cash and cash equivalents	24	328.9	274.6
		1,053.5	803.7
Total assets		2,784.9	1,863.2
Equity and liabilities			
Current liabilities			
Trade and other payables	19	283.0	217.0
Provisions	20	12.0	5.2
Bank overdrafts	24	85.1	55.6
Current portion of long-term borrowings	24	202.9	59.6
Short-term lease liabilities	24	14.1	11.2
Current tax payable		40.4	33.1
		637.5	381.7
Net current assets		416.0	422.0
Non-current liabilities			
Long-term borrowings	24	731.3	289.9
Long-term lease liabilities	24	51.1	48.9
Deferred tax liabilities	16	128.1	81.8
Post-retirement benefits	23	52.1	44.7
Provisions	20	6.2	1.5
Long-term payables		8.8	4.7
		977.6	471.5
Total liabilities		1,615.1	853.2
Net assets	2, 3	1,169.8	1,010.0
Equity			
Share capital	21	19.8	19.8
Share premium account		88.1	86.3
Translation reserve		17.5	(40.5)
Other reserves	21	(23.4)	(17.7)
Retained earnings		1,067.0	961.1
Equity shareholders' funds		1,169.0	1,009.0
Non-controlling interest		0.8	1.0
Total equity		1,169.8	1,010.0
Total equity and liabilities		2,784.9	1,863.2

These Financial Statements of Spirax-Sarco Engineering plc, company number 00596337, were approved by the Board of Directors and authorised for issue on 8th March 2023 and signed on its behalf by:

N J Anderson N B Patel Directors

Consolidated Income Statement

for the year ended 31st December 2022

	Notes	Adjusted 2022 £m	Adjustments 2022 £m	Total 2022 £m	Adjusted 2021 £m	Adjustments 2021 £m	Total 2021 £m
Revenue	3	1,610.6	–	1,610.6	1,344.5	–	1,344.5
Operating costs	4	(1,230.4)	(61.4)	(1,291.8)	(1,004.2)	(19.4)	(1,023.6)
Operating profit	2, 3	380.2	(61.4)	318.8	340.3	(19.4)	320.9
Financial expenses		(15.2)	(1.1)	(16.3)	(9.8)	–	(9.8)
Financial income		5.6	–	5.6	3.4	–	3.4
Net financing expense	3, 6	(9.6)	(1.1)	(10.7)	(6.4)	–	(6.4)
Share of loss of Associate	12	–	–	–	–	–	–
Profit before taxation	7	370.6	(62.5)	308.1	333.9	(19.4)	314.5
Taxation	9	(92.5)	9.4	(83.1)	(83.9)	4.3	(79.6)
Profit for the period		278.1	(53.1)	225.0	250.0	(15.1)	234.9
Attributable to:							
Equity shareholders		277.8	(53.1)	224.7	249.7	(15.1)	234.6
Non-controlling interest		0.3	–	0.3	0.3	–	0.3
Profit for the period		278.1	(53.1)	225.0	250.0	(15.1)	234.9
Earnings per share	2, 10						
Basic earnings per share		377.2p		305.1p	338.9p		318.3p
Diluted earnings per share		376.3p		304.4p	338.0p		317.5p
Dividends	11						
Dividends per share				152.0p			136.0p
Dividends paid during the year (per share)				140.0p			123.0p

Adjusted figures exclude certain items, as set out and explained in the Financial Review and as detailed in Notes 2 and 3. All amounts relate to continuing operations.

The Notes on pages 189 to 230 form an integral part of the Financial Statements.

Consolidated Statement of Comprehensive Income

for the year ended 31st December 2022

	Notes	2022 £m	2021 £m
Profit for the year		225.0	234.9
Items that will not be reclassified to profit or loss:			
Remeasurement (loss)/gain on post-retirement benefits	23	(8.3)	46.3
Deferred tax on remeasurement loss/(gain) on post-retirement benefits	23	1.8	(8.9)
		(6.5)	37.4
Items that may be reclassified subsequently to profit or loss:			
Foreign exchange translation differences and net investment hedges		54.8	(6.8)
Transfer to Income Statement of cumulative translation differences on disposal of subsidiaries	27	3.2	–
Loss on cash flow hedges net of tax	21, 28	(3.5)	(2.8)
		54.5	(9.6)
Total comprehensive income for the year		273.0	262.7
Attributable to:			
Equity shareholders		272.7	262.4
Non-controlling interest		0.3	0.3
Total comprehensive income for the year		273.0	262.7

Consolidated Statement of Changes in Equity

for the year ended 31st December 2022

	Notes	Share capital £m	Share premium account £m	Translation reserve* £m	Other reserves £m	Retained earnings £m	Equity shareholders' funds £m	Non-controlling interest £m	Total equity £m
Balance at 1st January 2022		19.8	86.3	(40.5)	(17.7)	961.1	1,009.0	1.0	1,010.0
Profit for the year		–	–	–	–	224.7	224.7	0.3	225.0
Other comprehensive income/(expense):									
Foreign exchange translation differences and net investment hedges	21	–	–	54.8	–	–	54.8	–	54.8
Transfer to Income Statement of cumulative translation differences on disposal of subsidiaries	21, 27	–	–	3.2	–	–	3.2	–	3.2
Remeasurement loss on post-retirement benefits	23	–	–	–	–	(8.3)	(8.3)	–	(8.3)
Deferred tax on remeasurement loss on post-retirement benefits	16, 23	–	–	–	–	1.8	1.8	–	1.8
Cash flow hedges	21, 28	–	–	–	(3.5)	–	(3.5)	–	(3.5)
Total other comprehensive income/(expense) for the year		–	–	58.0	(3.5)	(6.5)	48.0	–	48.0
Total comprehensive income/(expense) for the year		–	–	58.0	(3.5)	218.2	272.7	0.3	273.0
Contributions by and distributions to owners of the Company:									
Dividends paid	11	–	–	–	–	(103.1)	(103.1)	(0.5)	(103.6)
Equity settled share plans net of tax		–	–	–	–	(9.2)	(9.2)	–	(9.2)
Issue of share capital	21	–	1.8	–	–	–	1.8	–	1.8
Employee Benefit Trust shares	21	–	–	–	(2.2)	–	(2.2)	–	(2.2)
Balance at 31st December 2022		19.8	88.1	17.5	(23.4)	1,067.0	1,169.0	0.8	1,169.8

* In prior years, the translation reserve was included within other reserves with a breakdown being disclosed separately in the notes to the Financial Statements. Due to the material value of this reserve, we have presented it as a separate heading in the Statement of Changes in Equity for the year ended 31st December 2022. The comparatives have also been amended to reflect this reclassification to ensure comparability and consistency.

Other reserves represent the Group's cash flow hedges, capital redemption and Employee Benefit Trust reserves (see Note 21). The non-controlling interest is a 2.5% share of Spirax Sarco Korea Ltd.

Consolidated Statement of Changes in Equity

for the year ended 31st December 2021

	Notes	Share capital £m	Share premium account £m	Translation reserve* £m	Other reserves £m	Retained earnings £m	Equity shareholders' funds £m	Non-controlling interest £m	Total equity £m
Balance at 1st January 2021		19.8	84.8	(33.7)	(2.4)	782.8	851.3	1.0	852.3
Profit for the year		–	–	–	–	234.6	234.6	0.3	234.9
Other comprehensive (expense)/income:									
Foreign exchange translation differences and net investment hedges	21	–	–	(6.8)	–	–	(6.8)	–	(6.8)
Remeasurement gain on post-retirement benefits	23	–	–	–	–	46.3	46.3	–	46.3
Deferred tax on remeasurement gain on post-retirement benefits	16, 23	–	–	–	–	(8.9)	(8.9)	–	(8.9)
Cash flow hedges	21, 28	–	–	–	(2.8)	–	(2.8)	–	(2.8)
Total other comprehensive (expense)/income for the year		–	–	(6.8)	(2.8)	37.4	27.8	–	27.8
Total comprehensive (expense)/income for the year		–	–	(6.8)	(2.8)	272.0	262.4	0.3	262.7
Contributions by and distributions to owners of the Company:									
Dividends paid	11	–	–	–	–	(90.7)	(90.7)	(0.3)	(91.0)
Equity settled share plans net of tax		–	–	–	–	(3.0)	(3.0)	–	(3.0)
Issue of share capital	21	–	1.5	–	–	–	1.5	–	1.5
Employee Benefit Trust shares	21	–	–	–	(12.5)	–	(12.5)	–	(12.5)
Balance at 31st December 2021		19.8	86.3	(40.5)	(17.7)	961.1	1,009.0	1.0	1,010.0

Consolidated Statement of Cash Flows

for the year ended 31st December 2022

	Notes	2022 £m	2021 £m
Cash flows from operating activities			
Profit before taxation		308.1	314.5
Depreciation, amortisation and impairment	3, 4	81.0	69.0
Profit on disposal of property, plant and equipment	7	(1.4)	(0.5)
Cash payments to the pension schemes greater than the charge to operating profit	23	(5.3)	(7.6)
Loss on disposal of subsidiaries	27	7.0	–
Acquisition related costs	2	3.8	–
Restructuring related provisions and current asset impairments		10.2	–
Equity settled share plans	23	8.9	9.2
Net financing expense	6	10.7	6.4
Operating cash flow before changes in working capital and provisions		423.0	391.0
(Increase)/decrease in trade and other receivables		(56.3)	(71.3)
(Increase)/decrease in inventories		(58.3)	(26.7)
(Decrease)/increase in provisions		(0.8)	(1.0)
Increase/(decrease) in trade and other payables		23.5	59.5
Cash generated from operations		331.1	351.5
Income taxes paid		(90.0)	(78.1)
Net cash from operating activities		241.1	273.4
Cash flows from investing activities			
Purchase of property, plant and equipment	13	(104.3)	(52.8)
Proceeds from sale of property, plant and equipment		4.0	2.0
Purchase of software and other intangibles	15	(8.9)	(8.1)
Development expenditure capitalised	15	(4.3)	(3.2)
Disposal of subsidiaries	27	(2.8)	–
Acquisition of businesses net of cash acquired	26	(460.3)	–
Interest received	6	5.6	3.4
Net cash used in investing activities		(571.0)	(58.7)
Cash flows from financing activities			
Proceeds from issue of share capital	21	1.8	1.5
Employee Benefit Trust share purchase		(20.8)	(26.1)
Repaid borrowings	24	(511.1)	(77.5)
New borrowings	24	1,008.8	–
Interest paid including interest on lease liabilities	6	(15.5)	(8.5)
Repayment of lease liabilities	24	(12.9)	(11.7)
Dividends paid (including minorities)		(103.6)	(91.0)
Net cash used in financing activities		346.7	(213.3)
Net change in cash and cash equivalents		16.8	1.4
Net cash and cash equivalents at beginning of period	24	219.0	224.0
Exchange movement	24	8.0	(6.4)
Net cash and cash equivalents at end of period	24	243.8	219.0
Borrowings	24	(934.2)	(349.5)
Net debt at end of period	24	(690.4)	(130.5)
Lease liabilities	24	(65.2)	(60.1)
Net debt including lease liabilities at end of period	24	(755.6)	(190.6)

Notes to the Consolidated Financial Statements

1 Accounting policies

Basis of preparation

The Consolidated Financial Statements have been prepared on a historical cost basis except for items that are required by International Financial Reporting Standards (IFRS) to be measured at fair value, principally certain financial instruments. The Consolidated Financial Statements have been prepared in accordance with IFRS which includes the standards and interpretations issued by the International Accounting Standards Board (IASB) that have been adopted by the United Kingdom (UK).

The preparation of Financial Statements in conformity with IFRS requires the Directors to apply IAS 1 and make judgements, estimates and assumptions about the carrying amounts of assets and liabilities that are not apparent from other sources. The estimates and associated assumptions are based on historical experiences and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an on-going basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Critical judgements in applying the Group's accounting policies

The Directors have concluded that no critical judgements, apart from those involving estimations (which are dealt with separately below) have been made in the process of applying the Group's accounting policies.

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 outlined below.

(i) Post-retirement benefits

The Group's defined benefit obligation is assessed by selecting key assumptions. The selection of mortality rates and inflation are key sources of estimation uncertainty which could lead to material adjustment in the defined benefit obligation within the next financial year. These assumptions are set with close reference to market conditions.

The Group's defined benefit obligation is discounted at a rate set by reference to market yields at the end of the reporting period on high quality corporate bonds. The most significant criteria considered for the selection of bonds include the issue size of the corporate bonds, quality of the bonds and the identification of outliers which are excluded.

The assumptions selected and associated sensitivity analysis are disclosed in Note 23.

Climate change

Climate change is a global challenge and an emerging risk to businesses, people and the environment across the world. We have a role to play in limiting warming by improving our energy management, reducing our carbon emissions and by helping our customers do the same. Growing awareness of climate change and customer sustainability targets will provide impetus for business growth as we provide products, services and solutions that increase efficiency and reduce customers' energy use and carbon emissions. As a result, in our view climate change does not create any further key sources of estimation uncertainty. For further detail see the Risk Management and Sustainability sections of the Strategic Report.

The Group has considerable financial resources together with a diverse range of products and customers across wide geographic areas and industries. As a consequence, the Directors believe that the Group is well placed to manage its business risks successfully.

Further information on the Group's business activities, performance and position, together with the financial position of the Group, its capital structure and cash flow are included in the Strategic Report from the inside front cover to page 94. In addition, Note 28 to the Financial Statements discloses details of the Group's financial risk management and credit facilities.

The Consolidated Financial Statements are presented in pounds sterling, which is the Company's functional currency, rounded to the nearest one hundred thousand.

The Group's Income Statement includes an adjustment column where certain items are included. Details of the items included and the reasons why they are included are disclosed in Note 2.

New standards and interpretations applied in the current year

During the current year, the Group has applied the following amendments to IFRS Standards and Interpretations issued by the International Accounting Standards Board (IASB) effective for annual periods that begin on or after 1st January 2022. Adoption has not had a material impact on the disclosures or on the amounts reported in these Financial Statements:

- Amendments to IFRS 3 Reference to the Conceptual Framework;
- Amendments to IAS 16 Property, Plant and Equipment— Proceeds before Intended Use;
- Amendments to IAS 37 Onerous Contracts—Cost of Fulfilling a Contract; and
- Annual Improvements to IFRS Accounting Standards 2018-2020 Cycle.

Notes to the Consolidated Financial Statements continued

1 Accounting policies continued

The Economies in Argentina and Turkey are subject to high inflation. At 31st December 2022 we have concluded that applying IAS 29 (Financial Reporting in Hyperinflationary Economies) is not required as the impact of adoption is not material. We will continue to assess the position going forward.

New standards and interpretations not yet applied

At the date of authorisation of these Financial Statements, the Group has not applied the following new and revised IFRS Standards that have been issued but are not yet effective:

- IFRS 17 Insurance Contracts;
- IFRS 10 and IAS 28 (amendments): 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 and IFRS Practice Statement 2: Disclosure of Accounting Policies;
- Amendments to IAS 8: Definition of Accounting Estimates; and
- Amendments to IAS 12: Deferred Tax related to Assets and Liabilities arising from a Single Transaction.

The Directors do not expect that the adoption of the Standards listed above will have a material impact on the Financial Statements of the Group in future periods.

Basis of accounting

(i) Subsidiaries

The Group Consolidated Financial Statements include the results of the Company and all its subsidiary undertakings. Subsidiaries are entities controlled by the Group. Control is achieved when the Group has power over an entity, is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to use its power to affect those returns. In assessing control, potential voting rights that presently are exercisable or convertible are taken into account. The Financial Statements of subsidiaries are included in the Consolidated Financial Statements from the date that control commences until the date that control ceases.

(ii) Associates

Associates are those entities for which the Group has significant influence, but not control, over the financial and operating policies. The Financial Statements include the Group's share of the total recognised income and expense of Associates on an equity accounted basis, from the date that significant influence commenced until the date that significant influence ceases.

(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 Group Consolidated Financial Statements. Unrealised gains arising from transactions with Associates are eliminated to the extent of the Group's interest in the entity.

Foreign currency

(i) On consolidation

The assets and liabilities of foreign operations are translated into sterling at exchange rates ruling at the date of the Consolidated Statement of Financial Position (closing rate). The revenues, expenses and cash flows of foreign operations are translated into sterling at average rates of exchange ruling during the year. Where the Notes to the Group Consolidated Financial Statements include tables reconciling movements between opening and closing balances, opening and closing assets and liabilities are translated at closing rates and revenue, expenses and all other movements translated at average rates, with the exchange differences arising being disclosed separately.

Exchange differences arising from the translation of the assets and liabilities of foreign operations are taken to a separate translation reserve within equity. They are recycled and recognised in the Income Statement upon disposal of the operation. Any differences that have arisen before 1st January 2004, the date of transition to IFRS, are not presented as a separate component of equity.

(ii) Foreign currency transactions

Transactions in foreign currencies are translated to the respective currencies of the Group entities at the foreign exchange rate at the date of the transaction. Monetary assets and liabilities at the date of the Statement of Financial Position denominated in a currency other than the functional currency of the entity are translated at the foreign exchange rate ruling at that date. Foreign exchange differences arising on translation are recognised in the Income Statement. Non-monetary assets and liabilities that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction. Non-monetary assets and liabilities denominated in foreign currencies that are stated at fair value are translated at foreign exchange rates ruling at the dates fair value was determined.

1 Accounting policies continued

Cash flow hedges

Where a derivative financial instrument is designated as a hedge of the variability in cash flows of a highly probable forecasted transaction, the effective part of any gain or loss on the derivative financial instrument is recognised in other comprehensive income and presented in the cash flow hedges reserve. The associated gain or loss is removed from equity and recognised in the Income Statement in the period in which the transaction to which it relates occurs.

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 the borrowings are recognised in the Consolidated Statement of Comprehensive Income and accumulated in the net investment hedge reserve. The ineffective part of any changes in value caused by changes in exchange rates is recognised in the Consolidated Income Statement.

Interest-bearing borrowings

Interest-bearing borrowings are recognised initially at the fair value of consideration received, less directly attributable transaction costs. Subsequent to initial recognition, interest-bearing borrowings are measured at amortised cost with any difference between cost and redemption value being recognised in the Consolidated Income Statement over the period of the borrowings on an effective-interest basis.

Other financial liabilities

Other financial liabilities, including borrowings, are initially measured at fair value, net of transaction costs. Other financial liabilities are subsequently measured at amortised cost using the effective interest method, with interest expense recognised on an effective interest basis. The effective interest method is a method of calculating the amortised cost of the financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments through the expected life of the financial liability, or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

The Group has not participated in any supplier financing arrangements during the current or prior year.

Property, plant and equipment

Items of property, plant and equipment are stated at cost or deemed cost, less accumulated depreciation.

Depreciation is charged to the Income Statement on a straight-line basis at rates which write down the value of assets to their residual values over their estimated useful lives. Land is not depreciated.

The annual principal rate are as follows:

Freehold buildings	1.5-4.0%
Leasehold buildings	Over life of lease
Plant and machinery	6.66-10%
Office furniture and fittings	10%
Office equipment	12.5-33.3%
Motor vehicles	20%
Tooling and patterns	10%

The depreciation rates are reassessed annually.

The Group has reviewed the principal depreciation rates and has determined a change for plant and machinery from 10-12.5% to 6.66-10%. This is to reflect the extended usage of the large operating equipment around the Group. This impact on current and future periods is not material.

Business combinations

Acquisitions of subsidiaries and businesses are accounted for using the acquisition method of accounting. Identified assets acquired and liabilities assumed are measured at their respective acquisition date fair values. The excess of the fair value of the consideration given over the fair value of the identifiable net assets acquired is recorded as goodwill. Acquisition-related costs are expensed as incurred. The operating results of the acquired business are reflected in the Group's Consolidated Financial Statements after the date of acquisition.

The cost of the acquisition is measured as the cash paid and also includes the fair value of any asset or liability resulting from a contingent consideration arrangement at the acquisition date.

Notes to the Consolidated Financial Statements continued

1 Accounting policies continued

Intangible assets

(i) Goodwill

Goodwill represents the difference between the cost of the acquisition and the fair value of the net identifiable assets acquired. Goodwill is stated at cost less any accumulated impairment losses. Goodwill is allocated to cash-generating units and is not amortised but is tested annually for impairment (see Note 15 for more detail). Annual impairment tests are performed on goodwill by comparing the carrying value with the recoverable amount, being the higher of the fair value less cost to sell and value in use, discounted at an appropriate discount rate, of future cash flows in respect of goodwill for the relevant cash-generating unit.

(ii) Research and development

Expenditure on R&D is charged to the Income Statement in the period in which it is incurred except that development expenditure is capitalised where the development costs relate to new or substantially improved products that are subsequently to be released for sale and will generate future economic benefits. The expenditure capitalised includes staff costs and related expenses. Capitalised development expenditure is stated at cost less accumulated amortisation (see below) and any impairment losses.

(iii) Other intangible assets

Intangible assets other than goodwill that are acquired by the Group are stated at cost less accumulated amortisation (see below) and any impairment losses.

Where computer software is cloud based and the Group does not have control of the software, the configuration and customisation costs are expensed over either:

- The period the services are received, where costs are distinct from the underlying software
- The period of the SaaS arrangement, where costs are not distinct from the underlying software

(iv) Amortisation

Amortisation is charged to the Income Statement on a straight-line basis over the estimated useful lives of intangible assets, other than goodwill, from the date they are available for use. The annual principal amortisation rates are as follows:

Capitalised development costs	20%
ERP systems and software	12-33%
Brand names and trademarks	5-33%
Manufacturing designs and core technology	6-50%
Non-compete undertakings	20-50%
Customer relationships	6-33%

Inventories

Inventories are measured at the lower of cost and net realisable value. Inventory cost is calculated on both a first in, first out and weighted average methodologies depending on which is deemed most appropriate. The cost of inventories includes expenditure incurred in acquiring the inventories, production or conversion costs and other costs in bringing them to their existing location and condition. In the case of manufactured inventories and work in progress, cost includes an appropriate share of production overheads based on normal operating capacity.

Trade receivables and other receivables

Trade receivables are carried at original invoice amount (which is considered a reasonable proxy for fair value) and are subsequently held at amortised cost less a loss allowance. Other receivables are initially measured at fair value. The loss allowance of trade receivables is based on lifetime expected credit losses. Lifetime expected credit losses are calculated by assessing historic credit loss experience, adjusted for factors specific to the receivable and operating company. The movement in the provision is recognised in the Consolidated Income Statement.

Trade and other payables

Trade and other payables are recognised at fair value and subsequently held at amortised cost.

Provisions and contingent liabilities

A provision is recognised in the Consolidated Statement of Financial Position when the Group has a present legal or constructive obligation as a result of a past event and it is probable that an outflow of resources, that to which can be reliably measured, will be required to settle the obligation. If the obligation is expected to be settled within 12 months of the reporting date, the provision is included within current liabilities and if expected to be settled after 12 months, it is included in non-current liabilities.

In respect of product warranties, a provision is recognised when the underlying products or services are sold. Obligations arising from restructuring plans are recognised when detailed formal plans have been established and there is a valid expectation that such a plan will be carried out. Provisions are recognised at an amount equal to the best estimate of the expenditure required to settle the Group's liability. If the likelihood of having to settle the obligation is less than probable but more than remote, or the amount of the obligation cannot be measured reliably then a contingent liability is disclosed.

1 Accounting policies continued

Cash and cash equivalents

Cash and cash equivalents comprise cash balances and call deposits with an original maturity of three months or less, and are held at amortised cost. Bank overdrafts that are repayable on demand and form an integral part of the Group's cash management are included as a component of cash and cash equivalents for the purpose of the Statement of Cash Flows.

Going concern

The Group's principal objective when managing liquidity is to safeguard the Group's ability to continue as a going concern for at least 12 months from the date of signing the 2022 Annual Report. The Group retains sufficient resources to remain in compliance with all the required terms and conditions within its borrowing facilities with material headroom and no material uncertainties have been identified. Having assessed the relevant business risks as discussed in our Principal Risks on pages 95 and 99 and considered the liquidity and covenant headroom available under several alternative scenarios as set out in the viability assessment on page 44, the Directors consider it appropriate to continue to adopt the going concern basis in preparing the financial statements. The full statement on the going concern assumption is set out on pages 43 and 44.

Alternative performance measures

The Group reports under International Financial Reporting Standards (IFRS) and also uses alternative performance measures where the Board believe that they help to effectively monitor the performance of the Group and users of the Financial Statements might find them informative. Certain alternative performance measures also form a meaningful element of Executive Directors' variable remuneration. A definition of the alternative performance measures included in the Annual Report and a reconciliation to the closest IFRS equivalent are disclosed in Note 2. Adjusted performance measures are not considered to be a substitute for, or superior to, IFRS measures.

Employee benefits

(i) Defined contribution plans

Obligations for contributions to defined contribution pension plans are recognised as an expense in the Income Statement as incurred.

(ii) Defined benefit plans

The costs of providing pensions under defined benefit schemes are calculated in accordance with the advice of qualified actuaries and spread over the period during which benefit is expected to be derived from the employees' services. The Group's net obligation or surplus in respect of defined benefit pensions 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. Past service costs are recognised straight away.

That benefit is discounted at rates reflecting the yields on AA credit rated corporate bonds that have maturity dates approximating the terms of the Group's obligations to determine its present value. Pension scheme assets are measured at fair value at the Statement of Financial Position date. Actuarial gains and losses, differences between the expected and actual returns, and the effect of changes in actuarial assumptions are recognised in the Statement of Comprehensive Income in the year they arise. Any scheme surplus (to the extent it is considered recoverable under the provisions of IFRIC 14) or deficit is recognised in full in the Statement of Financial Position.

The cost of other post-employment liabilities are calculated in a similar way to defined benefit pension schemes and spread over the period, which benefit is expected to be derived from the employees' services, in accordance with the advice of qualified actuaries.

(iii) Employee share plans

Incentives in the form of shares are provided to employees under share option and share award schemes. The fair value of these options and awards at their date of grant is charged to the Income Statement over the relevant vesting periods with a corresponding increase in equity. The value of the charge is adjusted to reflect expected and actual levels of options and share awards vesting.

(iv) Long-term share incentive plans

The fair value of awards is measured at the date of grant and the cost spread over the vesting period. The amount recognised as an expense is not adjusted to reflect market-based performance conditions, but is adjusted for non-market-based performance conditions.

Revenue

The Group applies the following five-step framework when recognising revenue.

Step 1: Identify the contracts with customers.

Step 2: Identify the performance obligations in the contract.

Step 3: Determine the transaction price.

Step 4: Allocate the transaction price to the performance obligations in the contract.

Step 5: Recognise revenue when (or as) the entity satisfies a performance obligation.

The criteria the Group uses to identify the performance obligations within a contract are:

- the customer must be able to benefit from the goods or services either on its own or in combination with other resources available to the customer; and
- the entity's promise to transfer the good or service to the customer is separable from other promises in the contract.

Notes to the Consolidated Financial Statements continued

1 Accounting policies continued

The transaction price is the value that the Group expects to be entitled to from the customer and includes discounts, rebates, credits, price concessions, incentives, performance bonuses, penalties and liquidated damages, but is not reduced for bad debts. It is net of any value-added tax (VAT) and other sales-related taxes. Variable consideration that is dependent on certain events is included in the transaction price when it is highly probable that the variable consideration will occur.

Revenue is recognised over time as the product is being manufactured or a service being provided if any of the following criteria are met:

- the Group is creating a bespoke item which doesn't have an alternative use to the Group (i.e. we would incur a significant loss to re-work and/or sell to another customer) and the entity has a right to payment for work completed to date including a reasonable profit;
- the customer controls the asset that is being created or enhanced during the manufacturing process i.e. the customer has the right to significantly modify and dictate how the product is built during construction;
- services provided where the customer simultaneously receives and consumes the benefits provided by the Group's performance as the Group performs.

Judgement is made when determining if a product is bespoke and the value of revenue to recognise over time as products are being manufactured. However due to the low value of orders for bespoke items in progress at the 31st December 2022 where we have a right to payment of costs plus a reasonable profit, this is not considered a critical judgement.

The value of revenue to be recognised over time for goods being manufactured is calculated using a cost-based input approach. This is considered a faithful depiction of the transfer of the goods as the costs incurred, total costs expected to be incurred and order value are known.

The value of revenue to be recognised over time for services being provided is calculated based on the stage of completion. This is assessed by reference to the contractual performance obligations with each separate customer and the costs incurred on the contract to date in comparison to the total forecast costs of the contract.

If the criteria to recognise revenue over time are not met then revenue is recognised at a point in time when the customer obtains control of the asset and the performance obligation is satisfied. The customer obtains control of the asset when the customer can direct the use of the asset and obtain the benefits from the asset.

Factors the Group considers when determining the point in time when control of the asset has passed to the customer and revenue recognised include:

- the Group has a right to payment;
- legal title is transferred to the customer;
- physical possession of the asset has been transferred to the customer;
- the customer has the significant risks and rewards of ownership; and
- the customer has accepted the asset.

Control normally passes and revenue recognised when the goods are either despatched or delivered to the customer (in accordance with the terms and conditions of the sale) or the installation and testing is completed.

A large proportion of the Group's revenue qualifies for recognition on despatch or delivery of the goods to the customer as this is when the performance obligation is satisfied. This is normally the trigger point for raising an invoice per the terms and conditions of the order. Therefore invoicing for a large proportion of the Group's revenue occurs at the same time as when the performance obligation is satisfied. Contract assets at 31st December 2022 were £11.7m (0.7% of total revenue) (2021: £3.2m (0.2% of total revenue)).

All revenue recognised by the Group is generated through contracts with customers.

When the unavoidable costs of fulfilling the contract exceed the revenue to be recognised the contract is loss making and the expected loss is recognised in the Consolidated Income Statement immediately.

Warranties that give assurance that a product meets agreed-upon specifications are accounted for as a cost provision and do not impact the timing and value of revenue. The Group does not have any material warranties that promise more than just providing assurance that a product meets agreed-upon specifications.

Costs of obtaining a contract, that are only incurred because the contract was obtained, are capitalised and expensed at a later date. At 31st December 2022 no costs of obtaining a contract were capitalised. All other assets recognised to fulfil a contract are within the scope of other accounting standards and policies.

Leases

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 (assets with a value of less than £5,000). For these leases, the Group recognises the lease payments as an operating expense on a straight-line basis over the term of the lease unless another systematic basis is more representative of the time pattern in which economic benefits from the leased assets are consumed.

1 Accounting policies continued

For new leases entered into, the lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted by using the incremental borrowing rate for the related geographical location unless the rate implicit in the lease is readily determinable. The incremental borrowing rate is calculated at the rate of interest at which the company would have been able to borrow for a similar term and with a similar security the funds necessary to obtain a similar asset in a similar market.

Lease payments included in the measurement of the lease liability comprise:

- fixed lease payments (including in substance fixed payments), less any lease incentives receivable;
- variable lease payments that depend on an index or rate, initially measured using the index or rate at the commencement date;
- the amount expected to be payable by the company under residual value guarantees;
- the exercise price of purchase options, if the company is reasonably certain to exercise the options; and
- payments of penalties for terminating the lease, if the lease term reflects the exercise of an option to terminate the lease.

The lease liability is subsequently measured by increasing the carrying amount to reflect interest on the lease liability 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:

- the lease term has changed or there is a significant event or change in circumstances resulting in a change in the assessment of exercise of a purchase option; and
- the lease payments change due to changes in an index or rate or a change in expected payment under a residual guarantee value.

The right-of-use assets comprise the initial measurement of the corresponding lease liability, lease payments made at or before the commencement date and any 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 lease term and useful life of the underlying asset. If a lease transfers ownership of the underlying asset or the cost of the right-of-use asset reflects that the Group expects to exercise a purchase option, the related right-of-use asset is depreciated over the useful life of the underlying asset.

Variable lease payments that do not depend on an index or rate are not included in the measurement of the lease liability and the right-of-use asset. The related payments are recognised as an expense in the period in which the event or condition that triggers those payments occurs.

Judgement is required when determining whether to include or exclude optional extension periods within the lease term, and estimation is required when calculating the incremental borrowing rate used to discount the future lease cash flows. These are not considered critical judgements or a key source of estimation uncertainty.

Taxation

The tax charge comprises current and deferred tax. Income tax expense is recognised in the Income Statement unless it relates to items recognised directly in equity or in other comprehensive income, when it is also recognised in equity or other comprehensive income respectively. Current tax is the expected tax payable on the profit for the year and any adjustments in respect of previous years using tax rates enacted or substantively enacted at the reporting date. Tax positions are reviewed to assess whether a provision should be made on prevailing circumstances. Tax provisions are included within current taxation payable. Deferred tax is provided on temporary differences arising between the tax base of assets and liabilities, and their carrying amounts in the Financial Statements. Deferred tax assets are recognised to the extent that it is probable that future taxable profits will be available against which the asset can be utilised. Deferred tax is provided using rates of tax that have been enacted or substantively enacted at the date of the Statement of Financial Position or the date that the temporary differences are expected to reverse. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

Share capital and repurchased shares

When share capital recognised as equity is repurchased, the amount of the consideration paid, including directly attributable costs, is recognised as a deduction from equity. Repurchased shares are classified as treasury shares or placed in an Employee Benefit Trust and are presented as a deduction from total equity.

Notes to the Consolidated Financial Statements continued

2 Alternative performance measures

The Group reports under International Financial Reporting Standards (IFRS) and also uses alternative performance measures where the Board believes that they help to effectively monitor the performance of the Group and users of the Financial Statements might find them informative. Certain alternative performance measures also form a meaningful element of Executive Directors' variable remuneration. Please see the Annual Report on Remuneration 2022 on pages 143 to 168 for further detail. A definition of the alternative performance measures and a reconciliation to the closest IFRS equivalent are disclosed below. The term 'adjusted' is not defined under IFRS and may therefore not be comparable with similarly titled measures reported by other companies. Adjusted performance measures are not considered to be a substitute for, or superior to, IFRS measures.

Adjusted operating profit

Adjusted operating profit excludes items that are considered to be significant in nature and/or quantum at either a Group or an operating segment level and where treatment as an adjusted item provides all our stakeholders with additional useful information to assess the period-on-period trading performance of the Group. The Group excludes such items including those defined as follows:

- amortisation and impairment of acquisition-related intangible assets;
- costs associated with acquisitions and disposals;
- reversal of acquisition-related fair value adjustments to inventory;
- changes in deferred and contingent consideration payable on acquisitions;
- gain or loss on disposal of subsidiary and disposal groups;
- costs associated with a significant restructuring programme;
- significant gains or losses on disposal of property;
- significant non-recurring pension costs or credits;
- accelerated depreciation, impairment and other related costs on one-off significant property redevelopments; and
- related tax effect on adjusting items above and other tax items which do not form part of the underlying tax rate.

A reconciliation between operating profit as reported under IFRS and adjusted operating profit is given below.

	2022 £m	2021 £m
Operating profit as reported under IFRS	318.8	320.9
Amortisation of acquisition-related intangible assets	23.7	21.4
Reversal of acquisition-related fair value adjustments to inventory	1.8	–
Disposal of subsidiaries in Russia	7.1	–
Restructuring costs	15.5	–
Acquisition-related items	9.1	–
Accelerated depreciation and other related costs on one-off property redevelopments	4.2	–
Post-retirement benefit plan in Germany being closed to future accrual	–	(2.0)
Adjusted operating profit	380.2	340.3

The related tax effects of the above are included as adjustments in taxation as disclosed in Note 9.

Adjusted earnings per share

	2022	2021
Profit for the period attributable to equity holders as reported under IFRS (£m)	224.7	234.6
Items excluded from adjusted profit (£m)	62.5	19.4
Tax effects on adjusted items (£m)	(9.4)	(4.3)
Adjusted profit for the period attributable to equity holders (£m)	277.8	249.7
Weighted average shares (million)	73.6	73.7
Basic adjusted earnings per share	377.2p	338.9p
Diluted weighted average shares (million)	73.8	73.9
Diluted adjusted earnings per share	376.3p	338.0p

Basic adjusted earnings per share is defined as adjusted profit for the period attributable to equity holders divided by the weighted average number of shares. Diluted adjusted earnings per share is defined as adjusted profit for the period attributable to equity holders divided by the diluted weighted average number of shares.

Basic and diluted EPS calculated on an IFRS profit basis are included in Note 10.

2 Alternative performance measures continued

Adjusted cash flow

A reconciliation showing the items that bridge between net cash from operating activities as reported under IFRS to an adjusted basis is given below. Adjusted cash from operations is used by the Board to monitor the performance of the Group, with a focus on elements of cash flow, such as net capital expenditure, which are subject to day-to-day control by the business.

	2022 £m	2021 £m
Net cash from operating activities as reported under IFRS	241.1	273.4
Restructuring and acquisition-related costs	10.2	–
Net capital expenditure excluding acquired intangibles from acquisitions	(113.5)	(62.1)
Income tax paid	90.0	78.1
Repayments of principal under lease liabilities	(12.9)	(11.7)
Adjusted cash from operations	214.9	277.7

Adjusted cash conversion in 2022 is 57% (2021: 82%). Cash conversion is calculated as adjusted cash from operations divided by adjusted operating profit. The adjusted cash flow is included in the Financial Review on page 42. The impact of adjustments to operating profit as reported under IFRS of £61.4m (2021: £19.4m) on net change in cash and cash equivalents is a total outflow of £13.5m (2021: £nil). Included within cash generated from operations is acquisition-related items of £7.1m, related costs on one-off property redevelopments of £0.3m and disposal related costs £0.1m. Included within net cash used in investing activities is restructuring costs of £3.2m and disposal of subsidiaries in Russia of £2.8m.

Cash generation

Cash generation is one of the Group's key performance indicators used by the Board to monitor the performance of the Group and measure the successful implementation of our strategy. It is one of two financial measures on which Executive Directors' variable remuneration is based.

Cash generation is calculated as adjusted operating profit after adding back depreciation and amortisation, less cash payments to pension schemes in excess of the charge to operating profit, equity settled share plans, net capital expenditure excluding acquired intangibles, working capital changes and repayment of principal under lease liabilities. Cash generation is equivalent to adjusted cash from operations, a reconciliation between this and net cash from operating activities as reported under IFRS is shown on page 197.

Return on invested capital (ROIC) and return on capital employed (ROCE)

The Group distinguishes between invested capital and capital employed when calculating return on capital. Invested capital represents the total capital invested in the business and is equal to total equity plus net debt and therefore includes the impact of acquisitions and disposals. Capital employed is invested capital less certain non-current assets and non-current liabilities and therefore reflects capital that is more operational in nature. Both of these return metrics are used to ensure a full assessment of business performance.

Return on invested capital (ROIC)

ROIC measures the post-tax return on the total capital invested in the business. It is calculated as adjusted operating profit after tax divided by average invested capital. Average invested capital is defined as the average of the closing balance at the current and prior year end. Taxation is calculated as adjusted operating profit multiplied by the adjusted effective tax rate.

An analysis of the components is as follows:

	2022 £m	2021 £m
Total equity	1,169.8	1,010.0
Net debt including lease liabilities	755.6	190.6
Total invested capital	1,925.4	1,200.6
Average invested capital	1,563.0	1,157.9
Average invested capital (excluding acquisitions, disposals and leases)	1,263.8	1,108.4
Operating profit as reported under IFRS	318.8	320.9
Adjustments (see adjusted operating profit)	61.4	19.4
Adjusted operating profit	380.2	340.3
Taxation	(94.9)	(85.5)
Adjusted operating profit after tax	285.3	254.8
Adjusted operating profit after tax (excluding acquisitions, disposals and leases)	277.6	254.1
Return on invested capital	18.3%	22.0%
Return on invested capital (excluding acquisitions, disposals and leases)	22.0%	22.9%

Notes to the Consolidated Financial Statements continued

2 Alternative performance measures continued

Return on capital employed (ROCE)

ROCE measures effective management of fixed assets and working capital relative to the profitability of the business. It is calculated as adjusted operating profit divided by average capital employed. Average capital employed is defined as the average of the closing balance at the current and prior year end. More information on ROCE can be found in the Capital Employed and ROCE sections of the Financial Review on pages 41 and 42.

An analysis of the components is as follows:

	2022 £m	2021 £m
Property, plant and equipment	384.5	277.4
Right-of-use assets	67.2	62.9
Software and development costs	44.5	38.9
Prepayments	2.0	1.3
Inventories	290.0	201.3
Trade receivables	341.1	272.3
Other current assets	79.6	44.7
Tax recoverable	19.0	15.7
Trade, other payables and current provisions	(295.0)	(222.2)
Current tax payable	(40.4)	(33.1)
Capital employed	892.5	659.2
Average capital employed	775.9	621.5
Average capital employed (excluding acquisitions, disposals and leases)	677.5	571.9
Operating profit	318.8	320.9
Adjustments (see adjusted operating profit on page 196)	61.4	19.4
Adjusted operating profit	380.2	340.3
Adjusted operating profit (excluding acquisitions, disposals and leases)	369.9	339.2
Return on capital employed	49.0%	54.7%
Return on capital employed (excluding acquisitions, disposals and leases)	54.6%	59.3%

A reconciliation of capital employed to net assets as reported under IFRS and disclosed on the Consolidated Statement of Financial Position is given below.

	2022 £m	2021 £m
Capital employed	892.5	659.2
Goodwill and acquired intangibles	1,159.1	628.0
Investment in Associate	–	–
Post-retirement benefits	(52.1)	(44.7)
Net deferred tax	(59.1)	(35.7)
Non-current provisions and long-term payables	(15.0)	(6.2)
Lease liabilities	(65.2)	(60.1)
Net debt	(690.4)	(130.5)
Net assets as reported under IFRS	1,169.8	1,010.0

Net debt including lease liabilities

A reconciliation between net debt and net debt including lease liabilities is given below. A breakdown of the balances that are included within net debt is given within Note 24. Net debt excludes lease liabilities to be consistent with how net debt is defined for external debt covenant purposes, as well as to enable comparability with prior years.

	2022 £m	2021 £m
Net debt	690.4	130.5
Lease liabilities	65.2	60.1
Net debt and lease liabilities	755.6	190.6

2 Alternative performance measures continued

Net debt to earnings before interest, tax, depreciation and amortisation (EBITDA)

To assess the size of the net debt balance relative to the size of the earnings for the Group, we analyse net debt as a proportion of EBITDA. EBITDA is calculated by adding back depreciation and amortisation of owned property, plant and equipment, software and development and the 12 month pro-forma EBITDA impact of acquisitions and disposals to adjusted operating profit. Net debt is calculated as cash and cash equivalents less bank overdrafts and external borrowings (excluding lease liabilities). The net debt to EBITDA ratio is calculated as follows:

	2022 £m	2021 £m
Adjusted operating profit	380.2	340.3
Depreciation and amortisation of property, plant and equipment, software and development	37.4	36.2
Acquisitions and disposals pro-forma basis (EBITDA)	33.7	–
Earnings before interest, tax, depreciation and amortisation	451.3	376.5
Net debt	690.4	130.5
Net debt to EBITDA	1.5	0.3

The components of net debt are disclosed in Note 24.

Organic measures

As we are a multi-national Group of companies, who trade in a large number of currencies and also acquire and sometimes dispose of companies, we also refer to organic performance measures throughout the Annual Report. These strip out the effects of the movement in exchange rates and of acquisitions and disposals. The Board believe that this allows users of the accounts to gain a further understanding of how the Group has performed. Exchange translation movements are assessed by re-translating prior period reported values to current period exchange rates. Exchange transaction impacts on operating profit are assessed on the basis of transactions being at constant currency between years.

The incremental impact of any acquisitions that occurred in either the current period or prior period is excluded from the organic results of the current period at current period exchange rates. For any disposals that occurred in the current or prior period, the current period organic results include the difference between the current and prior period financial results only for the like-for-like period of ownership.

The organic percentage movement is calculated as the organic movement divided by the prior period at current period exchange rates, excluding disposals for the non like-for-like period of ownership. The organic bps change in adjusted operating margin is the difference between the current period margin, excluding the incremental impact of acquisitions, and the prior period margin excluding disposals for the non like-for-like period of ownership at current period exchange rates.

A reconciliation of the movement in revenue and adjusted operating profit compared to the prior period is given below.

	2021	Exchange	Organic	Acquisitions and disposals ¹	2022	Organic	Reported
Revenue	£1,344.5m	£52.5m	£191.6m	£22.0m	£1,610.6m	+14%	+20%
Adjusted operating profit	£340.3m	£13.0m	£23.5m	£3.4m	£380.2m	+7%	+12%
Adjusted operating margin	25.3%				23.6%	-160 bps	-170 bps

1 Includes the impact of (i) the acquisition of Cotopaxi Limited, Durex Industries and Vulcanic and (ii) the treatment of our disposed Russian operating companies as disposed from the date at which the Group suspended all trading with and within Russia.

Pro-forma Revenue

Due to the disposal of our Russian operating companies and the acquisitions of Cotopaxi Limited, Vulcanic and Durex Industries, our reported financial results for 2022 only include the impact of these operations for the period of ownership by the Group. The table below reconciles between statutory revenue as reported within the Consolidated Income Statement, and the 2022 pro-forma revenue had all acquisition and disposal transactions occurred on 1st January 2022. This allows users of the accounts to see the split of revenue by operating segment on a basis that will be like-for-like against 2023.

	Revenue (statutory) £m	Pro-forma adjustments* £m	Revenue (pro-forma) £m	Proportion of Group
Steam Specialties	866.0	(1.2)	864.8	50%
Electric Thermal Solutions	256.1	126.8	382.9	22%
Watson-Marlow	488.5	(1.9)	486.6	28%
Total	1,610.6	123.7	1,734.3	

*includes the 2022 pre-acquisition financial results of Cotopaxi Limited, Vulcanic and Durex Industries, and the removal of the 2022 statutory results of our Russian operating companies disposed

The term 'sales' is used interchangeably with 'revenue' when describing the financial performance of the business. Drop through is calculated as the organic increase in adjusted operating profit divided by the organic increase in revenue. The reconciliation for each segment is included in the Strategic Report.

Notes to the Consolidated Financial Statements continued

3 Segmental reporting

As required by IFRS 8 Operating Segments, the following segmental information is presented in a consistent format with management information considered by the Board.

No changes to the structure of operating segments have been made during the current period.

Analysis by operating segment 2022

	Revenue £m	Total operating profit £m	Adjusted operating profit £m	Adjusted operating margin %
Steam Specialties	866.0	196.2	206.1	23.8%
Electric Thermal Solutions	256.1	7.3	39.9	15.6%
Watson-Marlow	488.5	154.4	160.0	32.8%
Corporate expenses		(39.1)	(25.8)	
Total	1,610.6	318.8	380.2	23.6%
Net financing expense		(10.7)	(9.6)	
Share of (loss)/profit of Associate		–	–	
Profit before tax		308.1	370.6	

2021

	Revenue £m	Total operating profit £m	Adjusted operating profit £m	Adjusted operating margin %
Steam Specialties	754.9	186.8	188.7	25.0%
Electric Thermal Solutions	181.3	11.1	24.0	13.2%
Watson-Marlow	408.3	145.4	150.0	36.7%
Corporate expenses		(22.4)	(22.4)	
Total	1,344.5	320.9	340.3	25.3%
Net financing expense		(6.4)	(6.4)	
Share of (loss)/profit of Associate		–	–	
Profit before tax		314.5	333.9	

The following table details the split of revenue by geography for the combined Group:

	2022 £m	2021 £m
Europe, Middle East and Africa	649.6	563.3
Asia Pacific	384.3	334.2
Americas	576.7	447.0
Total revenue	1,610.6	1,344.5

Revenue generated by Group companies based in the USA is £433.0m (2021: £342.4m), in China is £213.2m (2021: £181.6m), in Germany is £134.3m (2021: £118.2m), in the UK is £115.7m (2021: £99.6m) and the rest of the world is £714.4m (2021: £602.7m).

3 Segmental reporting continued

The total operating profit for the period includes certain items, as analysed below:

2022

	Amortisation of acquisition-related intangible assets £m	Reversal of acquisition-related fair value adjustments to inventory £m	Disposal of subsidiaries in Russia £m	Restructuring costs £m	Acquisition-related items £m	Accelerated depreciation and other related costs on one-off property redevelopments £m	Total £m
Steam Specialties	(4.6)	–	(5.3)	–	–	–	(9.9)
Electric Thermal Solutions	(15.3)	(1.8)	–	(15.5)	–	–	(32.6)
Watson-Marlow	(3.8)	–	(1.8)	–	–	–	(5.6)
Corporate expenses	–	–	–	–	(9.1)	(4.2)	(13.3)
Total	(23.7)	(1.8)	(7.1)	(15.5)	(9.1)	(4.2)	(61.4)

2021

	Amortisation of acquisition-related intangible assets £m	German pension plan closed to future accrual £m	Total £m
Steam Specialties	(3.9)	2.0	(1.9)
Electric Thermal Solutions	(12.9)	–	(12.9)
Watson-Marlow	(4.6)	–	(4.6)
Corporate expenses	–	–	–
Total	(21.4)	2.0	(19.4)

Net financing income and expense

	2022 Income £m	2022 Expense £m	2022 Net £m	2021 Income £m	2021 Expense £m	2021 Net £m
Steam Specialties	3.6	(1.8)	1.8	3.0	(2.3)	0.7
Electric Thermal Solutions	0.3	(0.5)	(0.2)	–	(0.2)	(0.2)
Watson-Marlow	0.3	(0.6)	(0.3)	0.1	(0.5)	(0.4)
Corporate expenses	1.4	(13.4)	(12.0)	0.3	(6.8)	(6.5)
Total net financing expense	5.6	(16.3)	(10.7)	3.4	(9.8)	(6.4)

Net assets

	2022 Assets £m	2022 Liabilities £m	2021 Assets £m	2021 Liabilities £m
Steam Specialties	766.4	(226.8)	658.0	(182.1)
Electric Thermal Solutions	1,174.2	(78.0)	536.9	(33.0)
Watson-Marlow	427.4	(57.3)	331.8	(57.9)
	2,368.0	(362.1)	1,526.7	(273.0)
Liabilities	(362.1)		(273.0)	
Net deferred tax	(59.1)		(35.7)	
Net tax payable	(21.4)		(17.4)	
Net debt including lease liabilities	(755.6)		(190.6)	
Net assets	1,169.8		1,010.0	

Non-current assets in the USA were £686.8m (2021: £345.6m), in France were £403.1m (2021: £150.5m), in the UK were £284.1m (2021: £231.2m), in Germany were £165.6m (2021: £154.6m) and in the rest of the world were £191.8m (2021: £177.6m).

Notes to the Consolidated Financial Statements continued

3 Segmental reporting continued

Capital additions, depreciation, amortisation and impairment

	2022 Capital additions £m	2022 Depreciation, amortisation and impairment £m	2021 Capital additions £m	2021 Depreciation, amortisation and impairment £m
Steam Specialties	47.1	37.3	35.6	33.9
Electric Thermal Solutions	285.4	24.7	16.6	18.3
Watson-Marlow	76.4	19.0	51.0	16.8
Group total	408.9	81.0	103.2	69.0

Capital additions include property, plant and equipment of £135.0m (2021: £52.8m), of which £30.7m (2021: £nil) was from acquisitions in the period, and other intangible assets of £258.3m (2021: £11.3m) of which £245.1m (2021: £nil) relates to acquired intangibles from acquisitions in the period. Right-of-use asset additions of £15.6m (2021: £39.1m) occurred during the 12-month period to 31st December 2022, of which £4.1m (2021: £nil) relates to acquired leases from acquisitions in the period. Capital additions split between the USA, UK and rest of world are USA £186.4m (2021: £4.7m), UK £51.8m (2021: £54.2m) and rest of world £170.7m (2021: £44.4m).

4 Operating costs

	2022 Adjusted £m	2022 Adjustments £m	2022 Total £m	2021 Adjusted £m	2021 Adjustments £m	2021 Total £m
Cost of inventories recognised as an expense	381.2	3.9	385.1	304.7	–	304.7
Staff costs (Note 5)	570.3	–	570.3	478.5	–	478.5
Depreciation, amortisation and impairment	50.9	30.1	81.0	47.6	21.4	69.0
Other operating charges	228.0	27.4	255.4	173.4	(2.0)	171.4
Total operating costs	1,230.4	61.4	1,291.8	1,004.2	19.4	1,023.6

Total cost of inventories recognised as an expense includes the reversal of acquisition-related fair value adjustments to inventory £1.8m (2021: £nil) and the write down of inventory resulting from the closure of the Chromalox's manufacturing operations in Soissons (France) of £2.1m (2021: £nil).

Total staff costs includes a credit of £2.0m (2021: £2.7m) relating to amounts capitalised during the year. Excluding this credit, total staff costs were £572.3m (2021: £481.2m).

Total depreciation, amortisation and impairment includes amortisation of acquisition-related intangible assets of £23.7m (2021: £21.4m), accelerated depreciation on one-off property redevelopments of £3.9m (2021: £nil) and impairment resulting from the closure of the Chromalox's manufacturing operations in Soissons (France) £2.5m (2021: £nil).

Total other operating charges includes restructuring costs (including the closure of Chromalox's manufacturing operations in Soissons (France)) of £10.9m (2021: £nil), acquisition-related items of £9.1m (2021: £nil) relating to the acquisition of Cotopaxi Limited, Vulcanic and Durex Industries, disposal of subsidiaries in Russia of £7.1m (2021: £nil) and related costs on one-off property redevelopments of £0.3m (2021: £nil). Operating costs include exchange difference gains of £5.1m (2021: losses of £1.3m).

5 Staff costs and numbers

The aggregate payroll costs of persons employed by the Group were as follows:

	2022 £m	2021 £m
Wages and salaries	463.2	390.3
Social security costs	79.9	70.3
Pension costs	29.2	20.6
Total payroll costs	572.3	481.2

The average number of persons employed by the Group (including Directors) during the year was as follows:

	2022	2021
United Kingdom	2,699	2,225
Rest of World	6,670	5,977
Group average	9,369	8,202

6 Net financing income and expense

	2022 £m	2021 £m
Financial expenses:		
Bank and other borrowing interest payable	(14.0)	(7.4)
Interest expense on lease liabilities	(1.5)	(1.1)
Net interest on pension scheme liabilities	(0.8)	(1.3)
	(16.3)	(9.8)
Financial income:		
Bank interest receivable	5.6	3.4
Net financing expense	(10.7)	(6.4)
Net bank interest	(8.4)	(4.0)
Interest expense on lease liabilities	(1.5)	(1.1)
Net pension scheme financial expense	(0.8)	(1.3)
Net financing expense	(10.7)	(6.4)

7 Profit before taxation

Profit before taxation is shown after charging:

	2022 £m	2021 £m
Depreciation of property, plant and equipment	(33.2)	(28.3)
Depreciation of right-of-use assets	(13.5)	(11.4)
Amortisation of acquired intangibles	(23.7)	(21.4)
Leases exempt from IFRS 16 (short-term, low value or variable lease payments)	(2.5)	(2.6)
Exchange difference gains/(losses)	5.1	(1.3)
Profit on disposal of property, plant and equipment	1.4	0.5
Research and development	(15.8)	(13.0)

	2022 £m	2021 £m
Auditor's remuneration		
Audit of these Financial Statements	0.4	0.3
Amounts receivable by the Company's auditor and its Associates in respect of:		
Audit of Financial Statements of subsidiaries of the Company	1.9	1.7
Total audit fees	2.3	2.0
Audit-related assurance services	0.1	0.2
Total non-audit fees	0.1	0.2
Total auditor's remuneration	2.4	2.2

8 Directors' emoluments

Directors represent the key management personnel of the Group under the terms of IAS 24 Related Party Disclosures. Total remuneration is shown below.

Further details of salaries and short-term benefits, post-retirement benefits, share plans and long-term share incentive plans are shown in the Annual Report on Remuneration 2022 on pages 143 to 168. The share-based payments charge comprises a charge in relation to the Performance Share Plan and the Employee Share Ownership Plan (as described in Note 23).

	2022 £m	2021 £m
Salaries and short-term benefits	2.9	3.3
Post-retirement benefits	0.2	0.2
Share-based payments	2.0	2.4
Total Directors' remuneration	5.1	5.9

Notes to the Consolidated Financial Statements continued

9 Taxation

	2022 Adjusted £m	2022 Adjustments £m	2022 Total £m	2021 Adjusted £m	2021 Adjustments £m	2021 Total £m
Analysis of charge in period						
UK corporation tax:						
Current tax on income for the period	7.3	(0.2)	7.1	8.7	–	8.7
Adjustments in respect of prior periods	(0.7)	–	(0.7)	(1.7)	–	(1.7)
	6.6	(0.2)	6.4	7.0	–	7.0
Foreign tax:						
Current tax on income for the period	89.4	(0.8)	88.6	74.5	–	74.5
Adjustments in respect of prior periods	(1.3)	–	(1.3)	(1.5)	–	(1.5)
	88.1	(0.8)	87.3	73.0	–	73.0
Total current tax charge	94.7	(1.0)	93.7	80.0	–	80.0
Deferred tax – UK	(0.4)	(0.7)	(1.1)	4.0	(0.3)	3.7
Deferred tax – rest of the world	(1.8)	(7.7)	(9.5)	(0.1)	(4.0)	(4.1)
Tax on profit on ordinary activities	92.5	(9.4)	83.1	83.9	(4.3)	79.6

Reconciliation of effective tax rate

	2022 Adjusted £m	2022 Adjustments £m	2022 Total £m	2021 Adjusted £m	2021 Adjustments £m	2021 Total £m
Profit before tax and share of profit of Associate	370.6	(62.5)	308.1	333.9	(19.4)	314.5
Expected tax at blended rate	87.5	(14.3)	73.2	81.4	(4.1)	77.3
Increased withholding tax on overseas dividends	6.2	–	6.2	5.2	–	5.2
Non-deductible expenditure	0.6	3.0	3.6	2.6	–	2.6
Over provided in prior years	(2.3)	2.0	(0.3)	(4.9)	–	(4.9)
Other reconciling items	0.5	(0.1)	0.4	(0.4)	(0.2)	(0.6)
Total tax in Income Statement	92.5	(9.4)	83.1	83.9	(4.3)	79.6
Effective tax rate	25.0%	15.0%	27.0%	25.1%	22.2%	25.3%

The Group's tax charge in future years is likely to be affected by the proportion of profits arising and the effective tax rates in the various territories in which the Group operates. The rate may also be affected by the impact of any acquisitions. The Group monitors income tax developments in the territories in which it operates, to include the OECD Base Erosion and Profit Shifting (BEPS) initiative. This includes the setting of a new minimum global corporate tax rate of 15%. We will continue to monitor developments closely and assess whether this will lead to an increase in tax from 2024.

The Group's tax charge for the year ended 31st December 2022 includes a credit of £9.4m in relation to certain items excluded from adjusting operating profit (as disclosed in Note 2). The tax impacts of these items are:

- Amortisation of acquisition-related intangible assets (£5.6m credit);
- Costs associated with the acquisition of Vulcanic (£1.8m credit);
- Costs associated with the acquisition of Durex Industries (£1.2m credit);
- Restructuring of the Chromalox manufacturing operations in Soissons (France) (£0.7m credit); and
- Costs associated with the redevelopment of the Group Head Office building in Cheltenham (UK) (£0.1m credit).

Excluding these adjustments the tax on profit and the effective tax rate are £92.5m and 25.0% respectively.

The UK deferred tax assets and liabilities at 31st December 2022 that are expected to reverse before 1st April 2023 have been calculated based upon the rate of 19% whilst the UK deferred tax assets and liabilities expected to reverse on or after 1st April 2023 have been calculated based upon the rate of 25%.

9 Taxation continued

In October 2017, the European Commission (EC) opened a State Aid investigation into the UK's Controlled Foreign Company (CFC) regime. In April 2019, the EC published its final decision that the UK CFC Finance Company Exemption (FCE) constituted State Aid in certain circumstances, following which the UK Government appealed the decision to the EU General Court. In June 2022, the EU General Court dismissed the UK Government's appeal following which the UK Government lodged a further appeal to the European Court of Justice. The UK Government's appeal has not yet been heard. Like other UK Groups, the Group submitted its own appeal against the EC's decision. The Group's benefit from the FCE in the period from 1st January 2013 to 31st December 2022 is approximately £8.7m, including compound interest. To date, the Group has received, paid, and appealed Charging Notices totalling £4.9m, assessed for the period from 1st January 2017 to 31st December 2018. The Group expects to recover this in the event of a successful appeal and has recognised a receivable for the full amount at the year-end balance sheet date. The Group has not received a Charging Notice for the period prior to 1st January 2017, the benefit for this period being £2.8m. HMRC has enquired into the benefit received during 2019, which the Group estimates to be £1.0m. No provisions have been recognised at the year-end balance sheet date for either the Charging Notice amounts or for the estimates for the other periods.

No UK tax (after double tax relief for underlying tax) is expected to be payable on the future remittance of retained earnings of overseas subsidiaries.

The effective tax rate is calculated as a percentage of profit before tax and a share of profits of Associates.

10 Earnings per share

	2022	2021
Profit attributable to equity shareholders (£m)	224.7	234.6
Weighted average shares (million)	73.6	73.7
Dilution (million)	0.2	0.2
Diluted weighted average shares (million)	73.8	73.9
Basic earnings per share	305.1p	318.3p
Diluted earnings per share	304.4p	317.5p

Basic and diluted earnings per share calculated on an adjusted profit basis are included in Note 2.

The dilution is in respect of the Performance Share Plan.

11 Dividends

	2022 £m	2021 £m
Amounts paid in the year:		
Final dividend for the year ended 31st December 2021 of 97.5p (2020: 84.5p) per share	71.9	62.3
Interim dividend for the year ended 31st December 2022 of 42.5p (2021: 38.5p) per share	31.2	28.4
Total dividends paid	103.1	90.7
Amounts arising in respect of the year:		
Interim dividend for the year ended 31st December 2022 of 42.5p (2021: 38.5p) per share	31.2	28.4
Proposed final dividend for the year ended 31st December 2022 of 109.5p (2021: 97.5p) per share	80.8	71.8
Total dividends arising	112.0	100.2

The proposed dividend is subject to approval in 2023. It is therefore not included as a liability in these Financial Statements. No scrip alternative to the cash dividend is being offered in respect of the proposed final dividend for the year ended 31st December 2022.

Notes to the Consolidated Financial Statements continued

12 Investment in Associate

	Associate 2022 £m	Associate 2021 £m
Cost of investment	1.4	1.4
Share of equity	(1.4)	(1.4)
Total investment in Associate	–	–
Summarised financial information (100% of the results of the Associate):		
Revenue	1.8	0.6
Profit/(loss) for the period	0.1	(0.7)
Current assets	1.0	0.4
Non-current assets	0.3	0.4
Current and non-current liabilities	2.1	1.7

Details of the Group's Associate at 31st December 2022 and 31st December 2021 is as follows:

Name of Associate	Country of incorporation and operation	Proportion of ownership interest and voting power held	Principal activity
Econotherm (UK) Ltd	UK	14.7%	Manufacturing and selling

The Group's share of profit/(loss) of Associate is £nil profit (2021: £0.1m loss). The Group's share of profits in 2022 exceeded our total investment value by £nil. As a result, in line with IAS 28 paragraph 38, the Group did not recognise a profit in the Consolidated Income Statement. No further future profits/losses will be recognised in the Consolidated Income Statement going forward, and any share of profit will only be recognised once it has exceeded the cumulative unrecognised loss of £0.3m. The proportion of ownership reduced during 2022, from 16.1% to 14.7%.

13 Property, plant and equipment 2022

	Freehold land and buildings £m	Leasehold land and buildings £m	Plant and machinery £m	Fixtures, fittings, tools and equipment £m	Assets under construction £m	Total £m
Cost:						
At 1st January 2022	157.7	40.8	204.2	89.4	22.3	514.4
Exchange adjustments	6.1	1.7	9.0	3.1	1.8	21.7
	163.8	42.5	213.2	92.5	24.1	536.1
Acquisitions	7.3	9.4	11.2	2.1	0.7	30.7
Additions	2.8	1.4	23.1	17.1	59.9	104.3
Transfers	–	0.7	7.9	17.5	(26.4)	(0.3)
Disposal of subsidiaries	–	(0.3)	(0.6)	(0.3)	–	(1.2)
Disposals	(8.8)	(0.1)	(10.4)	(7.4)	(0.1)	(26.8)
At 31st December 2022	165.1	53.6	244.4	121.5	58.2	642.8
Depreciation:						
At 1st January 2022	36.9	10.9	127.4	61.8	–	237.0
Exchange adjustments	1.8	0.5	5.9	2.7	–	10.9
	38.7	11.4	133.3	64.5	–	247.9
Charged in year	6.4	1.8	15.5	9.5	–	33.2
Impairment	2.1	–	0.4	–	–	2.5
Transfers	–	–	–	–	–	–
Disposals of subsidiaries	–	(0.3)	(0.4)	(0.2)	–	(0.9)
Disposals	(8.7)	–	(9.6)	(6.1)	–	(24.4)
At 31st December 2022	38.5	12.9	139.2	67.7	–	258.3
Net book value:						
At 31st December 2022	126.6	40.7	105.2	53.8	58.2	384.5

All impaired assets have been impaired down to a recoverable amount of £nil. In 2022, the Group identified indicators of impairment as a result of the restructuring of the Chromalox manufacturing operations in Soissons (France). A total of £2.5m was recognised within items excluded from adjusted operating profit.

13 Property, plant and equipment continued

The total amount of transfers relates to property, plant and equipment transferred to other intangible assets (see Note 15).

2021

	Freehold land and buildings £m	Leasehold land and buildings £m	Plant and machinery £m	Fixtures, fittings, tools and equipment £m	Assets under construction £m	Total £m
Cost:						
At 1st January 2021	158.3	38.7	196.0	83.2	9.8	486.0
Exchange adjustments	(3.9)	0.7	(3.5)	(1.9)	—	(8.6)
	154.4	39.4	192.5	81.3	9.8	477.4
Additions	1.8	0.9	18.2	10.1	21.8	52.8
Transfers	2.1	0.6	2.9	0.1	(9.2)	(3.5)
Disposals	(0.6)	(0.1)	(9.4)	(2.1)	(0.1)	(12.3)
At 31st December 2021	157.7	40.8	204.2	89.4	22.3	514.4
Depreciation:						
At 1st January 2021	35.1	9.5	123.3	56.8	—	224.7
Exchange adjustments	(1.1)	0.1	(2.0)	(1.2)	—	(4.2)
	34.0	9.6	121.3	55.6	—	220.5
Charged in year	3.5	1.4	15.2	8.2	—	28.3
Transfers	(0.2)	—	(0.1)	(0.2)	—	(0.5)
Disposals	(0.4)	(0.1)	(9.0)	(1.8)	—	(11.3)
At 31st December 2021	36.9	10.9	127.4	61.8	—	237.0
Net book value:						
At 31st December 2021	120.8	29.9	76.8	27.6	22.3	277.4

14 Leases

Right-of-use assets 2022

	Leased land and buildings £m	Leased plant and machinery £m	Leased fixtures, fittings, tools and equipment £m	Total right-of- use assets £m
Cost:				
At 1st January 2022	73.9	17.2	2.4	93.5
Exchange adjustments	3.9	1.0	0.2	5.1
	77.8	18.2	2.6	98.6
Acquisitions	3.8	0.1	0.2	4.1
Additions	6.5	4.7	0.3	11.5
Disposals	(1.9)	(1.4)	—	(3.3)
At 31st December 2022	86.2	21.6	3.1	110.9
Depreciation:				
At 1st January 2022	19.0	9.8	1.8	30.6
Exchange adjustments	1.6	0.6	0.1	2.3
	20.6	10.4	1.9	32.9
Charged in the year	9.1	4.1	0.3	13.5
Disposals	(1.5)	(1.2)	—	(2.7)
At 31st December 2022	28.2	13.3	2.2	43.7
Net book value:				
At 31st December 2022	58.0	8.3	0.9	67.2

Notes to the Consolidated Financial Statements continued

14 Leases continued

The vast majority of the right-of-use asset value relates to leased property where the Group leases a number of office and warehouse sites in a number of geographical locations. The remaining leases are largely made up of leased motor vehicles, where the Group makes use of leasing cars for sales and service engineers at a number of operating company locations. The average lease term is 4.4 years (2021: 4.3 years).

2021

	Leased land and buildings £m	Leased plant and machinery £m	Leased fixtures, fittings, tools and equipment £m	Total right-of-use assets £m
Cost:				
At 1st January 2021	41.6	14.0	2.3	57.9
Exchange adjustments	(0.9)	(0.6)	(0.1)	(1.6)
	40.7	13.4	2.2	56.3
Additions	34.4	4.5	0.2	39.1
Disposals	(1.2)	(0.7)	–	(1.9)
At 31st December 2021	73.9	17.2	2.4	93.5
Depreciation:				
At 1st January 2021	13.3	7.0	1.3	21.6
Exchange adjustments	(0.2)	(0.4)	–	(0.6)
	13.1	6.6	1.3	21.0
Charged in the year	7.0	3.9	0.5	11.4
Disposals	(1.1)	(0.7)	–	(1.8)
At 31st December 2021	19.0	9.8	1.8	30.6
Net book value:				
At 31st December 2021	54.9	7.4	0.6	62.9

The maturity analysis of lease liabilities is presented in Note 28.

Amounts recognised in Consolidated Income Statement

	31st December 2022 £m	31st December 2021 £m
Depreciation expense on right-of-use assets	13.5	11.4
Interest expense on lease liabilities	1.5	1.1
Expense relating to short-term leases	1.9	2.0
Expense relating to leases of low value assets	0.4	0.4
Expense relating to variable lease payments not included in the measurement of the lease liability	0.2	0.2
Income from subleases right-of-use assets	(0.2)	(0.1)
Total impact on profit before tax	17.3	15.0

The total cash outflow for leases during 2022 was £16.9m (2021: £15.3m).

The following cash outflows (undiscounted) are those that the Group is potentially exposed to in future periods but are currently not reflected in the measurement of lease liabilities:

- £0.1m relating to variable lease payments not based on an index or rate (2021: £0.1m);
- £1.1m relating to optional extension periods that are not reasonably certain to be exercised as at 31st December 2022 (2021: £1.2m); and
- £28.1m relating to leases that the Group are committed, but have not commenced as at 31st December 2022 (2021: £37.7m).

15 Goodwill and other intangible assets

2022

	Acquired intangibles £m	Development costs £m	Computer software £m	Total other intangibles £m	Goodwill £m
Cost:					
At 1st January 2022	359.2	30.2	78.0	467.4	418.4
Exchange and other adjustments	28.8	0.3	1.7	30.8	33.1
	388.0	30.5	79.7	498.2	451.5
Acquisitions	244.6	0.1	0.4	245.1	259.3
Additions	–	4.3	8.9	13.2	–
Transfers from property, plant and equipment	–	–	0.3	0.3	–
Disposal of subsidiary	–	–	(0.3)	(0.3)	–
Disposals	–	–	(0.4)	(0.4)	–
At 31st December 2022	632.6	34.9	88.6	756.1	710.8
Amortisation:					
At 1st January 2022	142.4	19.5	49.8	211.7	7.2
Exchange adjustments	10.7	0.2	2.0	12.9	0.3
	153.1	19.7	51.8	224.6	7.5
Amortisation	23.7	2.3	5.8	31.8	–
Disposal of subsidiary	–	–	(0.3)	(0.3)	–
Disposals	–	–	(0.3)	(0.3)	–
At 31st December 2022	176.8	22.0	57.0	255.8	7.5
Net book value:					
At 31st December 2022	455.8	12.9	31.6	500.3	703.3

2021

	Acquired intangibles £m	Development costs £m	Computer software £m	Total other intangibles £m	Goodwill £m
Cost:					
At 1st January 2021	368.6	27.1	69.8	465.5	429.8
Exchange and other adjustments	(9.4)	(0.2)	(1.3)	(10.9)	(11.4)
	359.2	26.9	68.5	454.6	418.4
Additions	–	3.2	8.1	11.3	–
Transfers from property, plant and equipment	–	0.1	3.4	3.5	–
Disposals	–	–	(2.0)	(2.0)	–
At 31st December 2021	359.2	30.2	78.0	467.4	418.4
Amortisation:					
At 1st January 2021	125.4	17.6	45.9	188.9	7.4
Exchange adjustments	(4.4)	(0.1)	(0.9)	(5.4)	(0.2)
	121.0	17.5	45.0	183.5	7.2
Amortisation	21.4	2.0	5.9	29.3	–
Transfers from property, plant and equipment	–	–	0.5	0.5	–
Disposals	–	–	(1.6)	(1.6)	–
At 31st December 2021	142.4	19.5	49.8	211.7	7.2
Net book value:					
At 31st December 2021	216.8	10.7	28.2	255.7	411.2

Notes to the Consolidated Financial Statements continued

15 Goodwill and other intangible assets continued

Acquired intangibles

The disclosure by class of acquired intangible assets is shown in the tables below.

2022

	Customer relationships £m	Brand names and trademarks £m	Manufacturing designs and core technology £m	Non-compete undertakings and other £m	Total acquired intangibles £m
Cost:					
At 1st January 2022	87.1	190.2	60.2	21.7	359.2
Exchange and other adjustments	5.0	19.0	3.9	0.9	28.8
	92.1	209.2	64.1	22.6	388.0
Acquisitions	89.8	128.9	20.1	5.8	244.6
At 31st December 2022	181.9	338.1	84.2	28.4	632.6
Amortisation and impairment:					
At 1st January 2022	42.2	49.9	28.6	21.7	142.4
Exchange adjustments	2.9	5.0	1.8	1.0	10.7
	45.1	54.9	30.4	22.7	153.1
Amortisation and impairment	6.8	12.1	4.4	0.4	23.7
At 31st December 2022	51.9	67.0	34.8	23.1	176.8
Net book value:					
At 31st December 2022	130.0	271.1	49.4	5.3	455.8

Customer relationships are amortised over their useful economic lives in line with the accounting policies disclosed in Note 1. Within this balance the individually material balances relate to Durex Industries £83.3m (2021: £nil) and Thermocoax £26.9m (2021: £27.8m). The remaining amortisation periods are 14.9 years and 11.4 years respectively. Brand names and trademark assets are amortised over their useful economic lives in line with the accounting policies disclosed in Note 1. Within this balance individually material balances relate to Vulcanic £106.1m (2021: £nil), Durex Industries £21.2m (2021: £nil), Chromalox £103.5m (2021: £98.9m) and Gestra £22.4m (2021: £23.6m). The remaining amortisation periods are 19.8 years, 19.9 years, 14.5 years and 9.3 years respectively.

Manufacturing designs and core technology are amortised over their useful economic lives in line with the accounting policies disclosed in Note 1. There are no individually material items within this balance. Non-compete undertakings are amortised over their useful economic lives in line with the accounting policies disclosed in Note 1.

2021

	Customer relationships £m	Brand names and trademarks £m	Manufacturing designs and core technology £m	Non-compete undertakings and other £m	Total acquired intangibles £m
Cost:					
At 1st January 2021	91.4	192.3	61.8	23.1	368.6
Exchange and other adjustments	(4.3)	(2.1)	(1.6)	(1.4)	(9.4)
	87.1	190.2	60.2	21.7	359.2
Acquisitions	–	–	–	–	–
At 31st December 2021	87.1	190.2	60.2	21.7	359.2
Amortisation and impairment:					
At 1st January 2021	37.9	40.4	24.8	22.3	125.4
Exchange adjustments	(1.7)	(0.6)	(0.7)	(1.4)	(4.4)
	36.2	39.8	24.1	20.9	121.0
Amortisation and impairment	6.0	10.1	4.5	0.8	21.4
At 31st December 2021	42.2	49.9	28.6	21.7	142.4
Net book value:					
At 31st December 2021	44.9	140.3	31.6	–	216.8

Impairment

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.

15 Goodwill and other intangible assets continued

Goodwill impairment is considered based on groups of CGUs that represent the lowest level to which goodwill is monitored for internal management purposes, being each operating segment as disclosed in Note 3. The breakdown of the goodwill value at 31st December across these is shown below:

	2022 Goodwill £m	2021 Goodwill £m
Steam Specialties	127.4	110.6
Electric Thermal Solutions	514.9	241.0
Watson-Marlow	61.0	59.6
Total goodwill	703.3	411.2

The goodwill balance has been tested for annual impairment on the following basis:

The carrying values of goodwill have been assessed by reference to value in use. These have been estimated using cash flows based on forecast information for the next financial year which have been approved by the Board and then extended up to a further seven years based on the most recent forecasts prepared by management. Cash flow forecasts extend beyond five years only for Electric Thermal Solutions, incorporating further medium-term revenue growth expected during that period which is consistent with (i) the acquisition plan that indicated a period of greater than five years would be required before a newly acquired segment reaches long-term expected performance and (ii) the extension of forecasts to 2030 aligns with anticipated growth from industrial decarbonisation driven by net zero commitments made by customers. The Group has a strong track record of consistent organic growth over many years and this, coupled with the global decarbonisation targets to which our products support, provides a reliable basis for forecasts longer than five years. The forecast period beyond five years, however, is not a key judgement that would impact the outcome of the impairment tests performed on the Electric Thermal Solutions group of CGUs. The forecast period will be reduced by one year over each of the next three years, such that a five year forecast period will be used from 2025 onwards.

The key assumptions on which the impairment tests are based are the discount rates and forecast cash flows which are driven by growth rates and EBIT margins.

- pre-tax discount rates are based on estimations of the assumptions that market participants operating in similar sectors to the Group would make, using the Group's economic profile as a starting point and adjusting appropriately; taking into account the size of the business along with specific geographical and industry risk factors. Discount rates are not adjusted for estimated impacts of inflation, which is consistent with the calculation of the future operating cash flows to which they are applied;
- short to medium-term growth rates based on external market growth rates (where available) and historical experience within each group of CGUs. The short to medium-term is defined as not more than eight years;
- long-term growth rates are set using the weighted average GDP growth rates (IMF and Oxford Economics) of the group of CGUs end markets; and
- EBIT margins are based on historical performance and expected improvements in operational efficiency and leverage from completed projects.

The principal value in use assumptions were as follows:

Operating segment	2022 Discount rate	2022 Short to medium-term growth rate	2022 Long-term growth rate	Period of annual cashflow forecast (years)	2021 Discount rate	2021 Short to medium-term growth rate	2021 Long-term growth rate	Period of annual cashflow forecast (years)
Steam Specialties	14.1%	5.5% – 10.5%	3.1%	5	10.7%	5.7–7.9%	2.5%	5
Electric Thermal Solutions	11.3%	5.9% – 10.1%	2.4%	8	9.8%	3.5–14.9%	1.7%	9
Watson-Marlow	12.0%	(1.0)% – 12.4%	2.7%	5	10.2%	4.9–18.2%	2.0%	5

The results of the Group's impairment tests are dependent upon estimates, particularly in relation to the key assumptions described above. Sensitivity analysis to potential changes in the key assumptions has been undertaken based on the following reasonably possible change sensitivities in isolation:

- a 100 bps increase in the discount rate applied to each group of CGUs;
- a range of 0 bps – 220 bps reduction in the short to medium-term growth rates and a 50 bps reduction in long-term growth rates used in the cash flow projections;
- a range of 10 – 170 bps reduction in the EBIT margin used in the cash flow projections; and
- a 100 bps increase in the discount rates and a 50 bps reduction in long-term growth rates, combined with a range of 0 – 220 bps reduction in the short to medium-term growth rates and a range of 10 – 170 bps reduction in forecast EBIT margins specifically in relation to the Electric Thermal Solutions group of CGU's used in the cash flow projections.

For each group of CGUs, the Directors do not consider that there are any reasonably possible change sensitivities for the business that could arise in the next 12 months that would result in an impairment charge being recognised.

Notes to the Consolidated Financial Statements continued

16 Deferred tax assets and liabilities

Recognised deferred tax assets and liabilities

Deferred tax assets and liabilities are attributable to the following:

	2022 Assets £m	2021 Assets £m	2022 Liabilities £m	2021 Liabilities £m	2022 Net £m	2021 Net £m
Accelerated capital allowances	0.6	0.5	(23.4)	(12.8)	(22.8)	(12.3)
Provisions	12.0	8.3	(0.2)	(0.2)	11.8	8.1
Losses	16.2	5.6	–	–	16.2	5.6
Inventory	8.2	6.6	(0.9)	(1.6)	7.3	5.0
Pensions	18.6	15.8	(5.4)	(3.8)	13.2	12.0
Acquired intangibles	–	–	(91.0)	(55.0)	(91.0)	(55.0)
Other temporary differences	13.4	9.3	(7.2)	(8.4)	6.2	0.9
Tax assets/(liabilities)	69.0	46.1	(128.1)	(81.8)	(59.1)	(35.7)

Movement in deferred tax during the year 2022

	1st January 2022 £m	Recognised in income £m	Recognised in OCI £m	Recognised in equity £m	Acquisitions £m	31st December 2022 £m
Accelerated capital allowances	(12.3)	(9.9)	–	(0.4)	(0.2)	(22.8)
Provisions	8.1	3.4	(0.4)	0.5	0.2	11.8
Losses	5.6	9.5	–	0.1	1.0	16.2
Inventory	5.0	2.3	–	–	–	7.3
Pensions	12.0	(1.5)	1.7	0.7	0.3	13.2
Acquired intangibles	(55.0)	4.1	(2.3)	(5.6)	(32.2)	(91.0)
Other temporary differences	0.9	2.7	2.8	(0.4)	0.2	6.2
Group total	(35.7)	10.6	1.8	(5.1)	(30.7)	(59.1)

Movement in deferred tax during the year 2021

	1st January 2021 £m	Recognised in income £m	Recognised in OCI £m	Recognised in equity £m	31st December 2021 £m
Accelerated capital allowances	(8.8)	(3.7)	–	0.2	(12.3)
Provisions	8.8	(0.4)	0.1	(0.4)	8.1
Losses	3.9	1.9	–	(0.2)	5.6
Inventory	4.3	0.7	0.1	(0.1)	5.0
Pensions	22.7	(1.4)	(9.5)	0.2	12.0
Acquired intangibles	(61.1)	4.9	–	1.2	(55.0)
Other temporary differences	1.7	(2.1)	1.3	–	0.9
Group total	(28.5)	(0.1)	(8.0)	0.9	(35.7)

At the Balance Sheet date, the Group has deductible temporary differences, unused tax losses and unused tax creditors of £30.0m (2021: £14.4m) available for offset against future profits. A deferred tax asset has been recognised in respect of £16.2m (2021: £5.6m). No deferred tax asset has been recognised in respect of the remaining £13.8m (2021: £8.8m) as it is not considered probable that there will be future taxable profits available against which the relevant deduction can be offset. The losses may be carried forward indefinitely. A deferred tax credit of £1.7m (2021: £9.5m charge) recognised in the Consolidated Statement of Comprehensive Income (page 185) associated with the measurement of defined benefit obligations comprises £1.8m relating to remeasurement loss (2021: £8.9m relating to remeasurement gains) offset by £0.1m relating to exchange movement gains (2021: £0.6m loss).

17 Inventories

	2022 £m	2021 £m
Raw materials, consumables and components	136.1	81.6
Work in progress	39.5	26.7
Finished goods and goods for resale	114.4	93.0
Total inventories	290.0	201.3

The write-down of inventories recognised as an expense during the year was £9.0m (2021: £2.0m). This comprises a cost of £10.5m (2021: £3.4m) to write-down inventory to net realisable value reduced by £1.5m (2021: £1.4m) for reversal of previous write-down reassessed as a result of customer demand. A total of £2.1m was recognised within items excluded from adjusted operating profit.

The value of inventories expected to be recovered after more than 12 months is £12.6m (2021: £13.1m).

There is no material difference between the Statement of Financial Position value of inventories and their replacement cost. None of the inventory has been pledged as security.

18 Other current assets

	2022 £m	2021 £m
Other receivables	42.4	22.6
Contract assets	11.7	3.2
Prepayments	25.5	18.9
Total other current assets	79.6	44.7

Contract assets relate to revenue recognised that has not yet been invoiced to the customer.

Other receivables comprise various assets across the Group including sales tax receivables and other non trade balances.

19 Trade and other payables

	2022 £m	2021 £m
Trade payables	89.9	67.8
Contract liabilities	20.6	17.1
Social security	9.4	7.3
Other payables	49.9	39.1
Accruals	113.2	85.7
Total trade and other payables	283.0	217.0

Contract liabilities relate to advance payments received from customers that have not yet been recognised as revenue.

£15.7m of the contract liabilities at 31st December 2021 was recognised as revenue during 2022 (2021: £11.2m).

Other payables comprise various balances across the Group including sales tax payable.

Notes to the Consolidated Financial Statements continued

20 Provisions

	Product warranty £m	Legal, contractual and other £m	Total £m
2022			
At 1st January 2022	2.1	4.6	6.7
Additional provision in the year	0.6	7.9	8.5
Utilised or released during the year	(0.9)	(2.5)	(3.4)
Acquisition of subsidiary	0.8	5.2	6.0
Exchange adjustments	0.1	0.3	0.4
At 31st December 2022	2.7	15.5	18.2
	Product warranty £m	Legal, contractual and other £m	Total £m
2021			
At 1st January 2021	2.0	6.1	8.1
Additional provision in the year	0.7	3.1	3.8
Utilised or released during the year	(0.6)	(4.3)	(4.9)
Exchange adjustments	–	(0.3)	(0.3)
At 31st December 2021	2.1	4.6	6.7
		2022 £m	2021 £m
Current provisions		12.0	5.2
Non-current provisions		6.2	1.5
Total provisions		18.2	6.7

Product warranty

Product warranty provisions reflect commitments made to customers on the sale of goods in the ordinary course of business. These are expected to be incurred in the next three years.

Legal, contractual and other

Legal, contractual and other provisions mainly comprise amounts provided against open legal and contractual disputes arising from trade and employment. These costs are based on past experience of similar items and other known factors and represent management's best estimate of the likely outcome. The Group has taken action to enforce its rights and protect its intellectual property rights around the world.

Reflecting the inherent uncertainty within many legal proceedings, the timing and amount of the outflows could differ significantly from the amount provided. Management does not expect that the outcome of such proceedings, either individually or in aggregate, will have a material adverse effect on the Group's financial condition or results of operations. Of the total legal, contractual and other provisions at 31st December 2022 £9.8m (2021: £3.5m) has been included within current and £5.7m (2021: £1.1m) within non-current provisions.

21 Called-up share capital and reserves

	2022 £m	2021 £m
Ordinary shares of 26 12/13p (2021: 26 12/13p) each:		
Authorised 111,428,571 (2021: 111,428,571)	30.0	30.0
Allotted, called up and fully paid 73,776,048 (2021: 73,776,048)	19.8	19.8

28,262 (2021: 33,856) shares with a nominal value of £7,609 (2021: £9,155) were issued in connection with the Group's Employee Share Ownership Plan with external consideration of £1.8m (2021: £1.5m) received by the Group. In 2022, all shares were provided to employees through the Employee Benefit Trust and not through the issue of share capital.

At 31st December 2022, 179,632 shares were held in an Employee Benefit Trust and available for use in connection with the Group's Employee Share Schemes. 108 senior employees of the Group have been granted options on Ordinary shares under the Performance Share Plan (details in Note 23).

Translation reserve in the Consolidated Statement of Changes in Equity on pages 186 to 187 is made up as follows:

	1st January 2022 £m	Change in year £m	31st December 2022 £m
Net investment hedge reserve	12.7	(15.4)	(2.7)
Translation reserve	(53.2)	73.4	20.2
Total translation reserve	(40.5)	58.0	17.5

	1st January 2021 £m	Change in year £m	31st December 2021 £m
Net investment hedge reserve	(6.1)	18.8	12.7
Translation reserve	(27.6)	(25.6)	(53.2)
Total translation reserve	(33.7)	(6.8)	(40.5)

Net investment hedge reserve

The reserve records the cumulative gain or loss on hedging instruments designated in net investment hedges. Together with the translation reserve, these are the foreign currency translation reserves of the Group.

Other reserves in the Consolidated Statement of Changes in Equity on pages 186 to 187 are made up as follows:

	1st January 2022 £m	Change in year £m	31st December 2022 £m
Cash flow hedges reserve	(0.2)	(3.5)	(3.7)
Capital redemption reserve	1.8	–	1.8
Employee Benefit Trust reserve	(19.3)	(2.2)	(21.5)
Total other reserves	(17.7)	(5.7)	(23.4)

	1st January 2021 £m	Change in year £m	31st December 2021 £m
Cash flow hedges reserve	2.6	(2.8)	(0.2)
Capital redemption reserve	1.8	–	1.8
Employee Benefit Trust reserve	(6.8)	(12.5)	(19.3)
Total other reserves	(2.4)	(15.3)	(17.7)

Cash flow hedges reserve

The reserve records the cumulative net change in the fair value of forward exchange contracts where they are designated as effective cash flow hedge relationships.

Capital redemption reserve

This reserve records the historical repurchase of the Group's own shares.

Employee Benefit Trust reserve

The Group has an Employee Benefit Trust which is used to purchase, hold and issue shares in connection with the Group's employee share schemes. The shares held in Trust are recorded in this separate reserve.

Notes to the Consolidated Financial Statements continued

22 Capital commitments and contingent liabilities

	2022 £m	2021 £m
Capital expenditure contracted for but not provided	67.0	40.5

All capital commitments are related to property, plant and equipment and computer software. The Group has no material contingent liabilities at 31st December 2022 (no material contingent liabilities existed at 31st December 2021), but does have a non-material contingent liability in relation to tax estimated at approximately £3.8m (2021: £3.8m). See Note 9 for further details.

23 Employee benefits

Retirement benefit obligations

The Group operates a wide range of retirement benefit arrangements, which are established in accordance with local conditions and practices within the countries concerned. These include funded defined contribution and funded and unfunded defined benefit schemes.

Defined contribution arrangements

The majority of the retirement benefit arrangements operated by the Group are of a defined contribution structure, where the employer contribution and resulting Income Statement charge is fixed at a set level or is a set percentage of employees' pay. Contributions made to defined contribution schemes and charged to the Income Statement totalled £27.0m (2021: £16.5m). In Germany, following the closure of the defined benefit schemes to new entrants in 2021, the main scheme for new employees is a defined contribution scheme.

Defined benefit arrangements

The Group operates several funded defined benefit retirement schemes where the benefits are based on employees' length of service. Whilst the Group's primary schemes are in the UK, it also operates other material benefit schemes in the USA as well as less material schemes elsewhere. In funded arrangements, the assets of defined benefit schemes are held in separate trustee-administered funds or similar structures in the countries concerned.

UK defined benefit arrangements

The defined benefit schemes in the UK account for 47% (2021: 22%) of the Group's net liability for defined retirement benefit schemes. Spirax-Sarco operates three UK schemes: the Spirax-Sarco Employees Pension Fund, the Spirax-Sarco Executives' Retirement Benefits Scheme and the Watson-Marlow Pension Fund. These are all final salary pension schemes and are closed to new members. There is a mix of different inflation-dependent pension increases (in payment and deferment) which vary from member to member according to their membership history and which scheme they are a member of.

All three schemes have been set up under UK law and are governed by a Trustee committee, which is responsible for the scheme's investments, administration and management. A funding valuation is carried out for the Trustees of each scheme every three years by an independent firm of actuaries. Depending on the outcome of that valuation a schedule of future contributions is negotiated with Spirax-Sarco. Further information on the contribution commitments is shown in the Financial Review on pages 38 to 45.

US defined benefit schemes

The Group operates a pension scheme in the USA, which is closed to new entrants and frozen to future accrual. The pension scheme defines the pension in terms of the highest average pensionable pay for any five consecutive years prior to retirement. No pension increases (in payment and deferment) are offered by this scheme. It also operates a post-retirement medical plan in the USA, which is unfunded, as is typical for these plans.

Germany defined benefit scheme

The Group operates an unfunded pension scheme in Germany which was closed to future accrual with effect from 1st January 2021 with active members becoming deferred at this date. This curtailment was recognised as a past service credit of £2.0m in the 2021 Consolidated Income Statement.

23 Employee benefits continued

Principal Risks

The pension schemes create a number of risk exposures. Annual increases in benefits are, to a varying extent from scheme to scheme, dependent on inflation so the main uncertainties affecting the level of benefits payable are future inflation levels and the actual longevity of the membership. Benefits payable will also be influenced by a range of other factors including member decisions on matters such as when to retire and the possibility to draw benefits in different forms. A key risk is that additional contributions are required if the investment returns fall short of those anticipated when setting the contributions to the pension schemes. All pension schemes are regulated by the relevant jurisdictions. These include extensive legislation and regulatory mechanisms that are subject to change and may impact on the Group's pension schemes. The IAS 19 liability measurement known as Defined Benefit Obligation (DBO) and the Service Cost are sensitive to the actuarial assumptions made on a range of demographic and financial matters that are used to project the expected benefit payments, the most important of these assumptions being the future inflation levels and the assumptions made about life expectation. The DBO and Service Cost are also very sensitive to the IAS 19 discount rate, which determines the discounted value of the projected benefit payments. The discount rate depends on market yields on high-quality corporate bonds. Investment strategies are set with funding rather than IAS 19 considerations in mind and do not seek to provide a specific hedge against the IAS 19 measurement of DBO. As a result the difference between the market value of the assets and the IAS 19 DBO may be volatile. Further information on the investment strategy for the UK schemes can be found in the Financial Review on pages 38 to 45.

Sensitivity analysis to changes in discount rate and inflation are included on page 220.

The financial assumptions used at 31st December were:

	Assumptions weighted by value of liabilities % per annum			
	UK pensions		Overseas pensions and medical	
	2022 %	2021 %	2022 %	2021 %
Rate of increase in salaries	n/a	n/a	2.9	3.1
Rate of increase in pensions	2.9	3.2	2.6	1.8
Rate of price inflation	3.2	3.3	2.4	2.0
Discount rate	4.7	1.8	4.7	2.5
Medical trend rate	n/a	n/a	7.5	7.5

The UK pensions are closed to future accrual therefore the rate of increase in salaries is not applicable.

The weighted average duration of the defined benefit obligation at 31st December 2022 was approximately 15 years (2021:19 years) for the Spirax-Sarco Employees Pension Fund, 10 years (2021:12 years) for the Spirax-Sarco Executives' Retirement Benefits Scheme and 16 years (2021:19 years) for the Watson-Marlow Pension Fund.

The mortality assumptions for the material defined benefit schemes at 31st December 2022 and 31st December 2021 were:

Spirax-Sarco Employees Pension Fund	At 31st December 2022: 100% of SAPS 3, with CMI 2021 projections with a long-term 1.25% pa and an initial addition parameter of 0.25% and w2020 parameter of 10%. At 31st December 2021: 100% of SAPS 3, with CMI 2020 projections with a long-term 1.25% pa and an initial addition parameter of 0.25% and w2020 parameter of 10%.
Spirax-Sarco Executives' Retirement Benefits Scheme	At 31st December 2022: 84/87% (male/female) of SAPS S3 light normal, CMI 2021 projections with a long-term trend 1.25% and an initial addition parameter of 0.25% and w2020 parameter of 10%. At 31st December 2021: 84/87% (male/female) of SAPS S3 light normal, CMI 2020 projections with a long-term trend 1.25% and an initial addition parameter of 0.25% and w2020 parameter of 10%.
Watson-Marlow Pension Fund	At 31st December 2022: 102% of SAPS S3, CMI 2021 projections with a long-term trend of 1.25% pa and an initial addition parameter of 0.25% and w2020 parameter of 10%. At 31st December 2021: 102% of SAPS S2, CMI 2020 projections with a long-term trend of 1.25% pa and an initial addition parameter of 0.25% and w2020 parameter of 10%.
US Pension Scheme	At 31st December 2022: SOA Pri-2012 Amount-Weighted Blue Collar mortality tables with Mortality Improvement Scale MP2021. At 31st December 2021: SOA Pri-2012 Amount-Weighted Blue Collar mortality tables with Mortality Improvement Scale MP2021.

By way of example the mortality tables indicate the following life expectancy across the UK schemes:

Current age	2022 Life expectancy at 65		2021 Life expectancy at 65	
	Male	Female	Male	Female
65	22.1	24.6	22.1	24.3
50	23.0	25.6	23.0	25.5

The assumptions used by the actuary are the best estimates chosen from a range of possible actuarial assumptions which, due to the timescale covered, may not necessarily be borne out in practice.

Notes to the Consolidated Financial Statements continued

23 Employee benefits continued

The amounts recognised in the Consolidated Statement of Financial Position are determined as follows:

	UK pensions		Overseas pensions and medical		Total	
	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m
Fair value of schemes' assets	284.6	497.5	57.0	63.2	341.6	560.7
Present value of funded schemes' liabilities	(309.2)	(507.5)	(65.5)	(76.1)	(374.7)	(583.6)
Deficit in the funded schemes	(24.6)	(10.0)	(8.5)	(12.9)	(33.1)	(22.9)
Present value of unfunded schemes' liabilities	–	–	(19.0)	(21.8)	(19.0)	(21.8)
Retirement benefit liability recognised in the Consolidated Statement of Financial Position	(24.6)	(10.0)	(27.5)	(34.7)	(52.1)	(44.7)
Related deferred tax asset	6.2	2.5	7.0	9.5	13.2	12.0
Net pension liability	(18.4)	(7.5)	(20.5)	(25.2)	(38.9)	(32.7)

Fair value of scheme assets

	UK pensions		Overseas pensions and medical		Total	
	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m
Quoted equities	46.9	28.9	30.1	36.0	77.0	64.9
Quoted bonds	132.5	14.9	13.1	17.7	145.6	32.6
Other	54.4	6.8	7.4	2.7	61.8	9.5
Total with quoted market price	233.8	50.6	50.6	56.4	284.4	107.0
Cash and cash equivalents	45.9	28.3	0.6	0.8	46.5	29.1
Unquoted equities	2.8	109.5	–	–	2.8	109.5
Unquoted bonds	–	273.0	–	–	–	273.0
Real estate	0.3	36.1	–	–	0.3	36.1
Other	1.8	–	5.8	6.0	7.6	6.0
Total other securities	50.8	446.9	6.4	6.8	57.2	453.7
Total market value in aggregate	284.6	497.5	57.0	63.2	341.6	560.7

The actual return on plan assets was a decrease of £211.6m (2021: an increase of £43.2m).

The UK pensions assets include investments in Liability Driven Investment (LDI) funds. LDI funds allow the schemes to hedge a larger proportion of the underlying interest rate exposure that exists within the schemes liabilities. As a result of the structure of LDI funds the schemes may be required to provide additional cash collateral to the LDI funds in order to maintain the current level of hedging should market interest rates increase materially. The LDI funds of £83.4m are included within the quoted bonds in the table above.

The movements in the defined benefit obligation recognised in the Consolidated Statement of Financial Position during the year were:

	UK pensions		Overseas pensions and medical		Total	
	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m
Defined benefit obligation at beginning of year	(507.5)	(522.8)	(97.9)	(107.5)	(605.4)	(630.3)
Acquisitions	–	–	(1.5)	–	(1.5)	–
Current service cost	–	–	(0.7)	(0.1)	(0.7)	(0.1)
Past service credit – Curtailments	–	–	–	2.0	–	2.0
Interest cost	(9.1)	(6.7)	(2.5)	(2.1)	(11.6)	(8.8)
Administration costs	–	–	(0.7)	(0.6)	(0.7)	(0.6)
Remeasurement gain	207.0	8.7	23.0	4.9	230.0	13.6
Actual benefit payments	15.9	16.5	5.3	4.7	21.2	21.2
Experience (loss)/gain	(15.5)	(3.2)	(0.5)	0.3	(16.0)	(2.9)
Currency (loss)/gain	–	–	(9.0)	0.5	(9.0)	0.5
Defined benefit obligation at end of year	(309.2)	(507.5)	(84.5)	(97.9)	(393.7)	(605.4)

23 Employee benefits continued

The movements in the fair value of plan assets during the year were:

	UK pensions		Overseas pensions and medical		Total	
	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m
Value of assets at beginning of year	497.5	474.7	63.2	57.0	560.7	531.7
Acquisitions	–	–	0.4	–	0.4	–
Expected return on assets	9.0	6.1	1.8	1.4	10.8	7.5
Remeasurement gain	(210.9)	28.6	(11.5)	7.1	(222.4)	35.7
Contributions paid by employer	5.4	5.3	1.8	1.7	7.2	7.0
Contributions paid by members	–	–	–	–	–	–
Actual benefit payments	(15.9)	(16.5)	(5.3)	(4.7)	(21.2)	(21.2)
Administration costs	(0.5)	(0.7)	–	–	(0.5)	(0.7)
Currency gain	–	–	6.6	0.7	6.6	0.7
Value of assets at end of year	284.6	497.5	57.0	63.2	341.6	560.7

The estimated employer contributions to be made in 2023 are £6.3m.

The history of experience adjustments is as follows:

	2022 £m	2021 £m	2020 £m	2019 £m	2018 £m
Defined benefit obligation at end of year	(393.7)	(605.4)	(630.3)	(559.1)	(526.1)
Fair value of schemes' assets	341.6	560.7	531.7	487.8	441.0
Retirement benefit liability recognised in the Statement of Financial Position	(52.1)	(44.7)	(98.6)	(71.3)	(85.1)
Experience adjustment on schemes' liabilities	(16.0)	(2.9)	11.4	–	(0.6)
As a percentage of schemes' liabilities	4.1%	0.5%	1.8%	0.0%	0.1%
Experience adjustment on schemes' assets	(222.4)	35.7	46.5	49.0	(27.3)
As a percentage of schemes' assets	65.1%	6.4%	8.7%	10.0%	6.2%

The expense recognised in the Group Income Statement was as follows:

	UK pensions		Overseas pensions and medical		Total	
	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m
Current service cost	–	–	(0.7)	(0.1)	(0.7)	(0.1)
Administration costs	(0.5)	(0.7)	(0.7)	(0.6)	(1.2)	(1.3)
Past service credit – Curtailment	–	–	–	2.0	–	2.0
Net interest on schemes' liabilities	–	(0.6)	(0.8)	(0.7)	(0.8)	(1.3)
Total expense recognised in Income Statement	(0.5)	(1.3)	(2.2)	0.6	(2.7)	(0.7)

The expense is recognised in the following line items in the Consolidated Income Statement:

	2022 £m	2021 £m
Operating costs	(1.9)	(1.4)
Adjustments – closure of defined benefit schemes	–	2.0
Net financing expense	(0.8)	(1.3)
Total expense recognised in Income Statement	(2.7)	(0.7)

Notes to the Consolidated Financial Statements continued

23 Employee benefits continued

The gain or loss recognised in the Statement of Comprehensive Income (OCI) was as follows:

	UK pensions		Overseas pensions and medical		Total	
	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m
Remeasurement effects recognised in OCI:						
Due to experience on DBO	(15.5)	(3.2)	(0.5)	0.3	(16.0)	(2.9)
Due to demographic assumption changes in DBO	4.3	(1.4)	–	(0.2)	4.3	(1.6)
Due to financial assumption changes in DBO	202.8	10.1	23.0	5.0	225.8	15.1
Return on assets	(210.9)	28.6	(11.5)	7.1	(222.4)	35.7
Total remeasurement (loss)/gain recognised in OCI	(19.3)	34.1	11.0	12.2	(8.3)	46.3
Deferred tax on remeasurement (loss)/gain and change in rate recognised in OCI	4.8	(5.9)	(3.0)	(3.0)	1.8	(8.9)
Cumulative loss recognised in OCI at beginning of year	(39.6)	(67.8)	(21.1)	(30.3)	(60.7)	(98.1)
Cumulative loss recognised in OCI at end of year	(54.1)	(39.6)	(13.1)	(21.1)	(67.2)	(60.7)

Sensitivity analysis

The effect on the defined benefit obligation at 31st December 2022 of an increase or decrease in key assumptions is as follows:

	UK pensions £m	Overseas pensions and medical £m	Total £m
(Decrease)/increase in pension deficit:			
Discount rate assumption being 1.0% higher	(39.7)	(8.5)	(48.2)
Discount rate assumption being 1.0% lower	46.2	10.1	56.3
Inflation assumption being 1.0% higher	29.3	1.5	30.8
Inflation assumption being 1.0% lower	(26.9)	(1.3)	(28.2)
Mortality assumption life expectancy at age 65 being one year higher	10.0	2.3	12.3

The above sensitivities reflect reasonable possible changes in the assumptions therefore have been selected on this basis.

The average age of active participants in the UK schemes at 31st December 2022 was 53 years (2021: 53 years) and in the overseas schemes 47 years (2021: 47 years).

Cash payments to the pension scheme greater or less than the expense to operating profit

	2022 £m	2021 £m
Defined benefit arrangements	(1.9)	0.6
Defined contribution arrangements	(27.0)	(16.5)
Total expense recognised in operating costs	(28.9)	(15.9)
Defined benefit arrangements	7.2	7.0
Defined contribution arrangements	27.0	16.5
Total contributions paid by employer	34.2	23.5
Cash payments to the pension scheme greater than the expense to operating profit	5.3	7.6

Share-based payments

Disclosures of the share-based payments offered to employees are set out below. More detail on each scheme is given in the Annual Report on Remuneration 2022 on pages 143 to 168. The charge to the Income Statement in respect of share-based payments is made up as follows:

	2022 £m	2021 £m
Performance Share Plan	7.3	7.9
Employee Share Ownership Plan	1.6	1.3
Total expense recognised in Income Statement	8.9	9.2

23 Employee benefits continued

Performance Share Plan

Awards under the Performance Share Plan are made to Executive Directors and other senior managers and take the form of contingent rights to acquire shares, subject to the satisfaction of a performance target. To the extent that they vest, awards may be satisfied in cash, in shares or an option over shares. For the 2022 grant onwards, the performance criteria is split into three separate parts.

30% of the award is based on a TSR measure where the performance target is based on the Company's total shareholder return (TSR) relative to the TSR of other companies included in the FTSE 350 Industrial Goods and Services Supersector over a three-year performance period where awards will vest on a sliding scale. All shares within an award will vest if the Company's TSR is at or above the upper quartile. 18% will vest if the TSR is at the median and the number of shares that will vest will be calculated pro-rata on a straight-line basis between 18% and 100% if the Company's TSR falls between the median and the upper quartile. No shares will vest if the Company's TSR is below the median.

The second part, amounting to 50% of the award, is subject to achievement of a target based on aggregate EPS over a three-year performance period. 18% will vest if the compound growth in EPS is equal to the growth in global industrial production (IP) plus 2% as published by CHR Economics, and 100% will vest if the compound growth in EPS is equal to or exceeds the growth in global IP plus 8% (changing to IP plus 7% from the 2023 grant onwards), there is pro-rata vesting for actual growth between these rates.

The final 20% of the award compares greenhouse gas intensity emission in the base year of the three-year performance period to the final year. Performance will be measured relative to £m of sales at base year prices to ensure that efficiency savings are not distorted by inflation. 18% will vest if there is 24% reduction in GHG intensity emission, and 100% will vest if there is a reduction in GHG intensity emission equal to or exceeds 31%, there is pro-rata vesting for actual reduction between these rates.

Shares awarded under the Performance Share Plan have been valued using the Monte Carlo simulation valuation methodology. The relevant disclosures in respect of the Performance Share Plan grants are set out below.

	2018 Grant	2019 Grant	2020 Grant	2021 Grant	2022 Grant
Grant date	4th April	15th May	12th March	5th May	14th March
Mid-market share price at grant date	5,560.0p	8,161.0p	7,775.0p	11,770.0p	11,910.0p
Number of employees	134	133	104	106	108
Shares under scheme	145,041	112,159	140,934	89,806	92,951
Vesting period	3 years	3 years	3 years	3 years	3 years
Probability of vesting	73.5%	74.1%	74.3%	73.9%	76.1%
Fair value	4,084.4p	6,048.9p	5,779.2p	8,698.0p	9,057.6p

Employee Share Ownership Plan

UK employees are eligible to participate in the Employee Share Ownership Plan (ESOP). The aim of the ESOP is to encourage increased shareholding in the Company by all UK employees and so there are no performance conditions. Employees are invited to join the ESOP when an offer is made each year. Individuals save for 12 months during the accumulation period and subscribe for shares at the lower of the price at the beginning and the end of the accumulation period under HMRC rules. The Company provides a matching share for each share purchased by the individual.

Shares issued under the ESOP have been measured using the Present Economic Value (PEV) valuation methodology. The relevant disclosures in respect of the Employee Share Ownership Plans are set out below.

	2018 Grant	2019 Grant	2020 Grant	2021 Grant	2022 Grant
Grant date	1st October	1st October	1st October	1st October	1st October
Exercise price	7,240.0p	7,835.0p	11,102.0p	15,043.3p	10,348.3p
Number of employees	1,294	1,318	1,373	1,400	1,671
Shares under scheme	16,687	16,820	12,480	9,429	16,832
Vesting period	3 years	3 years	3 years	3 years	3 years
Expected volatility	19%	21%	25%	26.5%	28.7%
Risk-free interest rate	0.8%	0.5%	0.1%	0.2%	4.0%
Expected dividend yield	2.0%	1.8%	1.5%	1.0%	1.0%
Fair value	7,623.7p	8,305.1p	11,956.9p	16,382.2p	11,579.7p

The accumulation period for the 2022 ESOP ends in September 2023, therefore some figures are projections.

Notes to the Consolidated Financial Statements continued

24 Analysis of changes in net debt, including changes in liabilities arising from financing activities

2022

	At 1st January 2022 £m	Cash flow £m	Acquired debt* £m	Disposal of subsidiaries £m	Exchange movement £m	At 31st December 2022 £m
Current portion of long-term borrowings	(59.6)					(202.9)
Non-current portion of long-term borrowings	(289.9)					(731.3)
Total borrowings	(349.5)					(934.2)
Comprising:						
Borrowings	(349.5)	(497.7)	(67.0)	–	(20.0)	(934.2)
Changes in liabilities arising from financing	(349.5)	(497.7)	(67.0)	–	(20.0)	(934.2)
Cash at bank	274.6	46.3	–	(2.8)	10.8	328.9
Bank overdrafts	(55.6)	(26.7)	–	–	(2.8)	(85.1)
Net cash and cash equivalents	219.0	19.6	–	(2.8)	8.0	243.8
Net debt	(130.5)	(478.1)	(67.0)	(2.8)	(12.0)	(690.4)
Lease liabilities	(60.1)	12.9	(15.2)	–	(2.8)	(65.2)
Net debt including lease liabilities	(190.6)	(465.2)	(82.2)	(2.8)	(14.8)	(755.6)

*Debt acquired includes both debt acquired due to acquisition, and debt recognised on the balance sheet due to entry into new leases.

The net cashflow from borrowings of £497.7m consists of £1,008.8m of new borrowings and £511.1m of repaid borrowings.

New borrowings include acquisition-related short-term bank facilities of €265.0m (£232.8m) and US\$185.0m (£153.5m), a US\$150.0m (£124.4m) term loan, revolving credit facility drawdowns of £35.0m and €90.0m (£76.8m) and new private placement debt of €265.0m (£234.6m) and \$185.0m (£149.8m) that was issued to repay of the acquisition related short-term bank facilities.

Repaid borrowings include €70.0m (£59.7m) of term loan that matured during the year, €265.0m (£234.6m) and US\$185.0 (£149.8m) of acquisition related short-term bank facilities, €76.3m (£67.0m) of acquired debt that was repaid on completion of the Vulcanic acquisition.

At 31st December 2022, total lease liabilities consist of £14.1m (2021: £11.2m) short-term and £51.1m (2021: £48.9m) long-term.

See Note 28 for further information on net debt and lease liabilities.

2021

	At 1st January 2021 £m	Cash flow £m	Acquired debt* £m	Disposal of subsidiaries £m	Exchange movement £m	At 31st December 2021 £m
Current portion of long-term borrowings	(0.6)					(59.6)
Non-current portion of long-term borrowings	(452.2)					(289.9)
Total borrowings	(452.8)					(349.5)
Comprising:						
Borrowings	(452.8)	77.5	–	–	25.8	(349.5)
Changes in liabilities arising from financing	(452.8)	77.5	–	–	25.8	(349.5)
Cash at bank	246.2	35.7	–	–	(7.3)	274.6
Bank overdrafts	(22.2)	(34.3)	–	–	0.9	(55.6)
Net cash and cash equivalents	224.0	1.4	–	–	(6.4)	219.0
Net debt	(228.8)	78.9	–	–	19.4	(130.5)
Lease liabilities	(34.1)	11.7	(39.1)	–	1.4	(60.1)
Net debt including lease liabilities	(262.9)	90.6	(39.1)	–	20.8	(190.6)

25 Related party transactions

Transactions with Directors are disclosed separately in Note 8 and are shown in the Annual Report on Remuneration 2022 on pages 143 to 168.

There were no other related party transactions in either 2021 or 2022.

26 Purchase of businesses

The provisional fair value accounting is shown below:

2022

	Cotopaxi fair value £m	Vulcanic fair value £m	Durex fair value £m	Total £m
Non-current assets:				
Property, plant and equipment	–	15.8	14.9	30.7
Right-of-use assets	–	4.1	–	4.1
Acquired intangibles	2.8	115.6	126.2	244.6
Software and other intangibles	–	0.5	–	0.5
Deferred tax assets	–	2.9	0.5	3.4
	2.8	138.9	141.6	283.3
Current assets:				
Inventories	–	17.4	7.3	24.7
Trade receivables	0.8	24.5	9.5	34.8
Other receivables	0.4	3.5	1.2	5.1
Cash and cash equivalents	0.6	10.3	14.8	25.7
	1.8	55.7	32.8	90.3
Total assets	4.6	194.6	174.4	373.6
Current liabilities:				
Trade payables	0.1	7.5	1.1	8.7
Other payables, accruals and provisions	0.6	15.9	7.0	23.5
Short-term lease liabilities	–	1.1	–	1.1
	0.7	24.5	8.1	33.3
Non-current liabilities:				
Long-term borrowings	–	67.0	–	67.0
Long-term payables	–	3.7	–	3.7
Long-term lease liabilities	–	3.0	–	3.0
Deferred tax liabilities	0.6	33.4	0.1	34.1
Non-current provisions	–	4.6	0.1	4.7
Post-retirement benefit plans	–	1.1	–	1.1
	0.6	112.8	0.2	113.6
Total liabilities	1.3	137.3	8.3	146.9
Total net assets	3.3	57.3	166.1	226.7
Goodwill	10.0	119.2	130.1	259.3
Total	13.3	176.5	296.2	486.0
Satisfied by:				
Cash paid	13.3	176.5	296.2	486.0
Total consideration	13.3	176.5	296.2	486.0
Cash outflow for acquired businesses in the Statement of Cash Flows:				
Cash paid for businesses acquired in the period and debt repaid	13.3	243.5	296.2	553.0
Debt repaid	–	(67.0)	–	(67.0)
Cash paid for businesses acquired in the period	13.3	176.5	296.2	486.0
Less cash acquired	(0.6)	(10.3)	(14.8)	(25.7)
Net cash outflow	12.7	166.2	281.4	460.3

- On a debt-free cash-free basis the cash outflow for acquisitions was £535.5m consisting of £486.0m paid to the vendors, £67.0m of debt acquired and repaid and £8.2m of acquisition costs less cash acquired of £25.7m.
- The acquisitions of 100% of Vulcanic (completed on 29th September 2022 for consideration of €200.8m or £176.5m), 100% of Durex Industries (completed on 30th November 2022 for consideration of US\$357.1m or £296.2m) and 100% of Cotopaxi Limited (completed on 30th January 2022 for consideration of £13.3m) have all been accounted for under the acquisition method. The separately identified intangibles of all three acquisitions are recorded as part of the provisional fair value adjustment. The acquired intangibles relate to brand names and trademarks, manufacturing designs and core technology and customer relationships. The goodwill recognised represents the skilled workforce acquired and the opportunity to achieve synergies from being part of a larger Group.

Notes to the Consolidated Financial Statements continued

26 Purchase of businesses continued

3. Vulcanic is a European leader in industrial process heating solutions and is highly complementary to Chromalox within our ETS Business. As the lead brands within ETS for electric process heating, Chromalox and Vulcanic will support the effective deployment of our industry-leading decarbonisation solutions alongside Steam Specialties. Goodwill arising on the acquisition of Vulcanic is not expected to be tax deductible. Following completion of the acquisition, Vulcanic generated €34.8m (£29.7m) of revenue and €8.3m (£7.1m) of adjusted pre-tax profit. Had the acquisition been made on 1st January 2022, Vulcanic revenue and adjusted pre-tax profit would have been approximately €111.9m (£95.5m) and €21.1m (£18.0m) respectively.
4. Durex Industries, located in Illinois (USA), is a specialist in custom electric thermal solutions for ultra-high criticality industrial equipment and is highly complementary to Thermocoax within our ETS Business. Together, Thermocoax and Durex Industries are well positioned to capitalise on the growing demand for increasingly stringent thermal energy requirements in high-technology equipment within market sectors with high barriers to entry. Goodwill arising on the acquisition of Durex Industries is expected to be tax deductible in the USA. Following completion of the acquisition, Durex Industries generated US\$5.6m (£4.5m) of revenue and US\$1.2m (£1.0m) of adjusted pre-tax profit. Had the acquisition been made on 1st January 2022, Durex Industries revenue and adjusted pre-tax profit would have been approximately US\$81.3m (£65.5m) and US\$26.4m (£21.3m) respectively.
5. Cotopaxi Limited is a UK based digitally-enabled global energy consulting and optimisation company, which will enable Steam Specialties to digitally enhance its customer bonding through the provision of physical and digital connections to customers' infrastructure and equipment. Goodwill arising on the acquisition of Cotopaxi is not expected to be tax deductible. Following completion of the acquisition, Cotopaxi generated £2.9m of revenue and £0.5m of pre-tax profit. Had the acquisition been made on 1st January 2022, Cotopaxi revenue and pre-tax profit would not have been materially different from the figure disclosed.
6. As at the date of approval of the Financial Statements, the accounting for all current year acquisitions is provisional relating to the finalisation of the acquired intangible assets valuation and certain other provisional balances. Due to their contractual dates, the fair value of receivables acquired approximate to the gross contractual amounts receivable. The amount of gross contractual receivables not expected to be recovered is immaterial.

2021

No subsidiaries were acquired during 2021.

27 Disposal of subsidiary

The loss on disposal of subsidiaries relates wholly to the disposal of 100% of Spirax Sarco Russia and Watson-Marlow Russia on 6th July 2022.

The consideration amounted to £nil which resulted in a loss on disposal for Spirax Sarco Russia of £2.2m and £1.7m for Watson-Marlow Russia, including £0.1m of legal fees, and cumulative currency translation losses recycled to the income statement of £3.2m. £2.8m of cash and cash equivalents were disposed as part of the transaction.

These disposals did not meet the definition of a discontinued operation given in IFRS 5 Non-current Assets Held for Sale and Discontinued Operations, and therefore, no disclosures in relation to discontinued operations have been made.

2021

No subsidiaries were disposed of during 2021.

28 Derivatives and other financial instruments

The Group does not enter into significant derivative transactions. The Group's principal financial instruments comprise borrowings, cash and short-term deposits. The main purpose of these financial instruments is to raise finance for the Group's operations. The Group has various other financial instruments such as trade debtors and trade creditors, which arise directly from its operations. It is, and has been throughout the period under review, the Group's policy that no trading in financial instruments shall be undertaken.

The main risks arising from the Group's financial instruments are credit risk, interest rate risk, liquidity risk and foreign currency risk. The Board reviews and agrees policies for managing each of these risks and they are summarised below.

Credit risk

The Group sells products and services to customers around the world and its customer base is extremely varied in size and industry sector. The Group operates credit control policies to assess customers' credit ratings and provides for any debt that is identified as non-collectable.

Interest rate risk

The Group's policy is to hold a mixture of fixed and floating rate debt. When new debt facilities are entered into, the Group assesses if this should be fixed or floating depending on the specific circumstances at the time. In addition the Group aims to achieve a spread of maturity dates in order to avoid the concentration of funding requirements at any one time. The ratio of fixed to floating rate debt and debt maturity profile is kept under review by the Chief Financial Officer in conjunction with the Board.

Liquidity risk

The Group's objective is to maintain a balance between continuity of funding and flexibility through the use of overdrafts, loans, facilities and leases as appropriate.

Capital management

The Group's objective is to ensure support of the Group's operations and maximise shareholder value. The Group uses cash generated from operations to invest organically or to finance acquisitions. The capital structure comprises of debt and borrowings (see Note 24), cash and cash equivalents (see Note 24) along with equity as disclosed in the Consolidated Statement of Changes in Equity.

The Group is not subject to externally imposed capital requirements, other than financial covenant requirements on external borrowing.

Foreign currency risk

The Group has operations around the world and therefore its Consolidated Statement of Financial Position can be affected significantly by movements in the rate of exchange between sterling and various other currencies particularly the US dollar and euro. The Group seeks to mitigate the effect of this structural currency exposure by borrowing in these currencies where appropriate while maintaining a low cost of debt. In addition the Group employs Net Investment Hedge Accounting where appropriate to mitigate these exposures, with such hedges being designated in both 2022 and 2021. The loss on net investment hedges during 2022 included in the Consolidated Statement of Comprehensive income was £15.4m (2021: £18.8m gain). This is included within translation reserves in the Consolidated Statement of Changes in Equity (see Note 21).

The Group also has transactional currency exposures principally as a result of trading between Group companies. Such exposures arise from sales or purchases by an operating unit in currencies other than the unit's functional currency. The Group operates a programme to manage this risk on a Group-wide net basis, through the entering into of both forward contracts and non-deliverable forward contracts with a range of bank counter-parties.

Fair values of financial assets and financial liabilities

Fair values of financial assets and liabilities at 31st December 2022 are not materially different from book values due to their size or the fact that they were at short-term rates of interest. Fair values have been assessed as follows:

- **Derivatives**
Forward exchange contracts are marked to market by discounting the future contracted cash flows using readily available market data.
- **Interest-bearing loans and borrowings**
Fair value is calculated based on discounted expected future principal and interest cash flows.
- **Lease liabilities**
The fair value is estimated as the present value of future cash flows, discounted at the incremental borrowing rate for the related geographical location unless the rate implicit in the lease is readily determinable.
- **Trade and other receivables/payables**
For receivables/payables with a remaining life of less than one year, the notional amount is deemed to reflect the fair value.

Notes to the Consolidated Financial Statements continued

28 Derivatives and other financial instruments continued

The following table compares amounts and fair values of the Group's financial assets and liabilities:

	2022 Carrying value £m	2022 Fair value £m	2021 Carrying value £m	2021 Fair value £m
Financial assets:				
Cash and cash equivalents	328.9	328.9	274.6	274.6
Trade, other receivables and contract assets	395.2	395.2	298.1	298.1
Total financial assets	724.1	724.1	572.7	572.7

	2022 Carrying value £m	2022 Fair value £m	2021 Carrying value £m	2021 Fair value £m
Financial liabilities:				
Borrowings	934.2	918.1	349.5	358.3
Lease liabilities	65.2	65.2	60.1	60.1
Bank overdrafts	85.1	85.1	55.6	55.6
Trade payables	89.9	89.9	67.8	67.8
Other payables and contract liabilities	70.5	70.5	56.2	56.2
Long-term payables	8.8	8.8	4.7	4.7
Accruals	113.2	113.2	85.7	85.7
Total financial liabilities	1,366.9	1,350.8	679.6	688.4

There are no other assets or liabilities measured at fair value on a recurring or non-recurring basis for which fair value is disclosed.

Derivative financial instruments are measured at fair value. Fair value of derivative financial instruments are calculated based on discounted cash flow analysis using appropriate market information for the duration of the instruments.

Financial instruments fair value disclosure

Fair value measurements are classified into three levels, depending on the degree to which the fair value is observable:

- Level 1 fair value measurements are those derived from quoted prices in active markets for identical assets and liabilities;
- Level 2 fair value measurements are those derived from other observable inputs for the asset or liability; and
- Level 3 fair value measurements are those derived from valuation techniques using inputs that are not based on observable market data.

With the exception of the Group's private placement borrowings, there were no significant differences between the carrying value and the fair value of the Group's financial assets and liabilities. The fair value of private placement borrowings are estimated by discounting the future contracted cash flows using readily available market data and represents a Level 2 measurement in the fair value hierarchy.

We consider that the derivative financial instruments also fall into Level 2.

Interest rate risk profile of financial liabilities

The interest rate profile of the financial liabilities of the Group as at 31st December was as follows:

	Total £m	Fixed rate financial liabilities £m	Floating rate financial liabilities £m	Financial liabilities on which no interest is paid £m
2022				
Euro	762.9	642.2	44.9	75.8
US dollar	341.9	283.6	3.0	55.3
Sterling	107.3	21.0	36.3	50.0
Renminbi	46.3	2.0	–	44.3
Other	108.5	18.3	36.1	54.1
Group total	1,366.9	967.1	120.3	279.5

28 Derivatives and other financial instruments continued

2021	Total £m	Fixed rate financial liabilities £m	Floating rate financial liabilities £m	Financial liabilities on which no interest is paid £m
Euro	452.8	366.8	45.0	41.0
US dollar	49.8	8.9	4.0	36.9
Sterling	65.1	20.0	–	45.1
Renminbi	51.6	1.8	–	49.8
Other	60.3	14.6	–	45.7
Group total	679.6	412.1	49.0	218.5

Terms and debt repayment schedule

The terms and conditions of outstanding borrowings were as follows:

	Currency	Nominal interest rate	Year of maturity	2022 Carrying value £m	2021 Carrying value £m
Unsecured private placement – €225.0m	€	1.1%	2023	202.0	189.6
Unsecured private placement – \$185.0m	\$	5.3%	2028	152.9	–
Unsecured bank facility – \$150.0m	\$	5.5%	2025	124.0	–
Unsecured private placement – €140.0m	€	3.9%	2027	123.9	–
Unsecured private placement – €125.0m	€	4.2%	2029	110.6	–
Unsecured private placement – €120.0m	€	2.4%	2026	106.2	101.1
Unsecured bank facility	€	3.5%	2027	79.6	–
Unsecured bank facility	£	0.0%	2023	39.3	4.0
Unsecured bank facility	€	0.0%	2023	38.5	45.0
Unsecured bank facility	£	4.0%	2027	35.0	–
Unsecured bank facility	€	0.0%	2023	5.2	–
Unsecured bank facility	€	0.5%	2023	2.0	–
Unsecured bank facility	€	1.4%	2023	0.1	0.1
Unsecured bank facility	SEK	0.0%	2022	–	0.6
Unsecured bank facility – €160.0m	€	0.7%	2022	–	58.8
Unsecured bank facility	CNY	3.5%	2022	–	5.8
Unsecured bank facility	PLN	0.0%	2023	–	0.1
Total outstanding borrowings				1,019.3	405.1

New private placement borrowings of €265.0m (£234.6m) and US\$185.0m (£149.8m) along with a term loan of US\$150.0m (£124.4m) all relate to the funding of acquisitions made during the year.

The weighted average interest rate paid during the year was 3.3% (2021: 1.2%).

Interest rate risk profile of financial assets

The interest rate profile of the financial assets of the Group as at 31st December was as follows:

2022	Total £m	Fixed rate financial assets £m	Floating rate financial assets £m	Financial assets on which no interest is earned £m
Sterling	49.5	0.1	19.6	29.8
Euro	205.8	0.2	62.2	143.4
US dollar	186.3	0.8	36.4	149.1
Renminbi	92.4	6.4	41.1	44.9
Other	190.1	8.6	22.7	158.8
Group total	724.1	16.1	182.0	526.0

Notes to the Consolidated Financial Statements continued

28 Derivatives and other financial instruments continued

	Total £m	Fixed rate financial assets £m	Floating rate financial assets £m	Financial assets on which no interest is earned £m
2021				
Sterling	63.9	0.1	43.3	20.5
Euro	119.2	0.1	23.4	95.7
US dollar	124.2	–	16.0	108.2
Renminbi	91.2	4.0	40.9	46.3
Other	174.2	12.8	17.3	144.1
Group total	572.7	17.0	140.9	414.8

Financial assets on which no interest is earned comprise trade and other receivables and cash at bank. Floating and fixed rate financial assets comprise cash at bank or cash placed on deposit.

Currency exposures

As explained on page 225, the Group's objectives in managing the currency exposures arising from its net investment overseas (in other words, its structural currency exposures) are to maintain a low cost of debt while partially hedging against currency depreciation. All gains and losses arising from these structural currency exposures are recognised in the Consolidated Statement of Comprehensive Income. In addition the Group employs Net Investment Hedge Accounting in order to mitigate these impacts where appropriate.

Transactional (or non-structural) exposures give rise to net currency gains and losses that are recognised in the Consolidated Income Statement. Such exposures include the monetary assets and monetary liabilities in the Consolidated Statement of Financial Position that are not denominated in the operating (or functional) currency of the operating unit involved. At 31st December 2022 the currency exposures in respect of the euro was a net monetary liability of £280.8m (2021: £176.4m net monetary liability) and in respect of the US dollar a net monetary liability of £225.0m (2021: £121.4m net monetary asset).

At 31st December 2022, the percentage of debt to net assets, excluding debt was 53% (2021: 28%) for the euro, 7% (2021: 1%) for the US dollar and nil% (2021: 1%) for the Chinese renminbi.

Maturity of financial liabilities

The Group's financial liabilities at 31st December mature in the following periods:

	Trade, other payables and contract liabilities £m	Overdrafts £m	Lease liabilities £m	Long-term borrowings £m	Total £m
2022					
In six months or less, or on demand	271.0	85.1	7.9	37.3	401.3
In more than six months but no more than twelve	6.8	–	7.0	201.4	215.2
In more than one year but no more than two	1.7	–	10.9	84.2	96.8
In more than two years but no more than three	1.3	–	7.7	147.0	156.0
In more than three years but no more than four	0.8	–	5.6	107.5	113.9
In more than four years but no more than five	–	–	4.2	341.5	345.7
In more than five years	0.8	–	28.1	142.6	171.5
Total contractual cash flows	282.4	85.1	71.4	1,061.5	1,500.4
Statement of Financial Position values	282.4	85.1	65.2	934.2	1,366.9

	Trade, other payables and contract liabilities £m	Overdrafts £m	Lease liabilities £m	Long-term borrowings £m	Total £m
2021					
In six months or less, or on demand	201.8	55.6	6.4	67.0	330.8
In more than six months but no more than twelve	8.0	–	5.8	2.1	15.9
In more than one year but no more than two	2.4	–	11.0	193.4	206.8
In more than two years but no more than three	1.1	–	6.9	2.4	10.4
In more than three years but no more than four	0.6	–	4.7	2.3	7.6
In more than four years but no more than five	–	–	3.6	102.1	105.7
In more than five years	0.5	–	28.3	–	28.8
Total contractual cash flows	214.4	55.6	66.7	369.3	706.0
Statement of Financial Position values	214.4	55.6	60.1	349.5	679.6

28 Derivatives and other financial instruments continued

The Group did not employ any supply chain or similar forms of financing during 2022 or 2021.

Cash flow hedges

The Group uses forward currency contracts to manage its exposure to movements in foreign exchange rates. The forward contracts are designated as hedging instruments in a cash flow hedging relationship. At 31st December 2022 the Group had contracts outstanding to economically hedge or to purchase £38.9m (2021: £45.5m), and €12.9m (2021: €20.3m) with US dollars, £70.4m (2021: £74.3m) with euros, £20.3m (2021: £18.9m), and €8.4m (2021: €13.1m) with Chinese renminbi, £10.6m (2021: £7.7m) and €3.4m (2021: €3.1m) with Korean won, £2.5m (2021: £6.3m) with Singapore dollar and DKK54.2m (2021: DKK31.6m) with euros. The fair values at the end of the reporting period were a liability of £3.7m (2021: £0.2m liability), included within Trade and other payables on the Consolidated Statement of Financial Position. The fair value of cash flow hedges falls into the Level 2 category of the fair value hierarchy in accordance with IFRS 13. The fair value of derivative financial instruments is estimated by discounting the future contracted cash flow using readily available market data.

The contractual cash flows on forward currency contracts at the reporting date are shown below, classified by maturity. The cash flows shown are on a gross basis and are not discounted.

	Less than 6 months £m	6 to 12 months £m	More than 12 months £m	Total £m
2022				
Contracted cash in/(out):				
Sterling	72.8	70.0	–	142.8
Euro	(30.4)	(26.2)	–	(56.6)
US dollar	(23.7)	(27.9)	–	(51.6)
Other	(22.8)	(20.8)	–	(43.6)
Total contractual cash flows	(4.1)	(4.9)	–	(9.0)
	Less than 6 months £m	6 to 12 months £m	More than 12 months £m	Total £m
2021				
Contracted cash in/(out):				
Sterling	61.5	62.1	21.4	145.0
Euro	(21.6)	(16.8)	(8.0)	(46.4)
US dollar	(24.0)	(30.5)	(9.7)	(64.2)
Other	(14.6)	(15.4)	(3.6)	(33.6)
Total contractual cash flows	1.3	(0.6)	0.1	0.8

It is anticipated that the cash flows will take place at the same time as the corresponding forward contract matures. At this time the amount deferred in equity will be reclassified to profit or loss.

All forecast transactions which have been subject to hedge accounting during the year have occurred or are still expected to occur.

A loss on derivative financial instruments of £3.5m (2021: £2.8m loss) was recognised in other comprehensive income during the period.

As at 31st December 2022 no ineffectiveness has been recognised in profit or loss arising from hedging foreign currency transactions.

Borrowing facilities

The Group has various borrowing facilities available to it. The undrawn committed facilities available at 31st December in respect of which all conditions precedent had been met at that date were as follows:

	2022 £m	2021 £m
Expiring in one year or less	–	–
Expiring in more than one year but no more than two years	–	–
Expiring in more than two years but no more than three years	–	350.0
Expiring in more than three years	285.4	–
Total Group undrawn committed facilities	285.4	350.0

At 31st December 2022, the Group had available £285.4m (2021: £350.0m) of undrawn committed borrowing facilities in respect of its £400.0m (2021: £350.0m) pound sterling revolving credit facility, of which all conditions precedent had been met. This facility expires on 13th April 2027.

Notes to the Consolidated Financial Statements continued

28 Derivatives and other financial instruments continued

Sensitivity analysis

In managing interest rate and currency risks, the Group aims to reduce the impact of short-term fluctuations on the Group's earnings. Over the longer term, however, permanent changes in foreign exchange and interest rates would have an impact on consolidated earnings. At the year end borrowings totalled £1,019.3m (2021: £405.1m). At 31st December 2022, it is estimated that a general increase of one percentage point in interest rates would decrease the Group's profit after tax and equity by approximately £1.7m (2021: £0.1m).

For the year ended 31st December 2022, it is estimated that a decrease of five percentage points in the value of sterling weighted in relation to the Group's profit and trading flows would have increased the Group's profit before tax by approximately £17.0m (2021: £13.5m). The effect can be very different between years due to the weighting of different currency movements. Forward exchange contracts have been included in this calculation.

The credit risk profile of trade receivables

The ageing of trade receivables at the reporting date was:

	Gross 2022 £m	Impairment 2022 £m	Net 2022 £m	Gross 2021 £m	Impairment 2021 £m	Net 2021 £m
Not past due date	236.2	(1.8)	234.4	197.6	(1.9)	195.7
0–30 days past due date	48.8	(0.1)	48.7	40.9	(0.2)	40.7
31–90 days past due date	29.0	(0.1)	28.9	22.9	(0.5)	22.4
91 days to one year past due date	26.9	(1.3)	25.6	15.4	(1.9)	13.5
More than one year	13.9	(10.4)	3.5	8.4	(8.4)	–
Group total	354.8	(13.7)	341.1	285.2	(12.9)	272.3

Other than those disclosed above no other impairment losses on receivables and contract assets arising from contracts with customers have been recognised. Other than trade receivables there are no financial assets that are past their due date at 31st December 2022.

Payment terms across the Group vary depending on the geographic location of each operating company. Payment is typically due between 20 and 90 days after the invoice is issued.

All contracts with customers do not contain a significant financing component.

The movement in the allowance for impairment in respect of trade receivables during the year was as follows:

	2022 £m	2021 £m
Balance at 1st January	12.9	17.8
Additional impairment	1.0	2.0
Amounts written off as uncollectable	(0.3)	(1.2)
Amounts recovered	(0.6)	(1.2)
Impairment losses reversed	(0.3)	(4.3)
Exchange differences	1.0	(0.2)
Balance at 31st December	13.7	12.9

Company Financial Statements

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Company Statement of Financial Position

at 31st December 2022

	Notes	2022 £m	2021 £m
Assets			
Non-current assets			
Property, plant and equipment	11	5.9	5.8
Loans to subsidiaries	3, 9	106.2	291.0
Investment in subsidiaries	2	756.6	748.8
Deferred tax assets	6	10.5	0.1
Post-retirement benefits	7	3.9	5.1
		883.1	1,050.8
Current assets			
Loans to subsidiaries	3, 9	200.2	—
Due from subsidiaries	9	17.4	0.7
Other current assets	4	3.8	5.4
Cash and cash equivalents		20.5	19.0
		241.9	25.1
Total assets		1,125.0	1,075.9
Equity and liabilities			
Current liabilities			
Trade and other payables	5	10.6	5.4
Current portion of long-term borrowings	10	235.1	0.9
Short-term borrowings		49.8	0.1
		295.5	6.4
Net current liabilities / assets		(53.6)	18.7
Non-current liabilities			
Long-term borrowings	10	106.2	289.8
Deferred tax liabilities	6	1.4	1.3
Due to subsidiaries	9	30.2	10.4
		137.8	301.5
Total liabilities		433.3	307.9
Net assets		691.7	768.0
Equity			
Share capital	8	19.8	19.8
Share premium account		88.1	86.3
Other reserves	8	2.0	4.5
Retained earnings		581.8	657.4
Equity shareholders' funds		691.7	768.0
Total equity		691.7	768.0
Total equity and liabilities		1,125.0	1,075.9

The loss before dividends received was £30.6m (2021: £18.6m). Dividends from subsidiary undertakings of £72.4m (2021: £146.4m) are excluded from this amount. Total profit recognised during the year was £41.8m (2021: £127.8m).

These Financial Statements of Spirax-Sarco Engineering plc, company number 00596337 were approved by the Board of Directors and authorised for issue on 8th March 2023 and signed on its behalf by:

N.J. Anderson N.B. Patel Directors

Company Statement of Changes in Equity

for the year ended 31st December 2022

	Share capital £m	Share premium account £m	Other reserves £m	Retained earnings £m	Total equity £m
Balance at 1st January 2022	19.8	86.3	4.5	657.4	768.0
Profit for the year	–	–	–	41.8	41.8
Other comprehensive income:					
Cash flow hedges net of tax	–	–	(3.5)	–	(3.5)
Remeasurement loss on post-retirement benefits	–	–	–	(1.3)	(1.3)
Deferred tax on remeasurement loss on post-retirement benefits	–	–	–	0.3	0.3
Total other comprehensive income for the year	–	–	(3.5)	(1.0)	(4.5)
Total comprehensive income for the year	–	–	(3.5)	40.8	37.3
Contributions by and distributions to owners of the Company:					
Dividends paid	–	–	–	(103.1)	(103.1)
Equity settled share plans net of tax	–	–	–	(13.3)	(13.3)
Issue of share capital	–	1.8	–	–	1.8
Employee Benefit Trust shares	–	–	(2.2)	–	(2.2)
Investment in subsidiaries in relation to share options granted	–	–	3.2	–	3.2
Balance at 31st December 2022	19.8	88.1	2.0	581.8	691.7

For the year ended 31st December 2021

	Share capital £m	Share premium account £m	Other reserves £m	Retained earnings £m	Total equity £m
Balance at 1st January 2021	19.8	84.8	16.2	628.4	749.2
Profit for the year	–	–	–	127.8	127.8
Other comprehensive income:					
Transfer between reserves	–	–	–	–	–
Cash flow hedges net of tax	–	–	(2.8)	–	(2.8)
Remeasurement loss on post-retirement benefits	–	–	–	(0.3)	(0.3)
Deferred tax on remeasurement loss on post-retirement benefits	–	–	–	(0.2)	(0.2)
Total other comprehensive income for the year	–	–	(2.8)	(0.5)	(3.3)
Total comprehensive income for the year	–	–	(2.8)	127.3	124.5
Contributions by and distributions to owners of the Company:					
Dividends paid	–	–	–	(90.7)	(90.7)
Equity settled share plans net of tax	–	–	–	(7.6)	(7.6)
Issue of share capital	–	1.5	–	–	1.5
Employee Benefit Trust shares	–	–	(12.5)	–	(12.5)
Investment in subsidiaries in relation to share options granted	–	–	3.6	–	3.6
Balance at 31st December 2021	19.8	86.3	4.5	657.4	768.0

Other reserves represent the Company's share-based payments, capital redemption and Employee Benefit Trust reserves (see Note 8).

The Notes on pages 234 to 240 form an integral part of the Financial Statements.

Notes to the Company Financial Statements

1 Accounting policies

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. Accordingly the Company has adopted FRS 101 (Reduced Disclosure Framework). As permitted by FRS 101, the Company has taken advantage of the disclosure exemptions available under that standard in relation to share-based payments, financial instruments and the presentation of a Cash Flow Statement. Where relevant, equivalent disclosures have been given in the Consolidated Financial Statements.

Under section 408 of the Companies Act 2006, the Company is exempt from the requirement to present its own Income Statement. As permitted by the audit fee disclosure regulations, disclosure of non-audit fees information is not included in respect of the Company.

The Company's accounting policies are the same as those set out in Note 1 of the Consolidated Financial Statements, except as noted below.

The Directors have concluded that no critical judgements or key sources of estimation uncertainty have been made in the process of applying the Company's accounting policies.

Investments in subsidiaries are stated at cost less, where appropriate, provisions for impairment.

Loans to or from other Group undertakings and all other payables and receivables are initially recorded at fair value, which is generally the proceeds received. They are then subsequently carried at amortised cost.

2 Investments in subsidiaries

	2022 £m	2021 £m
Cost:		
At 1st January	748.8	737.1
Share options issued to subsidiary company employees	3.2	3.6
Disposals	(0.2)	–
Additions	4.8	8.1
At 31st December	756.6	748.8

Investments are stated at cost less provisions for any impairment in value.

Additions in the year relate to the transfer of ownership of Spirax-Sarco Engineering (China) Limited from Spirax-Sarco Investments Limited to Spirax-Sarco Engineering plc for £4.8m.

Disposals in the year relate to the disposal of the operating entities in Russia.

Details relating to subsidiary undertakings are given on pages 242 to 246. Except where stated all classes of shares were 100% owned by the Group at 31st December 2022. The country of incorporation of the principal Group companies is the same as the country of operation with the exception of companies operating in the United Kingdom which are incorporated in Great Britain. All operate in steam, electrical thermal energy solutions, fluid path technologies or peristaltic pumping markets except those companies identified as a holding company on pages 242 to 246.

3 Loans to subsidiaries

	2022 £m	2021 £m
Cost:		
At 1st January	291.0	309.9
Advances	–	–
Interest	4.7	4.6
Repayments	(4.7)	(4.6)
Exchange adjustment	15.4	(18.9)
At 31st December	306.4	291.0

The terms and conditions of loans to subsidiaries at 31st December 2022 were as follows:

	Currency	Nominal interest rate	Year of maturity	2022 £m	2021 £m
Spirax-Sarco Overseas Limited	€	1.10%	2023	199.8	189.8
Spirax-Sarco Overseas Limited	€	2.36%	2026	106.6	101.2
Total loans to subsidiaries				306.4	291.0
Due within one year				200.2	1.0
Due after more than one year				106.2	290.0

4 Other current assets

	2022 £m	2021 £m
Prepayments and accrued income	3.8	5.4
Total other current assets	3.8	5.4

5 Trade and other payables

	2022 £m	2021 £m
Accruals	10.6	5.4
Total trade and other payables	10.6	5.4

Trade and other payables are due within one year.

6 Deferred tax assets and liabilities

Movement in deferred tax during the year 2022

	1st January 2022 £m	Recognised in income £m	Recognised in OCI £m	Recognised in equity £m	31st December 2022 £m
Other temporary differences asset	0.1	9.5	0.9	–	10.5
Pensions liability	(1.3)	0.3	(0.4)	–	(1.4)
Company total	(1.2)	9.8	0.5	–	9.1

Movement in deferred tax during the year 2021

	1st January 2021 £m	Recognised in income £m	Recognised in OCI £m	Recognised in equity £m	31st December 2021 £m
Other temporary differences asset	–	0.1	–	–	0.1
Pensions liability	(1.1)	–	(0.2)	–	(1.3)
Company total	(1.1)	0.1	(0.2)	–	(1.2)

Notes to the Company Financial Statements continued

7 Employee benefits

Pension plans

The Company is accounting for pension costs in accordance with International Accounting Standard 19.

The disclosures shown here are in respect of the Company's defined benefit obligations. Other plans operated by the Company were defined contribution plans.

The total expense relating to the Company's defined contribution pension plans in the current year was £0.9m (2021: £0.6m).

At 31st December 2022 the post-retirement mortality assumptions in respect of the Company Defined Benefit Scheme follows 84%/87% (male/female) of SAPS S3 light, CMI 2021 projections with a long term trend of 1.25% p.a., initial addition of 0.25% and w2020 parameter of 10%. At 31st December 2021 the post-retirement mortality assumptions in respect of the Company Defined Benefit Scheme follows 84%/87% (male/female) of SAPS S3 light, CMI 2020 projections with a long term trend of 1.25% p.a., initial addition of 0.25%. These assumptions are regularly reviewed in light of scheme-specific experience and more widely available statistics.

The financial assumptions used at 31st December were:

	Weighted-average assumptions used to define the benefit obligations	
	2022 %	2021 %
Rate of increase in salaries	n/a	n/a
Rate of increase in pensions	2.9	3.2
Rate of price inflation	3.2	3.3
Discount rate	4.7	1.8

The assumptions used by the actuary are the best estimates chosen from a range of possible actuarial assumptions, which due to the timescale covered, may not necessarily be borne out in practice.

Fair value of scheme assets:

	2022 £m	2021 £m
Equities	5.2	11.1
Bonds	22.7	35.4
Other	14.6	13.8
Total market value in aggregate	42.5	60.3

£32.5m (2021: £nil) of scheme assets have a quoted market price in an active market.

The actual return on plan assets was a loss of £15.0m (2021: a gain of £3.1m).

The amounts recognised in the Company Statement of Financial Position are determined as follows:

	2022 £m	2021 £m
Fair value of scheme's assets	42.5	60.3
Present value of funded scheme's liabilities	(38.6)	(55.2)
Retirement benefit asset recognised in the Statement of Financial Position	3.9	5.1
Related deferred tax	(1.4)	(1.3)
Net pension asset	2.5	3.8

7 Employee benefits continued

The movements in the Defined Benefit Obligation (DBO) recognised in the Statement of Financial Position during the year were:

	2022 £m	2021 £m
Defined benefit obligation at beginning of year	(55.2)	(55.2)
Current service cost	–	–
Interest cost	(1.0)	(0.7)
Contributions from members	–	–
Remeasurement (loss)/gain	14.9	(2.7)
Actual benefit payments	2.7	3.4
Experience loss	–	–
Defined benefit obligation at end of year	(38.6)	(55.2)

The movements in the fair value of plan assets during the year were:

	2022 £m	2021 £m
Value of assets at beginning of year	60.3	60.8
Expected return on assets	1.1	0.7
Remeasurement (loss)/gain	(16.1)	2.4
Contributions paid by employer	–	–
Administration costs	(0.1)	(0.2)
Actual benefit payments	(2.7)	(3.4)
Value of assets at end of year	42.5	60.3

The estimated employer contributions to be made in 2023 are £nil.

The history of experience adjustments is as follows:

	2022 £m	2021 £m	2020 £m	2019 £m	2018 £m
Defined benefit obligation at end of year	(38.6)	(55.2)	(55.2)	(53.9)	(52.7)
Fair value of scheme's assets	42.5	60.3	60.8	59.5	56.4
Retirement benefit recognised in the Statement of Financial Position	3.9	5.1	5.6	5.6	3.7
Experience adjustment on scheme's liabilities	0.9	3.5	(5.0)	–	(0.3)
As a percentage of scheme's liabilities	2.3%	6.3%	9.1%	0.0%	0.1%
Experience adjustment on scheme's assets	(16.1)	2.4	2.6	4.1	(2.4)
As a percentage of scheme's assets	37.9%	4.0%	4.3%	6.9%	4.3%

The expense recognised in the Company Income Statement was as follows:

	2022 £m	2021 £m
Current service and administration cost	(0.1)	(0.2)
Net interest on scheme's assets and liabilities	0.1	0.1
Total expense recognised in Income Statement	0.0	(0.1)

Notes to the Company Financial Statements continued

7 Employee benefits continued

Statement of Comprehensive Income (OCI)

	2022 £m	2021 £m
Remeasurement effects recognised in OCI:		
Due to experience on DBO	(0.9)	(3.5)
Due to demographic assumption changes in DBO	0.5	0.2
Due to financial assumption changes in DBO	15.3	0.6
Return on assets	(16.1)	2.4
Total remeasurement loss recognised in OCI	(1.2)	(0.3)
Deferred tax on remeasurement amount recognised in OCI	0.3	(0.2)
Cumulative loss recognised in OCI at beginning of year	(10.6)	(10.1)
Cumulative loss recognised in OCI at end of year	(11.5)	(10.6)

Sensitivity analysis

The effect on the defined benefit obligation at 31st December 2022 of an increase or decrease in key assumptions is as follows:

Increase/(decrease) in pension defined benefit obligation	£m
Discount rate assumption being 1.00% higher	(3.3)
Discount rate assumption being 1.00% lower	3.7
Inflation assumption being 1.00% higher	2.1
Inflation assumption being 1.00% lower	(2.0)
Mortality assumption life expectancy at age 65 being one year higher	1.7

Share-based payments

Disclosures of the share-based payments offered to employees of the Company are set out below. The description and operation of each scheme is the same as outlined in the Group disclosure.

Share Option Scheme

As at 31st December 2022 the number of shares outstanding were nil, due to performance conditions in respect of all exercisable shares being met. No options have been granted since 2011.

Performance Share Plan

The relevant disclosures in respect of the Performance Share Plan grants are set out below.

	2018 Grant	2019 Grant	2020 Grant	2021 Grant	2022 Grant
Grant date	4th April	15th May	12th March	5th May	14th March
Mid-market share price at grant date	5,560.0p	8,161.0p	7,775.0p	11,770.0p	11,910.0p
Number of employees	12	12	19	15	13
Shares under scheme	60,899	60,626	82,607	45,815	42,573
Vesting period	3 years	3 years	3 years	3 years	3 years
Probability of vesting	73.5%	74.1%	74.3%	73.9%	76.05%
Fair value	4,084.4p	6,048.9p	5,779.2p	8,698.0p	9,057.6p

8 Called-up share capital and reserves

	2022 £m	2021 £m
Ordinary shares of 26 ¹² / ₁₃ p (2021: 26 ¹² / ₁₃ p) each		
Authorised 111,428,571 (2021: 111,428,571)	30.0	30.0
Allotted, called up and fully paid 73,776,048 (2021: 73,776,048)	19.8	19.8

28,262 shares with a nominal value of £7,609 were issued in connection with the Group's Employee Share Schemes for a consideration of £1.8m received by the Company.

In 2022 the Parent Company purchased 180,000 shares representing 0.24% of called-up share capital with a nominal value of £48,462 for a consideration of £20,712,752. The shares were placed in an Employee Benefit Trust (EBT) to be used in connection with the Group's Employee Share Scheme.

At 31st December 2022 179,632 shares were held in an Employee Benefit Trust and available for use in connection with the Group's Employee Share Schemes.

13 senior employees of the Company have been granted options on Ordinary shares under the Share Option Scheme and Performance Share Plan (details in Note 7).

Other reserves in the Company Statement of Changes in Equity on page 233 are made up as follows:

	1st January 2022 £m	Change in year £m	31st December 2022 £m
Share-based payments reserve	22.2	3.2	25.4
Cash flow hedges reserve	(0.2)	(3.5)	(3.7)
Capital redemption reserve	1.8	–	1.8
Employee Benefit Trust reserve	(19.3)	(2.2)	(21.5)
Total other reserves	4.5	(2.5)	2.0

Share-based payments reserve

This reserve records the Company's share-based payment charge that is recognised in reserves.

Cash flow hedges reserve

This reserve records the Company's cumulative net change in the fair value of forward exchange contracts where they are designated as effective cash flow hedge relationships.

Capital redemption reserve

This reserve records the historical repurchase of the Company's own shares.

Employee Benefit Trust reserve

The Company has an Employee Benefit Trust which is used to purchase, hold and issue shares in connection with the Group's employee share schemes. The shares held in Trust are recorded in this separate reserve.

9 Related party transactions

	2022 £m	2021 £m
Dividends received from subsidiaries	72.4	146.4
Loans due from subsidiaries at 31st December	306.4	291.0
Amounts due from subsidiaries at 31st December	17.4	0.7
Amounts due to subsidiaries at 31st December	30.2	10.4

Notes to the Company Financial Statements continued

10 Financial instruments

The terms and conditions of outstanding loans at 31st December 2022 are as follows:

	Currency	Nominal interest rate	Year of maturity	Carrying value £m
Unsecured private placement – €225.0m	€	1.1%	2023	199.8
Unsecured private placement – €120.0m	€	2.4%	2026	106.5
Revolving Credit Facility – Drawdown £35.0m	£	4.0%	2027	35.0
Total outstanding loans				341.3
Current portion of long-term borrowings due before 31st December 2023				235.1
Long-term borrowings payable after 31st December 2023				106.2
Total outstanding loans				341.3

11 Other information

Dividends

Dividends paid by the Company are disclosed in Note 11 of the Consolidated Financial Statements.

Property, plant and equipment

The Company holds freehold property with a cost of £7.1m (2021: £9.7m), accumulated depreciation of £1.2m (2021: £3.9m) and a net book value of £5.9m (2021: £5.8m). During the year the Company started construction of a new head office with £3.3m being written off the value of freehold property in respect of the demolition of the previous offices.

Included within the net book value of £5.9m as at 31st December 2022 is an amount of £3.9m (2021: £nil) in relation to assets under construction.

Employees

The total number of employees of the Company at 31st December 2022 was 117 (2021: 112).

Directors' remuneration

The remuneration of the Directors of the Company is shown in the Annual Report on Remuneration 2022 on pages 143 to 168.

Auditor's remuneration

Auditor's remuneration in respect of the Company's annual audit has been disclosed on a consolidated basis in the Company's Consolidated Financial Statements as required by Section 494(4)(a) of the Companies Act 2006.

Contingent liabilities and capital commitments

The Company has no contingent liabilities or capital commitments at 31st December 2022 (2021: £nil).

Corporate Information

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Officers and Advisers	247

Our Global Operations

Steam Specialties – EMEA

Country/Territory	Company Name	Registered Office address
Belgium	Spirax Sarco NV	Industriepark 5, B-9052 Zwijnaarde, Belgium
Czech Republic	Spirax Sarco spol sro	Pražská 1455, 102 00 Praha, Hostivar, Czech Republic
Egypt	Spirax Sarco Egypt	19 Farid Street, Heliopolis, Cairo, Egypt
	Spirax Sarco Energy Solutions LLC (H)	19 Farid Street, Heliopolis, Cairo, Egypt
Finland	Spirax Oy	Niittytie 25 A 24, 01300 Vantaa, Helsinki, Finland
France	Spirax Sarco SAS	Zone Industrielle des Bruyères 8 Avenue le Verrier, 78190 Trappes, France
	Spirax-Sarco France HoldCo SAS (H)	23 Route de Château-Thierry, 02200 Noyant-et-Aconin, Soissons, France
	Gestra France SAS	Zone Industrielle des Bruyères, 8 Avenue Le Verrier 78190 Trappes, France
	Spirax Sarco North & West Africa SAS	Zone Industrielle des Bruyères, 8 Avenue Le Verrier, 78190 Trappes, France
Germany	Spirax Sarco GmbH Regelapparate	Reichenastr. 210, 78467 Konstanz, Germany
	Spirax-Sarco Germany Holdings GmbH (H)	Reichenastr. 210, 78467, Konstanz, Germany
	Gestra AG	Muenchener Str. 77, 28215, Bremen, Germany
	Gestra HoldCo GmbH (H)	Muenchener Str. 77, 28215, Bremen, Germany
Hungary	Spirax-Sarco Kft	1103 Budapest Koér utca 2/A, Hungary
Italy	Spirax Sarco Srl	Via Per Cinisello 18, 20834 Nova Milanese, Italy
	Italgestra Srl	Via Per Cinisello 18, 20834 Nova Milanese, Italy
Kenya	Spirax Sarco East Africa Ltd	Clifton Park, Mombasa Road, Nairobi, Kenya
Morocco	Spirax Sarco Maghreb	Secteur 3, Lot 146, Rue Arfoud, Bureaux 5 et 6, commerce 2-12000 Temara, Morocco
Netherlands	Spirax-Sarco Netherlands BV	Industrieweg 130A, 3044 AT, Rotterdam, Netherlands
	Spirax-Sarco Engineering BV (H)	Industrieweg 130A, 3044 AT, Rotterdam, Netherlands
	Spirax-Sarco Investments BV (H)	Industrieweg 130A, 3044 AT, Rotterdam, Netherlands
	Spirax-Sarco Netherlands Holdings Coöperative WA (H)	Sluisstraat 7, 7491 GA Delden, Delden, Netherlands
Norway	Spirax Sarco AS	Vestvollveien 14A, N-2019 Skedsmokorset, Norway
Poland	Spirax Sarco Sp Zoo	Jutrzenki 98, 02-230, Warszawa, Poland
	Gestra Polonia Sp Zoo	ul Ku Ujściu 19, PL 80-172, Gdansk, Poland
Portugal	Spirax Sarco Equipamentos Ind Lda	Rua Quinta do Pinheiro, No 8 & 8A, 2794-058 Carnaxide, Portugal
	Gestra Portugal, Lda	Avenida Dr Antunes Guimaraes, Numero 1159, Porto 4100-082, Portugal
Romania	Spirax-Sarco SRL	2-4 Traian Street, Cluj-Napoca Municipality, Cluj County, Romania
South Africa	Spirax Sarco Investments (Pty) Ltd (H)	Corner Brine Avenue and Horn Street, Chloorkop Ext 23, Gauteng 1624, South Africa
	Spirax Sarco South Africa (Pty) Ltd	Corner Brine Avenue and Horn Street, Chloorkop Ext 23, Gauteng 1624, South Africa
Spain	Spirax-Sarco SAU	C/ Sant Josep, 130 08980 Sant Feliu de Llobregat, Barcelona, Spain
	Spirax-Sarco Engineering SLU (H)	C/ Sant Josep, 130 08980 Sant Feliu de Llobregat, Barcelona, Spain
	Gestra Espanola SA	Calle Luis Cabrera 86-88, 28002, Madrid, Spain
Sweden	Spirax Sarco AB	Evenemansgatan 40, 169 56 Solna, Sweden
Switzerland	Spirax Sarco AG	Gustav-Maurer-Strasse 9, 8702 Zollikon, Switzerland
Turkey	Spirax Sarco Valf Sanayi ve Ticaret A.Ş.	Serifali Mevkii, Edep Sok No 27, 34775 Yukari Dudullu – Ümraniye, Istanbul, Turkey
United Arab Emirates	Spirax Sarco Trading LLC	38-0, R338 Um Hurair Second, Dubai, United Arab Emirates
United Kingdom	Spirax-Sarco Ltd*	Charlton House, Cirencester Road, Cheltenham, Gloucestershire GL53 8ER, United Kingdom
	Spirax-Sarco America Ltd (H)	Charlton House, Cirencester Road, Cheltenham, Gloucestershire GL53 8ER, United Kingdom
	Spirax-Sarco America Investments Ltd* (H)	Charlton House, Cirencester Road, Cheltenham, Gloucestershire GL53 8ER, United Kingdom
	Spirax-Sarco Investments Ltd* (H)	Charlton House, Cirencester Road, Cheltenham, Gloucestershire GL53 8ER, United Kingdom
	Spirax-Sarco Overseas Ltd* (H)	Charlton House, Cirencester Road, Cheltenham, Gloucestershire GL53 8ER, United Kingdom
	Gestra Holdings Ltd* (H)	Charlton House, Cirencester Road, Cheltenham, Gloucestershire GL53 8ER, United Kingdom
	Gestra UK Ltd	Charlton House, Cirencester Road, Cheltenham, Gloucestershire GL53 8ER, United Kingdom

Steam Specialties – Asia Pacific

Country/Territory	Company Name	Registered Office address
Australia	Spirax Sarco Pty Ltd	14 Forge St., Blacktown, NSW 2148, Australia
China	Spirax-Sarco Engineering (China) Ltd	No 800 XinJun Ring Road, Pujiang Hi Tech Park, Shanghai, China
	Spirax Sarco Trading (Shanghai) Co Ltd	No 800 XinJun Ring Road, Pujiang Hi Tech Park, Shanghai, China
	Gestra (Shanghai) Fluid Control Technology Co Ltd	Room 333 3rd Floor of 4th Area Building 1, No.2001 North Yanggao Road China (Shanghai) Free Trade Pilot Zone, Shanghai, China
Hong Kong	Spirax Sarco Hong Kong Co Ltd	Unit 1507, 15th Floor, Prosperity Center, 25 Chin Yip Street, Kwun Tong, Kowloon, Hong Kong
India	Spirax-Sarco India Private Ltd	Plot No. 6, Central Avenue, Mahindra World City, Chengalpattu Taluk, Kancheepuram District 603004, India
Indonesia	PT Spirax Sarco Indonesia	Kawasan Infinia Park Blok C-99, Jl. Dr Sahardjo No. 45, Manggarai Tebet, Jakarta Selatan 12850, Indonesia
Japan	Spirax Sarco Godo Gaisha	261-0025, 2-37 Hamada, Mihama-ku, Chiba, Japan
Malaysia	Spirax Sarco Sdn Bhd	No 10, Temasya 18, Jalan Pelukis U1/46A, 40150 Shah Alam, Selangor, Malaysia
	Spirax Sarco Investment Limited (H)	6th Floor, Akademi Etiqa, No23 Jalan Melaka, 50100 Kuala Lumpur, Malaysia
Myanmar	Spirax Sarco Ltd	No.192, Kabar Aye Pagoda Road, Myanmar Centre – Tower 2, Unit.1218, Bahan Township, Yangon, Myanmar
New Zealand	Spirax Sarco Ltd	6 Nandina Avenue, East Tamaki, Auckland 2013, New Zealand
Philippines	Spirax-Sarco Philippines Inc	2308 Natividad Building, Chino Roces Avenue Extension, Makati City, Philippines
Singapore	Spirax Sarco Pte Ltd	21 Changi South Avenue 2, #01-01 Singapore 486630, Singapore
	Spirax-Sarco APAC Investments Pte Ltd	21 Changi South Avenue 2, #01-01 Singapore 486630, Singapore
	Gestra Singapore Pte Ltd	21 Changi South Avenue 2, #01-01 Singapore 486630, Singapore
South Korea	Spirax Sarco Korea Ltd	Steam People House, 99 Sadangro 30gil, Dongjak-gu, Seoul, Republic of Korea
Taiwan	Spirax Sarco Co Ltd	6F-3, No. 12, Lane 270, Sec. 3, Pei Shen Road, Shen Keng District, New Taipei City 22205, Taiwan
Thailand	Spirax Sarco (Thailand) Ltd	38 Krungthepkreeta Road, Khlong Song Ton Nun, Lat Krabang, Bangkok 10520, Thailand
Vietnam	Spirax Sarco Vietnam Co Ltd	4th Floor, 180 Nguyen Van Troi Street, Ward 8, Phu Nhuan District, Ho Chi Minh City, Vietnam

Steam Specialties – Americas

Country/Territory	Company Name	Registered Office address
Argentina	Spirax Sarco SA	Av. del Libertador 498, 12th Floor, Buenos Aires C1001ABR, Argentina
Brazil	Spirax Sarco Ind e Com Ltda	Avenida Manoel Lages do Chão, 268, Bairro Portão, Cotia, São Paulo, 06705-050, Brazil
	Spirax-Sarco Servicos de Engenharia Ltda	Avenida Manoel Lages do Chão, 268, Bairro Portão, Cotia, São Paulo, 06705-050, Brazil
	Hiter Controls Engenharia Ltda	Avenida Manoel Lages do Chão, 268, Bairro Portão, Cotia, São Paulo, 06705-050, Brazil
Canada	Spirax Sarco Canada Ltd	383 Applewood Crescent, Concord, ON L4K 4J3, Canada
Chile	Spirax-Sarco Chile Ltda	Las Garzas 930, Galpón E, Quilicura, Santiago de Chile, Chile
	Inversiones Spirax-Sarco Chile Ltda (H)	Las Garzas 930, Galpón D, Quilicura, Santiago de Chile, Chile
Colombia	Spirax Sarco Colombia SAS	Carretera Panamericana No 3-150, Jamundi, Valle del Cauca, Cali, Colombia
Mexico	Spirax Sarco Mexicana, SAPI DE CV	Boulevard Alianza 30B, Parque Industrial CPA, Ciénega de Flores Nuevo León, CP 65550, Mexico
Peru	Spirax Sarco Peru SAC	Av. Guillermo Dansey 2124, Lima, Lima, Perú
United States	Spirax Sarco Inc	1209 Orange Street, Wilmington, DE 19801, United States
	Sarco International Corp (H)	1209 Orange Street, Wilmington, DE 19801, United States
	Spirax Sarco Investments, Inc (H)	251 Little Falls Drive, Wilmington, DE 19808-1674, United States
	Gestra USA, Inc	1209 Orange Street, Wilmington, DE 19801, United States

Our Global Operations continued

Electric Thermal Solutions

Country/Territory	Company Name	Registered Office address
Australia	Vulcanic TEE Pty Ltd	7 Buckman Cl, Toormina NSW 2452, Australia
Belgium	Vulcanic SA	Uitbreidingstraat 60-62, 2600 Berchem, Belgium
Brazil	Chromalox Engenharia Ltda	Avenida Manoel Lages do Chão, 268, Bairro Portão, Cotia, São Paulo, 06705-050, Brazil
Canada	Canadian Heat Acquisition Corp (H)	7051 68th Ave NW, Edmonton, Alberta, T6B 3E3, Canada
China	Chromalox Precision Heat Control (Shanghai) Co Ltd	88 Taigu Road, Suite A2, 4th Floor – Fenggu Building, Shanghai, 200131, China
	Chromalox Precision Heat Control (Suzhou) Co Ltd	T02, No 1801, Pangjin Road, Pangjin Industrial Park, Wujiang, Suzhou, 215200, China
	Thermocoax (Chengdu) Co Ltd	No.11 Fujiang Road, Shuangliu Park, Jiaelong Industry Port, Chengdu, Sichuan, China
France	Constructions Electro-Thermiques D'Alsace SAS	42 Rue des Aviateurs, 67500 Haguenau, France
	Etirex SAS	23 Route de Château Thierry, Noyant-et-Aconin, Soissons, Cedex, F 02203, France
	Loreme SAS	12 Rue des Potiers d'Etain, 57070 Metz, France
	RS Isolec SAS	45 Avenue des Acacias, 45120 Cepoy, France
	Thermocoax Développement SAS	40 Boulevard Henri Sellier, 92150 Suresnes, France
	Thermocoax SAS	Usine de Planquignon, Athis-de-l'Orne, 61430 Athis-Val de Rouvre, France
	Univers 32 SAS (H)	41 Avenue de Friedland, 75008 Paris, France
	Vulcanic Assets SAS (H)	48 Rue Louis Ampère, 93330 Neuilly-sur-Marne, France
	Vulcanic Management 1 SAS (H)	48 Rue Louis Ampère, 93330 Neuilly-sur-Marne, France
	Vulcanic Management 2 SAS (H)	48 Rue Louis Ampère, 93330 Neuilly-sur-Marne, France
	Vulcanic Group Holding SAS (H)	48 Rue Louis Ampère, 93330 Neuilly-sur-Marne, France
	Vulcanic SAS	48 Rue Louis Ampère, 93330 Neuilly-sur-Marne, France
Germany	Chromalox Isopad GmbH	Englerstraße 11, 69126 Heidelberg, Germany
	Vulcanic GmbH	Donaustraße 21, 63452 Hanau, Germany
	Vulcanic Triatherm GmbH	Flurstraße 9, 96515 Sonneberg, Germany
Hong Kong	Chromalox Hong Kong Holdings Ltd (H)	33/F, Shui On Centre, Nos 6-8 Harbour Road, Wanchai, Hong Kong
India	Chromalox India Precision Heat & Control Private Limited	1st Floor, 6 Unicom House, A-3 Commercial Complex, New Delhi, Janakpuri, 110058, India
Mexico	ELW Industrial S. de R. L. de C.V.	Carretera Nacional, K.M. 8.5, Modulo Industrial de America, Lote #5, Nuevo Laredo, Tamaulipas, 88277, Mexico
Singapore	Chromalox Precision Heat and Control (Singapore) Pte Ltd	No 11 Woodlands Close, #05-34, Singapore, 737854, Singapore
Spain	Vulcanic Termoelectrica SLU	Carretera de Viernoles no.32, 39300 Torrelavega, Cantabria, Spain
Thailand	Chromalox (Asia Pacific) Ltd	383/2, The Village Business Centre, Unit D16-A, Moo 12, Sukhumvit Road, Nongprue, Banglamung, Chon Buri, 20151, Thailand
United Arab Emirates	Chromalox Gulf DWC, LLC	PO Box 390012, Office No: E-2-0226, Business Park, Dubai Aviation City, United Arab Emirates
United Kingdom	Chromalox (UK) Ltd	AMP House, 2nd Floor, Dingwall Road, Croydon, Surrey, CR0 2LX, United Kingdom
	Thermocoax UK Ltd	Tower House, Lucy Tower Street, Lincoln, LN1 1XW, United Kingdom
	Vulcanic UK Ltd	Windward Barn, Honningham Thorpe Business Park Norwich Road, Colton, Norwich, NR9 5BZ, United Kingdom
United States	190 Detroit Street, LLC	2280 Hicks Rd., STE 500 Rolling Meadows, IL 60008, United States
	305 Cary Point, LLC	190 Detroit Street, Cary, IL 60013, United States
	325 Cary Point, LLC	190 Detroit Street, Cary, IL 60013, United States
	Cary Detroit, LLC	190 Detroit Street, Cary, IL 60013, United States
	Chromalox, Inc.	2711 Centerville Rd., Suite 400, Wilmington, DE 19808, United States
	Durex HoldCo Corp (H)	1209 Orange Street, Wilmington, DE 19801, United States
	Durex International, LLC	251 Little Falls Drive, Wilmington, DE 19808-1674, United States
	Heat Acquisition Corp (H)	2711 Centerville Rd., Suite 400, Wilmington, DE 19808, United States
	Thermocoax, Inc	1209 Orange Street, Wilmington, DE 19801, United States
	Vulcanic EML, LLC	5907 Breen Drive, Houston, TX 77086, United States

Watson-Marlow Fluid Technology Solutions

Country/Territory	Company Name	Registered Office address
Australia	Watson-Marlow Pty Ltd	Unit 15, 19-26 Durian Place, Wetherill Park, NSW 2164, Australia
Austria	Watson-Marlow Austria GmbH	Rathaus Viertel 3/1 OG/TOP 311, Guntramsdorf A 2353, Wien, Austria
Belgium	Watson-Marlow NV	Industriepark 5, B-9052 Zwijnaarde, Belgium
Brazil	Watson-Marlow Bredel Ind e Com de Bombas Ltda	Alameda Oceania, 63, Polo Empresarial Tamboré, Santana de Parnaíba, São Paulo, CEP 06543-308, Brazil
Canada	Watson-Marlow Canada Inc	383 Applewood Crescent, Concord, ON L4K 4J3, Canada
Chile	Watson-Marlow Bombas Chile Ltda	Las Garzas 930, Galpón E, Quilicura, Santiago de Chile, Chile
China	Watson-Marlow	No. 211, Wenjing Road, Shanghai Minhang District, China
Colombia	Watson-Marlow Colombia SAS	Carretera Panamericana No 3-150, Jamundi, Valle del Cauca, Cali, Colombia
Czech Republic	Watson-Marlow sro	Pražská 1455/18a, 102 00 Praha 10, Czech Republic
Denmark	Watson-Marlow Flexicon A/S	Frejasvej 2, 4100 Ringsted, Denmark
Finland	Watson-Marlow Finland Oy	Niittytie 25 A 24, 01300 Vantaa, Helsinki, Finland
France	Watson-Marlow SAS	9 Route De Galluis, Zi Les Croix, 78940 La Queue Lez Yvelines, France
Germany	Watson-Marlow GmbH	Kurt-Alder-Str. 1, 41569 Rommerskirchen, Germany
Hungary	Watson-Marlow Kft	Lajos ucta 30, Budapest 1023, Hungary
India	Watson-Marlow India Private Ltd	Mahalaxmi Icon, S. No. 132/2A-3A, Near Sai HP Petrol Pump, Pune-Mumbai Bypass Road, Tathawade, Pune, Maharashtra, 411 033, India
Ireland	Watson-Marlow Ltd	Unit 1013, Gateway Business Park, New Mallow Rd., Cork, Ireland
Italy	Watson-Marlow Srl	Via Padana Superiore 74/D, 25080 Mazzano, Brescia, Italy
Japan	Watson-Marlow Co Ltd	4-23-21 Ukima Kita-ku, Tokyo 115-0051, Japan
Malaysia	Watson-Marlow SDN BHD	6th Floor, Akademi Etiqa No. 23 Jalan Melaka, 50100 Kuala Lumpur W.P., Malaysia
Mexico	Watson-Marlow S de RL de CV	Boulevard Alianza 30B, Parque Industrial CPA, Ciénega de Flores Nuevo León, CP 65550, Mexico
Netherlands	Watson-Marlow BV	Oslo 9 – 11, 2993LD Barendrecht, Netherlands
	Watson-Marlow Bredel BV	Sluisstraat 7, 7491 GA, Delden, Netherlands
	Watson-Marlow Bredel Holdings BV (H)	Sluisstraat 7, 7491 GA, Delden, Netherlands
	Watson-Marlow Bredel Holdings II BV (H)	Sluisstraat 7, 7491 GA, Delden, Netherlands
New Zealand	Watson-Marlow Ltd	Unit F, 6 Polaris Place, East Tamaki, Auckland 2013, New Zealand
Norway	Watson-Marlow Norge AS	Vestvollveien 14A, 2019 Skedsmokorset, Norway
Philippines	Watson-Marlow Inc	10th Floor EGI Rufino Plaza, Sen. Gil Puyat Avenue, Corner Taft Avenue, Barangay, 38 Pasay City, Fourth District, Philippines
Poland	Watson-Marlow Sp Zoo	Al. Jerzego Waszyngtona 146, 04-076 Warszawa, Poland
Singapore	Watson-Marlow Pte Ltd	421 Tagore Industrial Avenue, #01-13, Singapore 787805, Singapore
South Africa	Watson-Marlow Bredel SA (Pty) Ltd	Unit 6 Cradleview Industrial Park, Cnr Beyers Naude Drive & Johan Street, Laser Park, South Africa
Spain	Watson-Marlow SLU	Tuset, 20 3 – 08006, Barcelona, Spain
Sweden	W-M Alitea AB	Hammarby Fabriksväg 29-31, SE-120 30 Stockholm, Sweden
Switzerland	Watson-Marlow AG	Gustav-Maurer-Strasse 9, 8702 Zollikon
Taiwan	Watson-Marlow Co Ltd	No.9 Lane 270 Sec. Beishen Road, Shenkeng District, New Taipei City 222, Taiwan
United Arab Emirates	Watson Marlow FZCO	Office Number FZJOA2005, Jafza One, Jebel Ali Free Zone, Dubai, United Arab Emirates
United Kingdom	Aflex Hose Ltd	Dyson Wood Way, Bradley, Huddersfield, HD2 1GZ, United Kingdom
	BioPure Technology Ltd	Bickland Water Road, Falmouth, Cornwall, TR11 4RU, United Kingdom
	Watson-Marlow Ltd*	Bickland Water Road, Falmouth, Cornwall, TR11 4RU, United Kingdom
United States	ASEPCO	1161 Cadillac Ct, Milpitas, CA 95035, United States
	Watson-Marlow America Manufacturing Inc	37 Upton Drive, Wilmington, MA 01887, United States
	Watson Marlow Inc	37 Upton Drive, Wilmington, MA 01887, United States
	Watson Marlow Inc	37 Upton Technology Park, Wilmington, MA 01887, United States
	Watson-Marlow Flow Smart Inc	1675 South State St., Suite B, Dover, DE 19901 United States

Our Global Operations continued

Dormant companies

Country/Territory	Company Name	Registered Office address
Canada	Canadian Heat Holding Corp	6600-100 King Street W., 1 First Canadian Place, Toronto, Ontario, M5X 1B6, Canada
France	Heat Holding France SAS	23 Route de Château-Thierry, 02200 Noyant-et-Aconin, Soissons, France
Russia	Vulcanic (Representative Office)	Business Centre Grad, 1 Bld, 3A Solnechnaya Street, Moskovskoe Poselenie, 108811 Moscow, Russia
United Kingdom	Gervase Instruments Ltd*	Charlton House, Cirencester Road, Cheltenham, Gloucestershire GL53 8ER, United Kingdom
	Heat Holding (UK) Limited	AMP House, 2nd Floor, Dingwall Road, Croydon, Surrey, CR0 2LX, United Kingdom
	SARCO Ltd*	Charlton House, Cirencester Road, Cheltenham, Gloucestershire GL53 8ER, United Kingdom
	Sarco Thermostats Ltd	Charlton House, Cirencester Road, Cheltenham, Gloucestershire GL53 8ER, United Kingdom
	Spirax Manufacturing Co Ltd	Charlton House, Cirencester Road, Cheltenham, Gloucestershire GL53 8ER, United Kingdom
	Spirax-Sarco Europe Ltd*	Charlton House, Cirencester Road, Cheltenham, Gloucestershire GL53 8ER, United Kingdom
	Spirax-Sarco International Ltd*	Charlton House, Cirencester Road, Cheltenham, Gloucestershire GL53 8ER, United Kingdom
United States	Electronic Control Systems, Inc.	103 Gamma Drive, Pittsburgh, PA 15238, United States
	Heat Asset Acquisition Corp.	251 Little Falls Drive, Wilmington, DE 19808-1674, United States
	Mexican Heat Holding Corp.	c/o RA PO Box 20380, Carson City, Nevada, 89706, United States
	Mexican Heat Holding, LLC	160 Greentree Dr., Suite 101, Dover, Delaware, 19904, United States
	Ogden Manufacturing Co.	2711 Centerville Rd., Suite 400, Wilmington, DE 19808, United States

The global operations listed on pages 242 to 246 are registered companies.

In addition to these operations we have a number of other operating units, including an Associate company; a company that is part owned with a third-party trust; branches of Spirax Sarco steam or Watson-Marlow companies; and several Watson-Marlow businesses that operate via Spirax Sarco steam business companies. Also, during 2021, the Spirax Sarco Group Education Fund was established, however under IFRS 10 the Group does not have control of this fund and therefore is not included in the Consolidated Financial Statements.

Notes

1. All subsidiaries in the tables on pages 242 to 246 are indirect subsidiaries of Spirax-Sarco Engineering plc, unless indicated*. All subsidiaries listed are 100% owned by the Group, except as follows:

Company	% owned by the Group
Spirax Sarco Egypt	98.867%
Spirax Sarco Energy Solutions LLC, Egypt	98.992%
Spirax Sarco Korea Ltd	97.5%
Spirax-Sarco Philippines Inc	99.998%
Spirax Sarco Services South Africa (Pty) Ltd	48.51%. (51.49% is owned by a third-party trust, The Tomorrow Trust). The Group has control of the company and exposure, or rights, to variable returns from its investment in the investee.
Spirax Sarco (Thailand) Ltd	99.995%

2. In addition to the subsidiaries in the tables on pages 242 to 246, we have the following operations:

Steam Specialties (Spirax Sarco):

Country	Operating as a branch of
Cambodia	Spirax Sarco Pte Ltd, Singapore
Denmark	Spirax-Sarco Limited, UK
Ghana	Spirax-Sarco Limited, UK
Greece	Spirax-Sarco Limited, UK
Ireland	Spirax-Sarco Limited, UK
Japan	Spirax-Sarco Limited, UK
Pakistan	Spirax-Sarco Limited, UK
Saudi Arabia	Spirax-Sarco Limited, UK
Sri Lanka	Spirax-Sarco India Private Ltd, India
Tanzania	Spirax-Sarco Limited, UK
Uganda	Spirax-Sarco Limited, UK
United Arab Emirates	Spirax-Sarco Limited, UK
Zambia	Spirax Sarco South Africa (Pty) Ltd, South Africa

Watson-Marlow Fluid Technology Solutions:

Country	Operating as a branch of
Serbia	Watson-Marlow Austria GmbH
	Operating via
Argentina	Spirax Sarco SA, Argentina
China	Spirax-Sarco Engineering (China) Ltd
Indonesia	PT Spirax-Sarco Indonesia
South Korea	Spirax Sarco Korea Ltd
Thailand	Spirax Sarco (Thailand) Ltd
Vietnam	Spirax Sarco Vietnam Co Ltd

This complete list of our global operations, including subsidiaries, forms part of the audited Financial Statements. For more information see Note 2 in the Company Financial Statements.

3. UK registered subsidiaries exempt from audit:

BioPure Technology Ltd (company no. 03665190), Chromalox (UK) Ltd (company no. 04325451), Gestra UK Ltd (company no. 10639879), Spirax-Sarco America Ltd (company no. 07829847), Spirax-Sarco Investments Ltd (company no. 00100995), Spirax-Sarco Overseas Ltd (company no. 01472201), V.C.E Restored Ltd (company no. SC126116), Gestra Holdings Ltd (company no. 11612492), Spirax-Sarco America Investments Ltd (company no. 11639451), Heat Holding (UK) Limited (company no. 04325456), Aflex Hose Ltd (company no. 01088141) and Thermocoax U.K. Ltd (company no. 03504380) qualify to take the statutory audit exemption as set out within section 479A of the Companies Act 2006 for the period ended 31st December 2022. Spirax-Sarco Engineering 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.

Key

- * Direct subsidiary owned by Spirax-Sarco Engineering plc
- (H) Holding company

Officers and Advisers

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Rothschild

JPMorgan Securities plc (JPMorgan Cazenove)

Financial PR

Citigate Dewe Rogerson

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HSBC Bank PLC

BNP Paribas

Citibank, N.A.

Crédit Industriel et Commercial

ING Bank, N.V.

UniCredit Bank AG

Wells Fargo Bank, N.A.

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excluding public holidays in England and Wales

Website: www.shareview.co.uk

Solicitors

Baker & McKenzie LLP

Important dates

Annual General Meeting	10th May 2023
2023 Half Year Results	10th August 2023

Final dividend**

Ordinary shares quoted ex-dividend	20th April 2023
Record date for final dividend	21st April 2023
Final dividend payable	19th May 2023

**Subject to shareholder approval at the AGM.



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