Catalysing the net zero transition

Johnson Matthey
Inspiring science, enhancing life

Annual Report and Accounts 2023

We are Johnson Matthey

Watch: our latest company film, describing JM in two minutes
matthey.com/corporate-video


Catalytic converters: fighting pollution for 50 years and beyond


PGMs: a circular solution for a net zero future


Sustainable aviation fuel: ready for take off


Hydrogen: ramping up to reach net zero

www.matthey.com

Our approach to reporting

We believe in being as transparent as possible in our reporting on sustainability performance and strive to make public all the information our stakeholders require through adopting the most well respected independent reporting standards and ratings services.

This report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards 2021 and also aligns with the Sustainability Accounting Standards Board (SASB) chemical sector reporting requirements (version 2018-10). Our Task Force on Climate-related Financial Disclosures (TCFD) report is included on pages 45-52 and complies fully with the TCFD disclosure recommendations. The numbers included in this section cover the entire Johnson Matthey group.

ERM Certification and Verification Services Limited (ERM CVS) were engaged to provide limited assurance of selected information as presented on page 228. Please see ERM CVS' full assurance statement on pages 229-230 for more details.

Find more information online

- *Sustainability Performance Databook: matthey.com/sustainability-databook*
- *GRI Content Index: matthey.com/gri-content-index*
- *SASB Index: matthey.com/sasb-index*
- *PAI Statement: matthey.com/pai-statement*
- *TCFD Compliance Table: matthey.com/tcfd-compliance-table*
- *Assurance Statement: matthey.com/assurance-statement*

Our products and services are where we believe we can have most positive impact on society and we have aligned our strategy with four of the UN SDGs

Cautionary statement

The strategic report and certain other sections of this annual report contain forward looking statements that are subject to risk factors associated with, among other things, the economic and business circumstances occurring from time to time in the countries and sectors in which the group operates. It is believed that the expectations reflected in these statements are reasonable, but they may be affected by a wide range of variables which could cause actual results to differ materially from those currently anticipated.

Icons within this report

Read more
Key performance indicator
Content available online
Principal risk

Click this link to see our glossary: matthey.com/ARA-glossary

Cover image: Fanesa Fernandes, Production Operator, checks a hydrogen fuel cell component at our Hydrogen Technologies site in Swindon

Our business at a glance

Our businesses

Read more on pages 14-21

Clean Air

Designs and manufactures emission control catalysts to reduce harmful pollutants , e.g. NOx, from vehicle exhausts and a range of stationary sources.

Platinum Group Metal Services (PGMS)

Metals management: supporting customers with short and long term metal planning through leading market research and price risk management.
PGM (platinum group metals) applications: processing metal into more complex, value added products for a vast array of uses. This includes providing PGM-based products for all our other businesses.
Refining: recycling used PGMs including spent auto-catalysts and taking mined PGMs to purity.

Catalyst Technologies

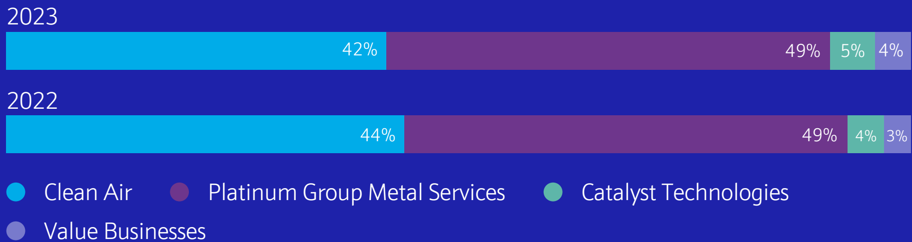
Designs and licences process technology and designs and manufactures catalysts for a wide range of processes used in the energy and chemicals industries to create products used in transportation fuels, fertilisers, wood products, paints, coatings and polymers.

Hydrogen Technologies

Designs and manufactures the key performance-defining components (catalyst-coated membranes) used at the heart of fuel cells and electrolysers.

In addition, we have three Value Businesses that are not within the core portfolio: Battery Systems, Medical Components and Diagnostic Services.

Revenue split (%)



Hydrogen Technologies represents less than 1% of total revenue

A global footprint

Europe
42% of Group sales
55% of employees

China
10% of Group sales
8% of employees

Rest of Asia
13% of Group sales
11% of employees

North America
29% of Group sales
17% of employees

Rest of World
6% of Group sales
9% of employees

12,600 employees worldwide

Supported by our values

We are a truly purpose-driven organisation – and our values provide the foundation for everything we do.

- Protecting people and the planet
- Acting with integrity
- Innovating and improving
- Working together
- Owning what we do

Key performance indicators

Financial performance

Revenue
£14,933m
2021/22: £16,025m

Sales[1] (excluding precious metals)
£4,201m
2021/22: £3,778m

Operating profit
£406m
2021/22: £255m

Underlying operating profit[1]
£465m
2021/22: £553m

Clean Air cash flow
£638m
2021/22: £772m

(Loss)/earnings per share
150.9p
2021/22: (52.6)p

Underlying earnings per share[1]
178.6p
2021/22: 213.2p

Ordinary dividend per share
77.0p
2021/22: 77.0p

Sustainability performance

Sales contributing to our four priority UN SDGs
82.0%
2021/22: 83.8%

R&D spend contributing to our four priority SDGs
89.5%
2021/22: 88.1%

Total Scope 1 and 2 GHG emissions (market-based)[2]
363,686 tCO_2e
2021/22: 410,110 tCO_2e

Total Scope 3 (Category 1) Purchased Goods and Services GHG emissions[2]
2,495,475 tCO_2e
2021/22: 2,978,197 tCO_2e

GHG emissions avoided from our technologies (compared to conventional offerings)[2]
848,643 tCO_2e
2021/22: 470,706 tCO_2e

Recycled PGM content in JM's manufactured products[3]
69%
2021/22: 70%

Total Recordable Injury and Illness Rate(TRIIR) employees + contractors
0.47
2021/22: 0.59

D&I – female representation across all management levels
28%
2021/22: 27%

1. Non-GAAP measures are defined and reconciled in note 34 of the financial statements, refer to pages 206 - 209
2. Prior year rebaselined to remove divested businesses, please see page 222 for more information
3. Prior year restated due to calculation refinement, please see page 222 for more information

For more information on our ESG ratings please see page 23

For more information on our sustainability targets please see page 24

Patrick Thomas
Chair

Liam Condon
Chief Executive Officer

Our purpose

Catalysing the net zero transition

As a global society we face big challenges. Many of the world's leading energy, chemicals and automotive companies depend on Johnson Matthey's technology and expertise to decarbonise, reduce harmful emissions and improve their sustainability.

Our purpose is to catalyse the net zero transition for our customers, and our strategy is derived from this purpose. In this report we explain some of the ways our solutions are already helping our customers meet their ambitions, and how we will create value for them and wider society over the coming years. Even while we reduce our own operational footprint to achieve net zero by 2040.

We know it's not enough to be purpose-led: we also need to be performance-driven. If we are to enable this transformation for our customers, we must transform too.

Chair's statement

It's a great privilege to be Chair of Johnson Matthey, a company with a rich history, world-class scientific skills and incredibly talented people. Over the last year, the Board has enjoyed working with Liam and his refreshed leadership team as they have injected pace and commercial thinking into the company's new strategy.

In May 2022, we launched a transformation programme to strengthen our commercial focus, ensuring that we concentrate on the technologies and markets where we have the greatest strength and competitive advantage.

This isn't an overnight fix, but it is already starting to deliver. By creating a more focused portfolio with four business areas, we are driving value creation, taking a much more customer-centric approach in order to seize opportunities with a simplified operating model to drive execution. The Board's challenge was how to measure and track progress, and I am pleased that we are seeing strong performance, delivering against strategic milestones. There is more information on this on page 13.

We are transforming our business at a time when our markets are coming at us faster than ever before. For example, the pace of decarbonisation activities in China have accelerated as it becomes the world's biggest fuel cell market. The EU has adopted a climate law enshrining its new climate targets of at least a 55% reduction in greenhouse gas (GHG) emissions by 2030 compared to 1990 levels. And in the US, it is a completely changed regulatory landscape. There has been a lot of noise about the Inflation Reduction Act – it's quite simply a global game-changer, offering $369 billion in subsidies.

We will always follow the markets and our customer demand – in the examples above, we are developing partnerships, winning business and helping customers catalyse the net zero transition. I am confident that this will continue to grow over the coming years.

Shareholder engagement

This year, I have spent a significant amount of time talking to our shareholders about the direction of travel. I am pleased that they support our vision, and we are aligned on our strategic focus on the right growth markets.

In addition, we engaged Rothschilds to undertake an independent perception study with investors. The purpose was to understand investors' perceptions of, and market sentiment towards JM. The study included in-depth discussions with investors representing 33% of JM's issued share capital and some of our core analysts. Covering strategy, business streams, management, valuation and environmental, social and governance (ESG), the study has been hugely useful for the Board and showed that we are on track and delivering in the right areas.

The study also highlighted the needs of different shareholders, with long-term shareholders focusing on our growth businesses and the future prospects of our Hydrogen Technologies and Catalyst Technologies businesses, while others are looking more for shorter-term performance including the ongoing success of Clean Air. But overall, the main message is that we have the building blocks in place to reinvigorate the investment case, underpinned by strong synergies between our businesses. I am confident that over the coming months, we will be able to show further strong evidence of delivery against our strategic milestones.

We really do understand the need to prove we can maximise shareholder value in the Clean Air business, including plans for site rationalisation. We are working on other efficiencies, tidying the portfolio and delivering cost efficiencies. I am sure that we have the right strategy in place to maximise shareholder value in both the short and long term.

Board focus and changes

I believe that the role of the Board is twofold: to constructively challenge, and encourage and support. The effectiveness of this approach could be viewed in how we navigated some of the challenges this year, including the war in Ukraine, the energy crisis and inflationary pressures.

Chris Mottershead will be retiring from the Board in January 2024, and I would like to thank him for all his hard work and dedication over the last eight years. With Chris's departure, John O'Higgins will take over the role as Chair of the Remuneration Committee.

I am very pleased that in July, Barbara Jeremiah will be joining the board as Senior Independent Director. Barbara brings strong leadership, deep understanding of metals, and has extensive experience in North American markets which will be important for JM as the group evolves.

Finally, I would like to take this opportunity to express my thanks to colleagues across the business who are at the heart of our strategy. It is because of their tireless work that JM is transforming into a company that is fit for the future and enabling our customers to catalyse the net zero transition.

Patrick Thomas
Chair

The drivers of our changing world

Throughout the world, 2022/23 was marked by volatility. But underneath the spikes in energy prices, inflation, conflict and extreme weather, there is a deeper shift happening towards creating more sustainable ways of living. The transition to net zero requires a range of technological innovations. From hydrogen fuel cells to sustainable chemical feedstocks, from new sustainable fuels to advanced emission control solutions with circularity embedded – all have an important part to play in transforming energy, mobility and industrial systems.

Johnson Matthey is not simply reacting to a changing world; we are actively contributing to catalysing the net zero transition, providing solutions for our customers that will have a positive impact.

Our Materiality Statement

Johnson Matthey's sustainability framework and targets cover all ESG topics considered important by our stakeholders. But we have also gone further to set targets on issues such as human rights, community impact and recycling which are not typically seen in the chemicals industry.

You can read more about our Materiality Statement on page 23

1

Decarbonising modern life

It's time for the world to move beyond fossil fuels and harness the power of more sustainable low carbon fuels, chemicals and industrial processes.

Sustainable fuels

Outlook

Many countries are setting transport targets for sustainable fuels or to phase out internal combustion engines. JM's technology helps create low carbon options such as renewable (green) or low carbon (blue) hydrogen and fuel cell technology, as well as developing entirely new types of fuel from alternative feedstocks, such as waste.

Opportunities and challenges

The demand for sustainable fuels is expected to grow significantly over the next 20 years. But a lot of work is still needed to find low carbon solutions for the aviation, maritime and heavy duty vehicle sectors in particular.

What we are doing

Our methanol process and catalyst technology used in Chile's Haru Oni project converts CO_2 captured from the air to produce 550 million litres of e-fuels annually, enough for approximately 220,000 gasoline vehicles. Our Fischer Tropsch (FT) CANS™ technology (co-developed with bp) and HyCOgen™, which also use CO_2 and green hydrogen, were selected by Aramco and Repsol for one of the earliest synthetic fuel plants, in Spain. We continue our research into using alternative feedstocks for aviation and other fuels, innovating to maintain technology leadership in these emerging markets.

Sustainable chemicals

Outlook

Demand for primary chemicals is expected to grow by 25% by 2030. The industry currently accounts for 18% of the world's CO_2 emissions. Increasingly, customers are looking to combine alternative, sustainable feedstocks with catalyst technologies that can turn them into useful products.

Opportunities and challenges

There are two pillars of decarbonisation for the chemical industry. The first pillar is carbon reduction through process optimisation and adding carbon capture and storage technology to current processes. The second is carbon replacement, using more sustainable feedstocks. We have been turning traditional feedstocks into synthesis gas (syngas) for decades. Syngas, a mix of carbon monoxide, carbon dioxide and hydrogen, is essential in enabling the decarbonisation of chemical processes, since it can also be made from alternative, more sustainable feedstocks.

What we are doing

For both pillars of decarbonisation, we have developed leading process technologies. For example, under the CLEANPACE brand, we can retrofit existing assets, enabling the reduction of carbon emissions from those processes by up to 95%.

2

Creating a circular economy

Outlook

If global consumption levels continue to grow at the current pace, there will simply not be enough natural resources to go around. So we need to put the right processes in place and embed circularity into how we source and use materials.

Opportunities and challenges

We are already the world's largest PGM recycler by volume. The amount of CO_2 for an ounce of recycled PGM is 30-50 times lower than newly mined PGM. We can reduce the carbon footprint of our products but also our customers' too in automotive, industrial, chemical and life sciences applications. We are applying our longstanding recycling expertise to emerging technologies, including fuel cell and electrolyser stacks to enable circularity in the hydrogen economy.

What we are doing

We understand the full life cycle of the PGMs in our products and continue to work with our partners to enable greater recycling and refining at the end of their life. We are investing in our global refining capabilities so that we are better positioned to deal with the increasing volume and range of materials we will need to recycle in the future. And in our innovation and R&D processes, we take "design for recycling" into account right from the start.

3

Cleaner air, healthier people

Outlook

Air pollution kills millions of people every year and the majority of the world's population are continually exposed to poor air quality. With increasing urbanisation, this problem looks set to intensify unless significant action is taken to reduce harmful emissions.

Opportunities and challenges

We know that transitioning the world's transport systems to net zero is a long and complex process. While alternative powertrains, such as fuel cell and battery electric, continue to develop, automotive catalysts will be needed in engines using drop-in sustainable fuels. We need to be doing all we can to ensure the vehicles on our roads now are as clean as possible.

What we are doing

Today, one in three cars worldwide carries JM's emission control technology. And we continue to invest and innovate to ensure that our technologies help customers meet the higher standards demanded by new legislations. We are investing in our plants throughout the world, and continue to innovate to further optimise performance of gasoline and diesel autocatalysts, as well as how best to control emissions from alternative fuel sources in the future.

4

An evolving regulatory landscape

Outlook

All over the world, governments are bringing in legislation to incentivise investments in sustainable technology and business practices. For example, 2022 saw the introduction of the Inflation Reduction Act (IRA) in the US and the Green Deal Industrial Plan in Europe. These sit alongside a growing body of national legislation and targets to reach net zero by 2050.

Opportunities and challenges

The market is moving in our direction faster than expected. Across the energy, chemicals and transport sectors, the transition being driven by these new requirements is likely to involve a mosaic of different technologies and solutions. In addition, governments are increasingly focused on security of supply for critical minerals, including PGMs, which is aligned to our recycling strategies.

What we are doing

We work alongside our partners and peers to create a unified voice to help influence policy in a way that accelerates the energy transition. For example, we are working closely with the Association for Emissions Control by Catalyst (AECC) and parties across the industry to ensure that the European Commission enables a swift adoption of the ambitious Euro 7 emission standards.

5

Geopolitical and economic volatility

Outlook

Global GDP is predicted to slow in 2023/24, with some countries potentially entering recession. Inflationary pressures, supply chain challenges as well as the ongoing impact of the conflict in Ukraine might affect activity.

Opportunities and challenges

While Johnson Matthey continues to deal with economic headwinds, the macroeconomic picture demonstrates more than ever the importance of accelerating the energy transition. This has sharpened our focus, enabling us to be laser-clear on our strengths, and make progress towards our 2030 goals.

What we are doing

Our transformation and commitment to catalysing the net zero transition for our customers enables us to take full advantage of the opportunities we see being created in a more volatile and complex world. We have also adapted as necessary. In 2022, we ceased all new opportunities in Russia, closed our Moscow office and evaluated all other activities on a case by case basis. Our business units also made significant progress in recovering inflation costs throughout 2022/23.

Our business model

Addressing three markets...

Energy
Designing technologies for a range of sustainable energy sources, including hydrogen, sustainable aviation fuel, methanol and ammonia.

Chemicals
Process and catalyst technologies that enable the production of chemicals, helping customers lower their carbon and environmental footprint.

Automotive
Emission control systems that reduce NO_x and other particulates that harm people and the environment.

We deliver through our four businesses...

Clean Air
Leading in autocatalyst markets

See page 14-15 for where our catalysts are being used

Catalyst Technologies
#1 in syngas-based chemicals and fuels technology

See page 18-19 for how we are leading in today's markets

Hydrogen Technologies
Market leader in performance components for fuel cells and electrolysers

See more on page 20-21 on how we are developing the Hydrogen economy

Platinum Group Metal Services
#1 global PGM refiner

See page 16-17 on the PGM ecosystem

c. 80%
PGMs used in our products are internally refined

By leveraging synergies and competitive advantages…

Expertise in metal chemistry
Everything we do across our four businesses is underpinned by our leadership in complex metal chemistry, catalysis and process engineering.

Mutual customers and partners
As our customers transition to net zero, we provide a fully integrated and comprehensive offering through collaboration across our business units.

Shared technology and capabilities
We have more than 1,600 scientists and engineers and common technology capabilities across all our businesses – with more than 4,000 patents granted and around 2,000 applications pending.

Foundational PGM ecosystem
We have deep insights into PGM markets through our Precious Metal Management team and our refining operations. Around 80% of the PGMs we use are sourced internally from our refineries. This shared resource creates a resilient supply, lower exposure to price risk and efficient working capital.

Security of supply
Our customers count on us for a reliable supply of PGMs and recycling services – around 50% of our Clean Air customers ask us to source their PGMs. This is because we are a metal hub for PGMs, underpinned by our status as the leading recycler of PGMs.

A comprehensive sustainability offering
Every part of our business is committed to helping our customers adapt processes and products to reach the sustainability goals our society and planet are depending on.

To create value for stakeholders.

Customers and strategic partners
Our customers gave us an average rating of 8.3 out of 10 in our annual customer satisfaction surveys. This is ahead of the industry average of 7.8. They highlight the depth of relationships and our technical capabilities.

8.3
out of 10

Society
Our catalytic converters have been helping to improve air quality since 1974. 92,000 additional tonnes of NO_x were removed from tailpipes in 2022/23.

762
Premature deaths prevented

Investors
Our performance-driven culture and play-to-win strategy create sustainable value for investors looking to support the net zero transition.

77.0p
Dividend maintained at the same level

Employees
Our teams are building a more sustainable future every day – and we ensure they are safe, supported and able to create rewarding careers at Johnson Matthey.

12,600
employees as of 31st March 2023

Communities
We work with a range of partners on charitable giving and employee volunteering schemes.

2,063
volunteering days in 2022/23

Suppliers
We partner with our suppliers to embed the highest standards to deliver for our customers.

38%
supplier spend (excl pgms) has EcoVadis medal for good ESG performance

For more information on our s172 statement please see page 72

For more information on our Board's engagement please see page 84

Chief Executive Officer's statement

This time last year I was very new to Johnson Matthey, and I wrote in the 2022 Annual Report how energised I was by JM's purpose and the way our people use their expertise to help catalyse the net zero transition. In the past year I have been immensely privileged to visit many of our sites around the world and see for myself the extraordinary science, refining and manufacturing capabilities that have been the bedrock of our company for over 200 years.

Equally importantly, I have personally visited many of our key customers and have been encouraged by their feedback, but also motivated to ensure JM continues to transform to meet the needs of our customers and continue to lead in our chosen markets.

Despite the global macro-economic challenges, I'm proud that Johnson Matthey has made good progress in delivering on our strategy and our milestones, with results in line with market expectations. There is more detail on the strategy on pages 12-13, but I am pleased that several regulatory tailwinds for renewable energy and decarbonisation mean that our chosen growth markets are going to be even bigger and are coming at us faster than originally anticipated.

Winning in our markets

In our strategy refresh in May 2022, we outlined how we would focus only on the markets where we can win, serving our customers through our four core businesses: Clean Air, PGMS, CT and HT. We said we would divest businesses that are not within the core portfolio and this is well on track, with the divestment of Piezo Products and Diagnostic Services.

Our core businesses have done very well in securing new customer commitments. Clean Air secured a number of important Euro 7 targeted customer wins, including all of Mercedes Benz's light duty diesel business in Europe.

CT business achieved its commercial milestones and signed several significant licences, including H_2H Saltend, one of the UK's largest low carbon (blue) hydrogen projects. In addition, our FT CANS™ technology has been selected by Strategic Biofuels for their Louisana project which aims to produce the world's lowest carbon footprint liquid fuel.

HT secured a transformational strategic partnership with Plug Power, including a co-investment in what is expected to be the largest (5GW scaling to 10GW over time) catalyst coated membrane (CCM) manufacturing facility in the world.

In our PGMS refining business we have won new contracts with a large miner, and increased our market share with some key recyclers. We have also won new contracts across our products business, most notably with our pharmaceutical and agro-chemical customers.

Financial performance in 2022/23

Our financial performance for the year was in line with market expectations, albeit below the prior year. The three main factors driving performance were lower precious metal prices (c. £55 million impact), cost inflation (particularly energy, raw materials and labour) and weak automotive and truck end markets which continued to be impacted by supply chain disruption. We experienced c. £150 million cost inflation, of which c. £95 million was recovered from customers in the year. As we sharpened our commercial focus and took action to increase efficiency, the recovery rate improved through the year as expected. I am pleased to confirm the total ordinary dividend will be 77.0 pence per share, maintained at the same level as last year.

Focus, simplify, execute

Over the year, we have achieved significant commercial progress and now have in place an internal commercial council to drive further progress across the company and create value for both our customers and JM. We have introduced customer-centricity training for all our leaders to put the voice of the customer front and centre, and improved our customer survey and feedback process. We have invested in our sales teams and have built coordinated key global account teams to enable better synergies across JM.

Our manufacturing and refining expansion activities are on track, particularly for PGMS and HT, as we made significant investments to not only increase capacity but create world-class assets. This is really important as we are expecting strong growth for our businesses that catalyse the net zero transition, combined with higher recycling demand as we shift to a more circular economy. We have also invested significantly in our capital project planning and engineering capabilities, which were identified last year as key enablers to help drive our strategy.

Last year, I also outlined how we would simplify to become more cost-efficient and less bureaucratic. We have accelerated our efforts to streamline our corporate cost base and real estate footprint. We are also simplifying our business processes, which includes a new finance shared service centre in Kuala Lumpur to service all our regions in a much more standardised and efficient manner. This all gives me confidence that we're building a stronger, more resilient business, fit for the future.

Solid foundations for 2023/24

The global macro-economic situation remains challenging with continued high inflation, intermittent supply chain disruption and fluctuating metals pricing. But since we launched the new strategy, our growth markets have been accelerating towards us at a much faster pace than we anticipated even a year ago. This has been driven by energy-related challenges and subsequent regulatory changes, the most significant being the IRA in the US.

By incentivising the production of low carbon production technologies, the IRA has drawn massive investment to the US and created a knock-on effect on green policy-making worldwide. In Europe, the EU has published the Green Deal Industrial Plan, the Net Zero Act and the Critical Raw Materials Act while the UK announced £20 billion of support for CCUS.

This is a pivotal moment for clean energy, and we are more than ready to seize the opportunity. Our customers tell us we have some of the best, and often the very best, technology available for their needs, and we continue to invest strongly in R&D to support our growth.

Growing responsibly

As we deliver against our strategy, it's important we do so responsibly. We have made good progress against our sustainability targets, and significantly increased our climate ambition to ensure we are fully aligned with the 1.5 degree pathway to net zero. This year we were awarded the EcoVadis platinum rating, putting us in the top one percentile of 90,000 companies. This is great recognition of our commitments and the progress we're making so far.

Our people are at the heart of our plans. We recognised that employees were not immune to the cost-of-living crisis, so as a responsible employer we took steps to play our part. This included awarding pay increases, giving temporary supplementary allowances and providing support through Assist, giving our employees access to a team of highly trained and qualified professionals on a variety of financial well-being topics.

We are disappointed that our employee engagement scores did not improve this year, although this is perhaps to be expected given the degree of transformation the company is going through. We have increased the training and support to leadership teams to help them build engagement, and we have revamped our performance management, reward and recognition schemes.

We continue to make safety our top priority, and improved safety leadership across all levels in the company. This has resulted in better occupational and process safety performance compared to last year.

"We are building a stronger, more resilient business, fit for the future"

During the year we welcomed three new members to our Group Leadership Team (GLT): Anne Chassagnette joined in May as our first Chief Sustainability Officer, and in July we welcomed Anish Taneja as CEO for Clean Air and Mark Wilson as CEO for Hydrogen Technologies. Ron Gerrard, Chief EHS and Operations Officer retired in February, and I am very grateful to him for his service to JM. Ron's role was not replaced on the GLT, with his responsibilities divided among the existing members.

In summary, the refreshed strategy; more focused businesses where we play to win; a strong focus on efficiency and important investments for the future have created a strong foundation for sustainable growth. We are enhancing our competitiveness and I'm confident that our strategy will create significant value in the coming years.

I would like to thank the Board for its strong support over the last year, and I would especially like to thank all our employees for their hard work, passion and commitment to make our strategy a success.

Liam Condon
Chief Executive Officer

Detailed results commentary online

matthey.com/fy-22-23

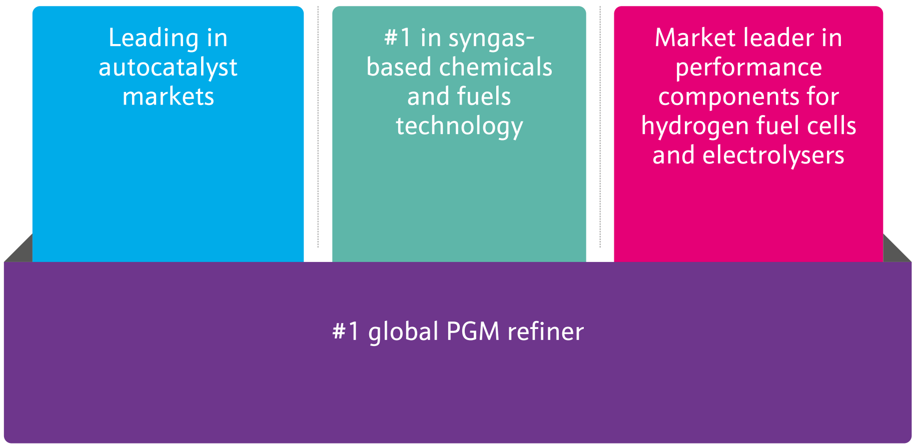
Our strategy

We are playing to win in exciting growth markets where our core competencies and technology portfolio can have maximum impact.

Focus

We launched our revised strategy last year, focusing our portfolio on our core competencies in metal chemistry, catalysis and process technology and divesting Value Businesses. Our goal is to achieve a top three position in all our markets. Our business structure supports this by allowing us to maximise synergies across our four business units.

Our strategic priorities



Disciplined capital allocation

From 2022/23 to 2024/25, we expect to spend £1.1 billion on capital expenditure. This is focused on the core activities where we have the right to win and need to invest to drive growth – our PGM refineries, CT and HT.

We are maintaining a strong balance sheet and allocating capital in a disciplined way. This means investing for growth and attractive returns, ensuring a reliable dividend and returning excess cash to shareholders.

Simplify

Over the past 12 months, we have made progress to develop our people, enhance customer focus and simplify processes and organisational structure.

Some notable achievements include:

- Launch of the JM Production System (JMPS), a common methodology and framework for driving continuous improvement in manufacturing, built around Clean Air's automotive know-how
- Reduction of global policies by 75% so they are now shorter, simpler and more focused
- Deployment of Workday as a single platform for managing employee and organisational data
- Eliminating 170 management roles, enabling investment in new capabilities and growth business.
- Launch of a new finance shared service centre in Kuala Lumpur serving all regions
- Started to rationalise our sites, which is already delivering reductions in business rates, procurement and facilities management costs.

In total, these actions realised c. £45 million in new transformation savings in-year relative to 2021/22 actuals.

In the coming year, the drive to simplify and improve business processes will further accelerate. It will do so through our wide-ranging transformation programme that is fundamentally upgrading JM's business processes and operating model.

This includes actions to:

- Accelerate consolidation of the Clean Air manufacturing footprint, focusing production on the highest productivity lines in North Macedonia, Poland, the US, China and India
- Deploy a common procurement management platform, driving spend to fewer strategic suppliers and increasing competitive sourcing on all commodities
- Transition delivery of major capital projects to a global team with enhanced capabilities in project, contract and partner management
- Implement a strengthened approach to performance management and feedback
- Deliver more than c. £65 million in transformation and procurement savings in 2023/24.

Execute

Our strategy is underpinned by a maturing performance culture. By combining science and purpose with a more commercial mindset, we are driving stronger execution, unlocking near-term cost opportunities and positioning ourselves for long-term growth.

We have committed to reaching 10 strategic milestones by the end of 2023/24 that evidence the execution of our strategy. Focused on customers, investments, people and sustainability, our strong progress across these milestones highlights the success of our performance culture.

Group Commercial Council

We created a commercial council to strengthen our commercial capabilities and cross-JM synergies, with a strong focus on value creation. The council is harnessing the power of all our businesses by taking an integrated oneJM approach to our customers, maximising our current partnerships and building new profitable business.

Strategic milestones	End of 2022/23	End of 2023/24	Progress in 2022/23	Status
Customers				
Win at least 2 large scale strategic partnerships in Hydrogen Technologies	●		Partnerships announced with Plug Power and Hystar	● On track
Win targeted Euro 7 business and deliver on £4 billion+ trajectory for Clean Air	●	●	Firmly on track to win on targeted Euro 7 business AND deliver £4 billion+ cash	● On track
Win >10 additional large scale projects[1]		●	Won five additional large scale projects to date	● On track
Investments				
Expand PGM Services refining capacity in China	●		PGM Services refining capability in China is complete and ramping up	● On track
Complete construction of Hydrogen Technologies CCM plant in UK[2]		●	New CCM plant in UK is on time and on budget	● On track
Targeted capacity expansion (fuel cells catalyst, formaldehyde catalyst)		●	On track	● On track
Complete divestment of Value Businesses		●	Divestment of Piezo Products, Diagnostic Services	● On track
People				
Achieve >70% employee engagement score[3]		●	Employee engagement score has not improved in 2022/23 due to transformation programme	● Requires focus
Sustainability				
Achieve c. 10% reduction in Scope 1+2 GHG emissions against 2019/20 baseline		●	Achieved 13% reduction in Scope 1 + 2 GHG emissions	● On track
Help customers reduce GHG emissions by >1mt p.a. through use of our products		●	Reduced customers' GHG emissions by 850,000 p.a. through use of our products	● On track

1. Includes Catalyst Technologies and Hydrogen Technologies projects
2. To expand total capacity from 2GW to 5GW
3. New methodology for measuring employee engagement (Workday Peakon) now in place
   Baseline score of 6.9 achieved in 2022/23, with new target of 7.2 by 2024/25

Key
- ● On track
- ● Requires focus

Clean Air

Improving air quality, transforming mobility

Our catalytic converters have been helping improve air quality since 1974. Today, our products are installed in around one-third of all new cars on the road, as well as a significant number of trucks and buses around the world. They actively deliver cleaner air to billions of people globally. Climate change and a growing body of air quality regulations are pushing the automotive industry to build cleaner engines and deliver new powertrain options. With our decades of experience in the industry and long history of innovation, we aim to be the lasting partner for our customers, playing a significant role in the transformation of mobility.

92k
additional tonnes of NO_x removed from tailpipes in 2022/23

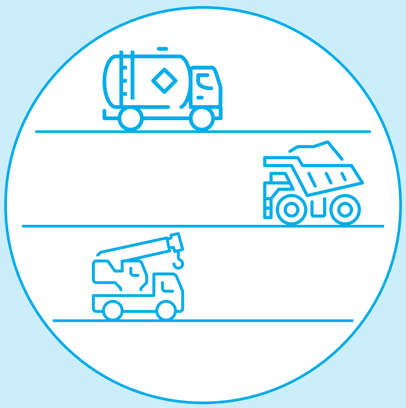
Positioning ourselves to win big

Our leading role in auto-catalysts is underpinned by deep expertise in complex PGM chemistry and catalysis, distinctive technology, longstanding relationships and a global state-of-the-art production footprint. As the auto industry goes through unprecedented change, transitioning towards zero-emission vehicles, clean and efficient internal combustion engine vehicles have a big role to play for decades to come. We aim to be the lasting partner that our customers can rely on at each step of their journey towards sustainable mobility.

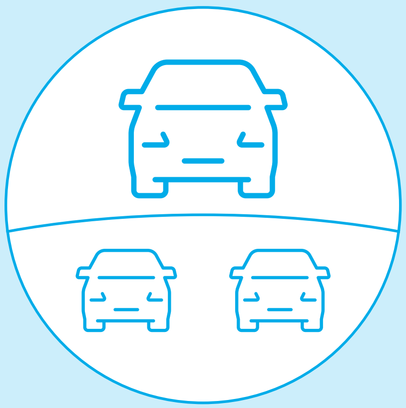
Customer facing and market-focused

The global regulatory landscape will continue to be favourable to our business. Our best-in-class technology is ready to help our customers meet more challenging regulations that improve air quality and ultimately save lives. Our use of modelling is increasing the speed and accuracy of our product and system designs – helping to create more value for existing customers and win new ones.

Our catalysts enable our customers' flexibility in fuel choice – from traditional diesel or gasoline, to hydrogen, to e-fuels. Our catalysts also reduce emissions from marine and stationary sources, for example, in data centres. These are markets that will continue to grow over the next decade.



We play a leading role in heavy duty diesel technology



Around 1 out of 3 new cars on the road use our catalysts

Our marine catalysts reduce 100k tonnes of NO_x annually

Our industrial catalysts reduce 11k tonnes of NO_x annually

Synergy in action

The energy transition will require a mosaic of different technologies and processes. This is why it's vital our Clean Air customers are aware of the full offer from Johnson Matthey so our new sales approach will provide customers with a much more comprehensive and holistic service. For example, we may be in discussion with a customer about emissions control and find that their hydrogen division needs support in optimising existing infrastructure to support deployment at scale going forward. This is something our Hydrogen Technologies team can support. We know how these customers operate, and we can help them transition as the powertrain evolves.

Our performance in 2022/23

In Clean Air, we are focused on our target of generating at least £4 billion of cash to 2030/31, which is underpinned by tightening emission control legislation, business wins, manufacturing footprint consolidation and other fixed cost reductions. In 2022/23 we generated around £600 million of cash, taking our cumulative cash generation over two years to £1.4 billion. However, underlying operating profit declined 28% to £230 million and margins decreased to 8.7%. This largely reflected cost inflation, product mix, lower volumes, and the transactional impact of exchange rates. We saw an improvement in margins during the year due to an acceleration in our pricing, and we are expecting strong growth in operating performance in 2023/24.

We continued to build our commercial muscle, improving our inflation recovery rate with the majority of the recovery in the second half of the year, while also winning our targeted business linked to Euro 7 and equivalent legislation globally. During the year we won all of Mercedes Benz's light duty diesel business in Europe, and the global contracts covering light duty gasoline and diesel with a leading automotive OEM. As further evidence of our stronger commercial muscle, these wins were achieved whilst negotiating inflationary cost increases and improving our customer satisfaction score by five points. Consequently, we are outperforming the rate of business wins required to achieve our cash generation target of at least £4 billion by 2030/31.

Supply chain disruption, semiconductor shortages and the ongoing consequences of the global pandemic all affected our customers, creating additional challenges around variability and predictability of demand. Our logistics partners also experienced continued pressure around capacity, cost and lead times. We worked hard to support our entire value chain – and our efforts led to us winning several customer awards, including the 2022 General Motors Overdrive Award for Relationship.

We are optimising our manufacturing footprint to not only drive efficiencies but strengthen our development, manufacturing and delivery processes. Our optimised footprint will be more agile and flexible, allowing us to respond quickly to market changes.

In China, we have adapted our commercial and technology structure to have more of a local focus. This improved our chances of successful delivery to the local market and provides even more growth potential for the region moving forward.

Continuing to win big with some of the world's largest companies

All over the world, governments are introducing increasingly stringent air quality and pollution legislation. This creates a big opportunity for Clean Air, and the last year has seen us continue to win new business and strengthen existing relationships.

In an increasingly challenging and competitive market environment, our investment in our sales capabilities and new focus on value and pricing, led by the commercial council, is generating positive results. To deliver £4 billion cash by 2030/31, we will need to continue to build on the momentum generated this year.

Among our big wins in 2022/23 were:

- Breaking the record for the largest business deal in JM's history with a new £1.2 billion deal with a leading automotive company
- Securing a 10-year deal worth £450 million with a world-famous automotive brand's three European platforms
- Awarded the entire Euro 7 light duty diesel business of one of our long-standing automotive clients
- Securing £50 million and £180 million deals with two of India's largest commercial vehicle manufacturers.

Watch: fighting pollution for 50 years and beyond: matthey.com/clean-air-50-years

Platinum Group Metal Services

The industry-leading, growth-focused bedrock of Johnson Matthey

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

We apply our deep expertise and long history in platinum group metals (PGMs) to provide solutions to the complex challenges our customers face. Our chemistry facilitates the transition to net zero, delivering products to our customers across the chemical, energy and transport industries and beyond.

We are the largest refiner of secondary PGMs (by volume) and account for circa 20% of all global PGMs refined (primary and secondary). This makes us a vital cog in the global economy and a partner of choice for customers who want an end-to-end service for PGMs. Our expertise in PGM catalysis and performance underpins much of the innovation across Johnson Matthey, drives synergies across our business and strengthens our global position in our key markets.

c. 80%
of PGMs used in JM products are internally refined

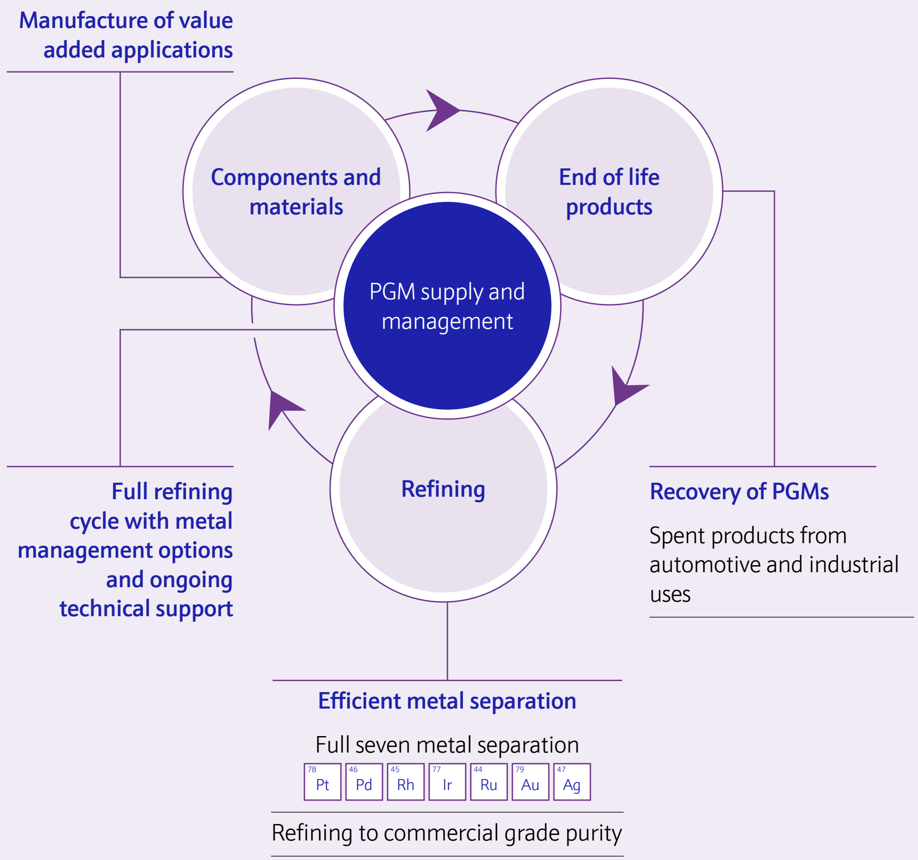
up to 95%
lower carbon footprint of PGMs from secondary refined metals compared to primary[1]

Leaders in circularity

Circularity of PGMs is an essential part of the net zero transition. With limited quantities of these critical minerals available, recycling plays a crucial role in securing the metal needed to supply existing and future demand. Recycled metal also significantly reduces waste and energy usage compared to primary mining, minimising the environmental impact of global PGM value chains.

The PGM ecosystem

We optimise the use of these critical materials, sourcing, fabricating and recycling them to enable their circular use.



1. IPA website link https://ipa-news.de/index/sustainability/

Synergy in action

We've advised, supplied and facilitated recycling for big OEMs in the automotive industry for the last 30-40 years, working closely with the Clean Air business. We have created a model that enables us to work in partnership with our customers, offering a full range of services. This is a blueprint that we will leverage as the CT and HT businesses continue to grow.

Our performance in 2022/23

As with businesses across the globe, adverse macro-economic trends are impacting our performance. Underlying operating profit declined 21% mainly impacted by lower average PGM prices (c. £55 million impact*) and reduced refinery volumes. Cost inflation was more than offset by efficiency benefits, as well as higher pricing across both our refining and products businesses.

We continued to invest in the long term future of our refineries, updating our assets so that we are fully positioned to capture the opportunities in the coming decades. In China, we have expanded our capabilities and now provide a full refinery offering, consolidating our position as a global leader in PGMs.

Globally we continue to make progress towards an integrated closed loop solution for CCM recycling for Hydrogen Technologies. This will allow us to once again be a leading innovator in making circularity a reality in our markets, and in doing so, we will add to our value proposition to Hydrogen Technologies customers.

Throughout 2022/23 we consulted with a range of government agencies around the world on matters relating to critical material supply, circularity and the transition to net zero. Our expertise is actively helping to drive forward the global green economy through contributing to policy development and technological progress.

Positioning ourselves for long-term success

In the longer term, we see significant opportunities for PGMS. Platinum and iridium in particular are growth areas given they are critical enablers of the hydrogen economy. We also see new opportunities for palladium in industrial applications, including sustainable aviation fuels. We have world-leading expertise in securing a sustainable supply, through responsible sourcing and recycling. In addition, our ability to provide low carbon refined metals will be increasingly important to our customers and society over time.

PGMS is also a critical enabler for our other core businesses. We offer them an integrated ecosystem with expert knowledge of the PGM markets, responsible and sustainable metal sourcing, value added PGM catalysts and solutions for end-of-life recycling of their products. Our R&D priorities include a closed loop solution for CCMs used in fuel cells and electrolysers, recovering the PGMs and ionomers, making it more sustainable and cost-effective for our customers.

* £55 million adverse impact represents a gross PGM price impact before any foreign exchange movement

Efficiency, performance and circularity in our products

PGMs are essential to the processes and technologies that enhance our daily lives, but it's not always obvious where they're used. One example is pharmaceutical manufacturing. PGM catalysts and biocatalysts are used across a vast range of drug synthesis processes to enable complex chemical structures to be formed. They also help reduce the overall number of process steps in the synthesis, along with waste.

We work with our pharmaceutical customers to develop tailored solutions and optimise catalyst performance for a wide range of drug synthesis steps. This includes reducing the metal loadings through catalyst thrifting. Using less metal not only lowers costs, but can also reduce the CO_2 footprint of production processes.

Watch: a circular solution for a net zero future: matthey.com/circular-solution-for-net-zero

Our unique end-to-end offering means that while we source PGMs and use them to create products for specialist applications, we also maximise their value by recovering and refining them. For our pharmaceutical customers, this happens in a closed loop, giving them a sustainable supply of PGMs.

If you've bought or been prescribed medication, you may well have benefitted from our expertise in PGMs and catalysis.

Catalyst Technologies

Enabling the chemicals and fuels industries to operate efficiently and transition to net zero

Our Catalyst Technologies business focuses on our core expertise in process technology and catalysis. Our products enable our customers to create the chemicals and fuels of today and the future which positively impact the everyday lives of millions of people.

We have worked for decades in partnership with our customers to improve the efficiency and sustainability of their processes, but there is more we can do to reduce the environmental impact of these chemicals and fuels across their full lifecycle. So we are developing robust solutions with our customers that reduce their process emissions today while enabling them to replace fossil-based feedstocks with more sustainable options.

Sharpening our commercial focus in a changing world

Catalyst Technologies has segment-leading positions in methanol, formaldehyde, and hydrogen – all technologies that build on our core strengths in syngas production, purification and conversion.

We've adapted our approach to our customers to make sure that we are creating value for both them and us in a high inflationary and energy cost environment.

We are also driving awareness among current and new customers to the many ways Johnson Matthey as a whole can partner with them as their industries evolve.

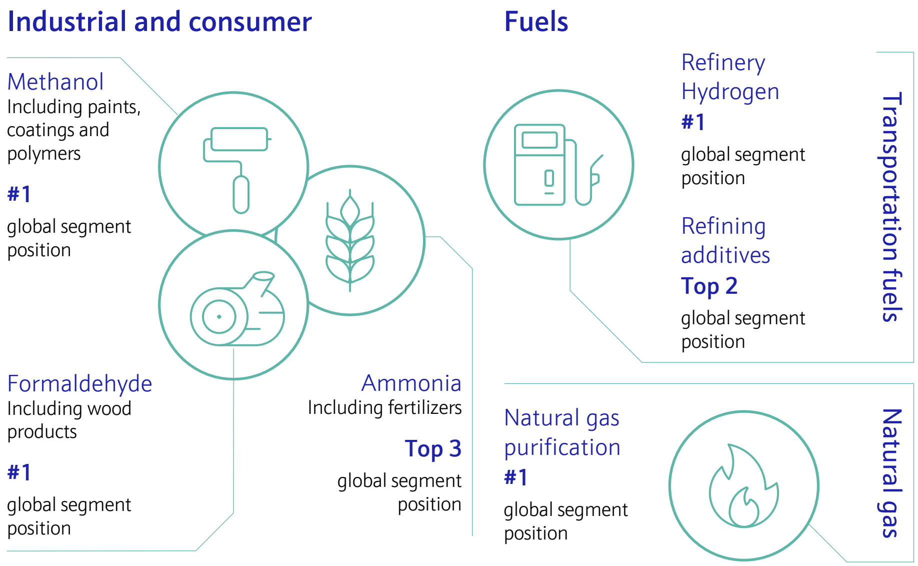
Our expertise underpins our suite of decarbonisation technologies, led by our low carbon (blue) hydrogen and our sustainable fuels offering. We are well placed to capture the sizeable opportunity presented by valorising non-fossil feedstocks like biomass, renewable (green) hydrogen and captured CO_2 over the coming decades. But we can also help customers with existing assets to minimise their environmental footprint as regulations tighten and carbon taxes increase.

In line with our new strategy, we are transforming how we work so that we can take full advantage of the opportunities generated by the chemical industry's decarbonisation journey and positioning our technologies to lie at the heart of the energy transition.

How Catalyst Technologies helps our customers

- **World-class catalysts and chemical processes** – to get the most of their assets; increasing efficiency, maximising output, reducing both operational and capital expenditure
- **Carbon management** – helping current asset owners reduce their environmental footprint and mitigate future financial impacts
- **Low carbon new energy** – helping customers catalyse their plans for the energy transition with technologies that can be deployed at scale now.

Leading in today's markets



In the submarket segments in which we operate

Synergy in action

We are ensuring that all our customers are aware of the benefits brought by the shared technology, insight and ecosystem across Johnson Matthey.

We all know that transportation needs to decarbonise. However, there is no one technology that meets the needs of every market. But we can provide a range of solutions, whether it's hydrogen fuel cells, drop-in liquid hydrocarbon fuels, or emission control solutions for engines running on sustainable fuels. Our Bioforming™ technology, co-developed with Virent, produces sustainable gasoline and aviation fuel, and in January, Emirates operated a milestone demonstration flight, using fuel produced by our process blended to create 100% sustainable aviation fuel (SAF) in one of the engines of a Boeing 777-300ER. This is only made possible by JM's deep understanding of PGM chemistry and circularity, leveraging skills in PGMS. It's why JM is better together.

Another synergy is in hydrogen, covering both production and use. From reducing the carbon intensity of current customers' assets to producing components for green hydrogen that can be used in e-fuels and chemicals, we're ready to support our customers wherever they are in the journey.

Reputation. Innovation. Commercialisation at scale

Our reputation in process technology, coupled with our deep knowledge of metal chemistry and catalysis, is generating value today for our customers. And a growing part of our business will be to innovate and deliver the technologies at scale to address tomorrow's challenges.

Building strong partnerships, both commercially and technically, is key to success in the move to a net zero world. A great example of this is our work with Honeywell UOP to integrate leading carbon capture technology into our syngas decarbonisation technologies. In the case of our LCH™ technology, this collaboration creates a solution that delivers a 99% CO_2 capture rate that is ready to be deployed today.

Many of the critical innovations inside our emerging syngas offers, such as our HyCOgen™ reverse water gas shift and ammonia cracking licences, have their basis in technologies with proven real-world operation over decades in other markets. So our customers can be confident we can help them decarbonise successfully. For example, the H_2H Saltend project in the UK will use JM's LCH™ technology in its 600MW low carbon hydrogen production plant with carbon capture. This is just one of several leading-edge decarbonisation projects in Europe and North America that show the value we bring to partnerships.

Our performance in 2022/23

Like the rest of the business, Catalyst Technologies continued to deal with economic headwinds in 2022/23. Underlying operating profit of £51 million was in line with the prior year. Margins declined to 9.1%; however we saw good improvement from the first to the second half of the year. Higher pricing, improved product mix and the benefits of our transformation programme offset significant cost inflation and the loss of business in Russia.

Despite these challenges, sales during the period were up 17%, with strong growth in licensing and growth in first fills and refills reflecting higher pricing and positive mix. We continued to deliver on our commercial and strategic goals. Our sharper commercial focus has resulted in us winning 12 new licences. We are also making good progress towards CT and HT's 2023/24 goal of winning more than ten additional large-scale projects, with five added to our portfolio. Our continued investment in our business is exemplified by the formaldehyde catalyst capacity expansion in our facility in Perstorp, Sweden. This is progressing well and is on track to be fully operational in early 2024/25, increasing the site's capacity by around 50%.

We will focus on further strengthening the value creation from our core catalyst businesses and leveraging our strong customer satisfaction scores. Internally, we will maintain the momentum we created in 2022/23 around simplifying our operations, creating clearer accountability and setting performance targets that deliver value today and growth for the future.

Our R&D teams continue to innovate on the catalysts, reactors and process concepts that together enable technology leadership in low carbon (blue) hydrogen and sustainable aviation fuels as well as ammonia cracking and other e-fuels. We are creating cost-effective solutions with low carbon intensity tailored to the feedstocks of the future. We are also investing in sustainable catalyst manufacturing technologies across the portfolio.

Pioneering the use of household waste as a feedstock with Fulcrum Sierra

Along with international energy company bp, we are enabling the world's first commercial-scale plant to use household rubbish as a feedstock for the production of synthetic crude oil. Using our FT CANS™ technology, the Fulcrum Sierra Biofuels Plant in Reno, Nevada, is expected to produce around 11 million gallons of product annually from 175,000 tonnes of landfill waste that can be refined into renewable, low carbon transportation fuel.

JM and bp have worked with waste-to-fuels developer Fulcrum to use FT CANS technology since 2018.

This project lays important foundations for the transition to a less carbon-intensive economy. In order to reach its climate goals of achieving net zero by 2050, the aviation industry needs reliable and scalable sources of alternative fuels. Using waste as feedstock will also help to reduce both the amount of waste sent to landfill and the methane produced through biodegradation.

Watch: ready for take off: matthey.com/ready-for-take-off

Hydrogen Technologies

Providing critical components for the emerging hydrogen economy

7 AFFORDABLE AND CLEAN ENERGY

13 CLIMATE ACTION

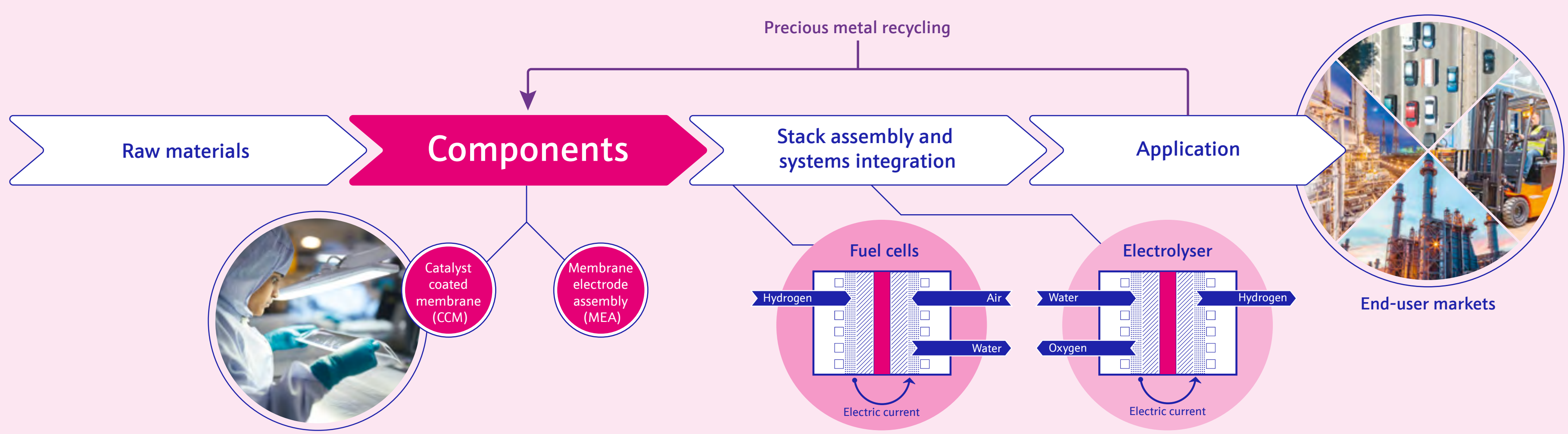
Renewable (green) hydrogen has the potential to transform energy systems. As a fuel, it creates no carbon emissions, and if the electricity used to produce it comes from renewable sources, the environmental benefits are tremendous. Global investment, innovation and demand for green hydrogen solutions is growing rapidly. To make the hydrogen economy viable, businesses need two processes: a way to use renewable electricity to split water into hydrogen and oxygen, and fuel cells to turn that hydrogen back into electricity when and where it is needed. Our specialist catalyst coated membranes (CCMs) are essential to both of these processes.

Customer-led growth

Johnson Matthey has been active in hydrogen in fuel cells for over 20 years, and our Hydrogen Technologies business is playing to win in the hydrogen market. In order to fully capitalise on this fast growth market, we need to be able to move quickly, scale effectively and efficiently manage the risks inherent in doing so. As the market becomes increasingly crowded, being able to demonstrate the competitiveness of our offer and the scale of our capabilities will be hugely important.

Partnerships and strategic relationships with customers are critical to our goal of becoming a market leader. We aim to partner with the expected winners in the markets for fuel cells and electrolysis, and to do this we have put customer-led growth at the heart of our commercial strategy. We look to partner with strategic customers early in their development cycle. These are partners that we believe have the capabilities to win in their markets. Our partnership with Plug Power is proof that this approach is working.

Focused on delivering performance-defining components for the hydrogen economy



Synergy in action

Businesses across the global economy are looking at hydrogen as a way of decarbonising. We work to leverage existing relationships with Clean Air customers to provide a range of sustainability technologies to the automotive industry. Many of Catalyst Technologies' customers are also exploring hydrogen as a cleaner fuel alternative to hydrocarbons. They face a choice between blue hydrogen and carbon capture or powering themselves with green hydrogen. We can then complete the end-to-end value chain through our PGMS capabilities, from sourcing to end-of-life recycling. Whatever our customers choose, Johnson Matthey is there to support them.

An essential part of the transition to net zero

Achieving net zero requires a range of technologies. Fuel cells using hydrogen provide an alternative to diesel, without the associated emissions. We believe the market for hydrogen-powered heavy duty trucks and stationary systems will see significant growth towards 2030.

The predicted rapid market growth and demand are coming at us faster than ever before, partly due to significant regulatory changes to support commercial scale projects for production and infrastructure – such as the Inflation Reduction Act in the US and the UK's Automotive Transition Fund. The convergence of these market changes shines a spotlight on our technologies, builds rapid growth and moves the dial on the transition to net zero.

Our performance in 2022/23

We made major progress towards all of our strategic goals this year. Our sales have doubled over the course of 2022/23, and we achieved our goals of expanding our customer base, announcing long-term strategic partnerships with Plug Power and Hystar. We are seeing a trend of businesses that have previously tried to manufacture CCMs by themselves talking to us about working together in the future. Demand from existing customers is increasing too.

The underlying operating loss of £45 million primarily reflects increased investment into product development and building capability as we scale the business to meet customer demand, partly offset by higher volumes.

Although we faced the same inflationary pressures as the rest of Johnson Matthey in 2022/23, our business was less impacted by volatility and economic headwinds. This is due to us operating in a rapidly growing market that has benefited from regulatory support.

We have three main priorities for 2023/24. One, to continue focusing on commercial performance and developing new and existing partnerships; two, increasing our production capacity, with our major site in Royston completing construction, as well as projects starting in the US and China. Finally, we continue to invest in the next generation of our technology, both on our own and alongside our partners. Our R&D will focus on continuing to improve product efficiencies, including reducing utilisation of precious metals such as iridium within electrolysis CCM as well as optimising activity of platinum catalysts in fuel cells.

Accelerating the hydrogen economy with Plug Power

In early 2023, we announced a new, long-term partnership with Plug Power, a global leader in the hydrogen value chain. As the company's strategic partner, we will provide the catalysts, membranes and catalyst coated membranes Plug needs to reach its revenue target of US$20 billion by 2030.

Not only are we bringing our catalysis expertise, precious metal supply security and unique recycling capabilities to the table, but we are also co-investing in what will likely be the largest CCM manufacturing facility in the world – expected to begin production in the US in 2025.

The partnership is a game-changer for the hydrogen economy. Plug Power is a leading player in building an end-to-end green hydrogen ecosystem, helping companies like Amazon and BMW decarbonise. Its decision to partner with us is not only a demonstration of our expertise in CCMs – but proof that our manufacturing capabilities have the potential to bring new scale and volume to the emerging hydrogen economy.

Watch: ramping up to reach net zero: matthey.com/hydrogen-for-net-zero

Sustainability

Embedding sustainability into everything we do

We are a global leader in sustainable technologies. Through inspiring science and continued innovation, we are catalysing the net zero transition for millions of people every day. Our skills and technologies are important today as businesses and communities adapt to the challenges of climate change. But advancing sustainability isn't just about our portfolio of technologies, it's also about our own operations, how we work together and hold ourselves accountable for our impacts on society.

Our Societal Value Committee (SVC), which is made up of the full board, met four times this year to review progress in delivering on our sustainability commitments see page 88.

Our Sustainability Council, which is made up of our Group Leadership Team (GLT), met four times this year to decide the direction of our sustainability strategy and monitor progress. Our senior leaders and directors are incentivised to deliver on our sustainability ambitions through sustainability objectives included in our long-term Performance Share Plan (PSP) – see page 122 for details.

Our products and services are where we believe we can have most positive impact on society and we have aligned our strategy with four of the UN SDGs.

- **Emission control technologies** that reduce harmful oxides of nitrogen (NO_x) and particulates from vehicle tailpipes and stationary engines
- **Purification technologies** that reduce harmful contaminants, such as mercury, from industrial processes
- **Refinery additives** to mitigate NO_x and oxides of sulphur (SO_x) emissions
- **Catalysts** used to make pharmaceutical ingredients

3 GOOD HEALTH AND WELL-BEING

7 AFFORDABLE AND CLEAN ENERGY

- **Renewable (green) hydrogen technologies** that will support the drive to zero carbon hydrogen production using renewable energy and electrolysis
- **Low-carbon (blue) hydrogen technologies** that are available today to help make low-carbon hydrogen at scale

- **PGM recycling** to recover and reuse scarce resources
- **Chloride guards** to prevent corrosion
- **PURACARE™ services** to reduce maintenance lifetime and end-of-life recovery
- **CAT-AID™ products** to extend catalyst life

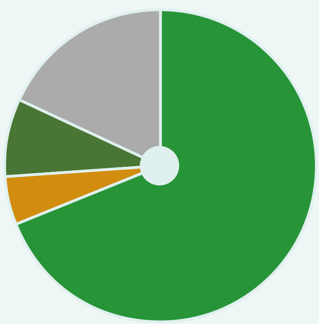
12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

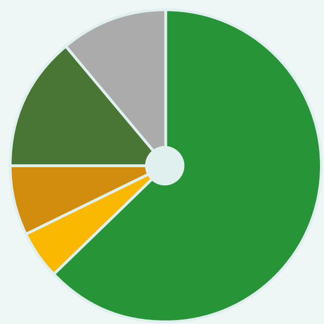
- **Technologies** that turn high sources of carbon, such as household waste, into sustainable aviation fuels
- **Fuel cell components** for low-carbon transportation and distributed power units
- **Nitrous oxide (N_2O) abatement** systems

We track our sales and investment in R&D against these global priorities.

82.0% sales from products contributing to priority UN SDGs



Sales		R&D spend
69%	SDG 3 – Good health and wellbeing	63%
0%	SDG 7 – Affordable and clean energy	5%
5%	SDG 12 – Responsible consumption and production	7%
8%	SDG 13 – Climate action	14%
18%	Not assigned to priority SDGs	11%



89.5% R&D spend contributing to priority UN SDGs

A new focus on our core material topics

This year, the whole of Johnson Matthey has been making changes to become a more customer-facing, commercially minded and agile business with the strategy simplify, focus, execute.

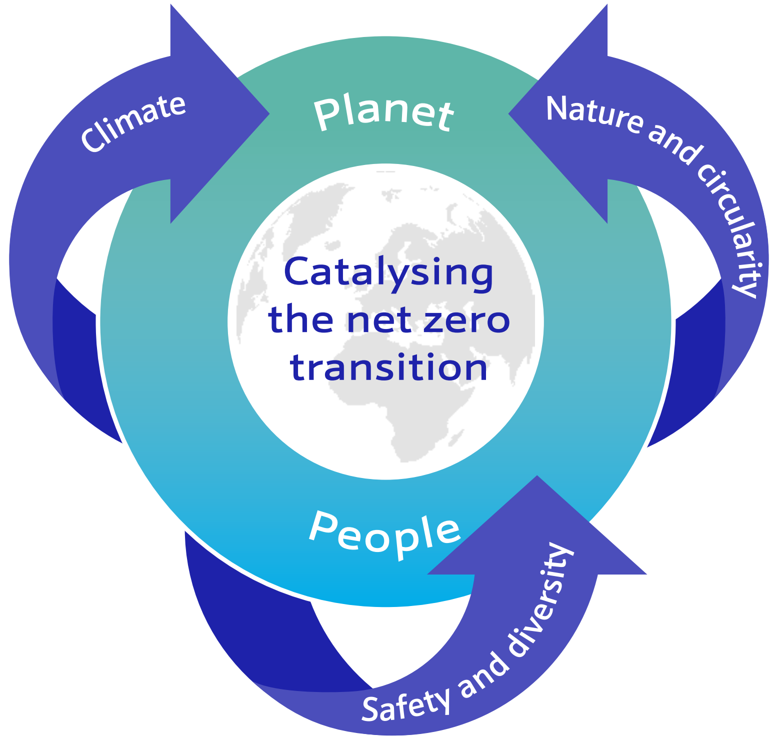
To support this, in partnership with an independent third-party, we refreshed our materiality assessment to ensure that our sustainability strategy, goals and targets are focused both on our biggest impacts on society and those areas of most importance to our stakeholders. We benchmarked our existing strategy against industry ESG standards, legislation requirements and sector peers. As a result, we reorganised our existing sustainability goals and targets for 2030 under new themes to better articulate the most material benefits that we believe we can bring to society. We increased the ambition in our climate-related 2030 targets to focus and align them better with our company purpose.

See page 222 for our list of material topics as approved in the SVC meeting in September 2022

Protecting the climate

Drive lower global greenhouse gas (GHG) emissions

Achieve net zero by 2040



Protecting nature and advancing the circular economy

Conserve scarce resources

Minimise our environmental footprint

Promoting a safe, diverse and equitable society

Keep people safe

Uphold human rights

Create a diverse, inclusive and engaged company

Invest in our local communities

Leading ESG ratings

MSCI	AAA rated	Dow Jones Sustainability Indexes	93rd top percentile top six European chemical companies
FTSE4Good	97th top percentile	Sustainalytics	Medium risk (22.8) 13th percentile, where 1st is top, in Chemicals sector
CDP	'B' Climate rated 'B' Water rated	Platinum 2022 ecovadis Sustainability Rating	Platinum rated (top1%)
Equileap – Make a difference and a return	45th / 4000	chemsec ChemScore	3rd / 54

Our sustainability targets for 2030

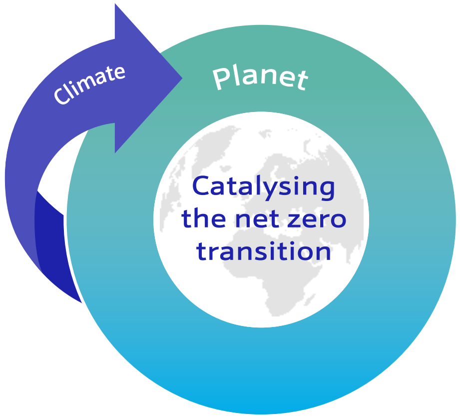
Our sustainability targets for 2030 are ambitious, but they build off the incredible impact our products and services already have. Our growing business of coated membranes is enabling the next generation of low carbon hydrogen technology, and our catalysts reduce pollution and help the global chemical industry de-fossilise. All this is underpinned by our circular PGM economy that helps reduce waste and make the most of scarce resources. For decades our expertise in metal chemistry has helped to solve the complex challenges of air pollution, and now our technologies are accelerating the transition to net zero.

This year we have decided to scale up our ambition and announce tougher GHG reduction targets for 2030 which will firmly put us on Science Based Targets initiative's (SBTi) 1.5°C trajectory and place us among the leading group of global businesses aiming for a rise of no more than 1.5°C. We have submitted them to SBTi for validation, as part of our Net Zero Standard application.

ERM Certification and Verification Services have provide limited assurance to ISAE3000 standard of selected KPIs with 2030 targets. Please see pages 228-230 for more details.

Goals	Key performance indicators (KPIs)	2030 target	2022/23 performance	Progress towards 2030 target from baseline (0%–100%)
Planet: Protecting the climate				
Our goal: Drive lower global greenhouse gas (GHG) emissions	1. GHG emissions avoided per year using technologies enabled by JM's products and solutions, compared to conventional offerings	50 million tonnes CO_2e	0.85 million tonnes CO_2e	1%
Our goal: Achieve net zero by 2040	2. Reduction in Scope 1 and Scope 2 GHG emissions	42%	13% reduction against baseline	31%
	3. Reduction in Scope 3 GHG emissions from purchased goods and services	42%	27% reduction against baseline	65%
Planet: Protecting nature and advancing the circular economy				
Our goal: Conserve scarce resources	4. Recycled PGM content in JM's manufactured products	75%	69%	-18%
Our goal: Minimise our environmental footprint	5. Reduction in total hazardous waste	50%	1% reduction against baseline	3%
	6. Reduction in net water usage	25%	5% reduction against baseline	21%
People: Promoting a safe, diverse and equitable society				
Our goal: Keep people safe	7. Total recordable injury and illness rate (TRIIR) for employees and contractors	<0.25	0.47	59%
	8. ICCA process safety event severity rate (PSESR)	0.4	1.0	21%
Our goal: Create a diverse, inclusive and engaged company	9. Employee engagement score	>8.0	6.9	new methodology this year
	10. Female representation across all management levels	40%	28%	-19%
Our goal: Uphold human rights	% supplier spend assessed for human rights risk and remedial plans in place where high risks identified	–	22%	no target set for 2030
Our goal: Invest in our local communities	Number of days of volunteering in our local communities by our employees	–	2,063 days	no target set for 2030

Planet: Protecting the climate



Our company purpose is to catalyse the net zero transition because we believe this represents the biggest benefit we can bring to society. This mainly comes through sales of our products and services, which when used by our customers, will bring about millions of tonnes of GHG avoided. We are also committed to net zero by 2040 for our operations.

You can read more about how climate change is bringing opportunity and risks to our business in our TCFD report on pages 45-52

2030 target	2021/22	2022/23	% change against prior year
Our goal: Drive lower global greenhouse gas (GHG) emissions			
50 million tonnes of GHG emissions avoided per year using technologies enabled by JM's products and solutions, compared to conventional offerings	0.49 million tonnes CO_2e	**0.85 million tonnes CO_2e**	+74%
Our goal: Achieve net zero by 2040			
42% Reduction in Scope 1 and Scope 2 GHG emissions	410,110 tonnes CO_2e[1]	**363,686 tonnes CO_2e**	-11%
42% Reduction in Scope 3 GHG emissions from purchased goods and services	2,978,197 tonnes CO_2e[1]	**2,495,475 tonnes CO_2e**	-16%

Our goal: Drive lower global greenhouse gas (GHG) emissions

Sales of our fuel cell components already help our customers avoid GHG emissions every year and are on track to achieve our milestone of 1 million tonnes saved by end of 2023/24. This currently only represents 1.1% of our sales (excl platinum group metals, PGM), but we want to amplify our impact considerably over the next decade. Our capabilities, experience and scale put us in a great position to play to win in additional emerging markets, such as clean hydrogen and sustainable fuels.

Last year we set ourselves the target that Johnson Matthey technologies would contribute towards avoiding 50 million tonnes of GHGs entering the atmosphere per year by 2030, compared to conventional technologies in 2020. This is equivalent to avoiding the emissions from half of UK transport[2]. During the year we have signed significant partnerships, and our major partnership with Plug Power will enable the manufacturing of significant volumes of catalyst-coated membranes for hydrogen production and fuel cells in the US and accelerate progress towards our 2030 target.

50 million tonnes of GHG emissions avoided[3] per year by our customers using our products by 2030

Energy

Sustainable fuels for aviation and marine use

Low-carbon (blue) hydrogen technology

Renewable (green) hydrogen technology (electrolysers)

Fuel cell components for distributed power generation

Chemicals

Solutions to **decarbonise chemical products**, like ammonia, methanol or formaldehyde

Solutions to **decarbonise chemical and industrial processes**

Automotive

Fuel cell components for hydrogen powered vehicles

SASB Resource efficiency indicator: We have also identified our revenues that align with the SASB Chemicals Sustainability Accounting Standard's definition of products that, when used, improve energy efficiency, eliminate or reduce GHG emissions, reduce raw materials consumption, lower water consumption and / or increase product life. In 2022/23, those sales were £1.01 billion (with sales excl. precious metals as £4.2bn) compared with £812 million in 2021/22.

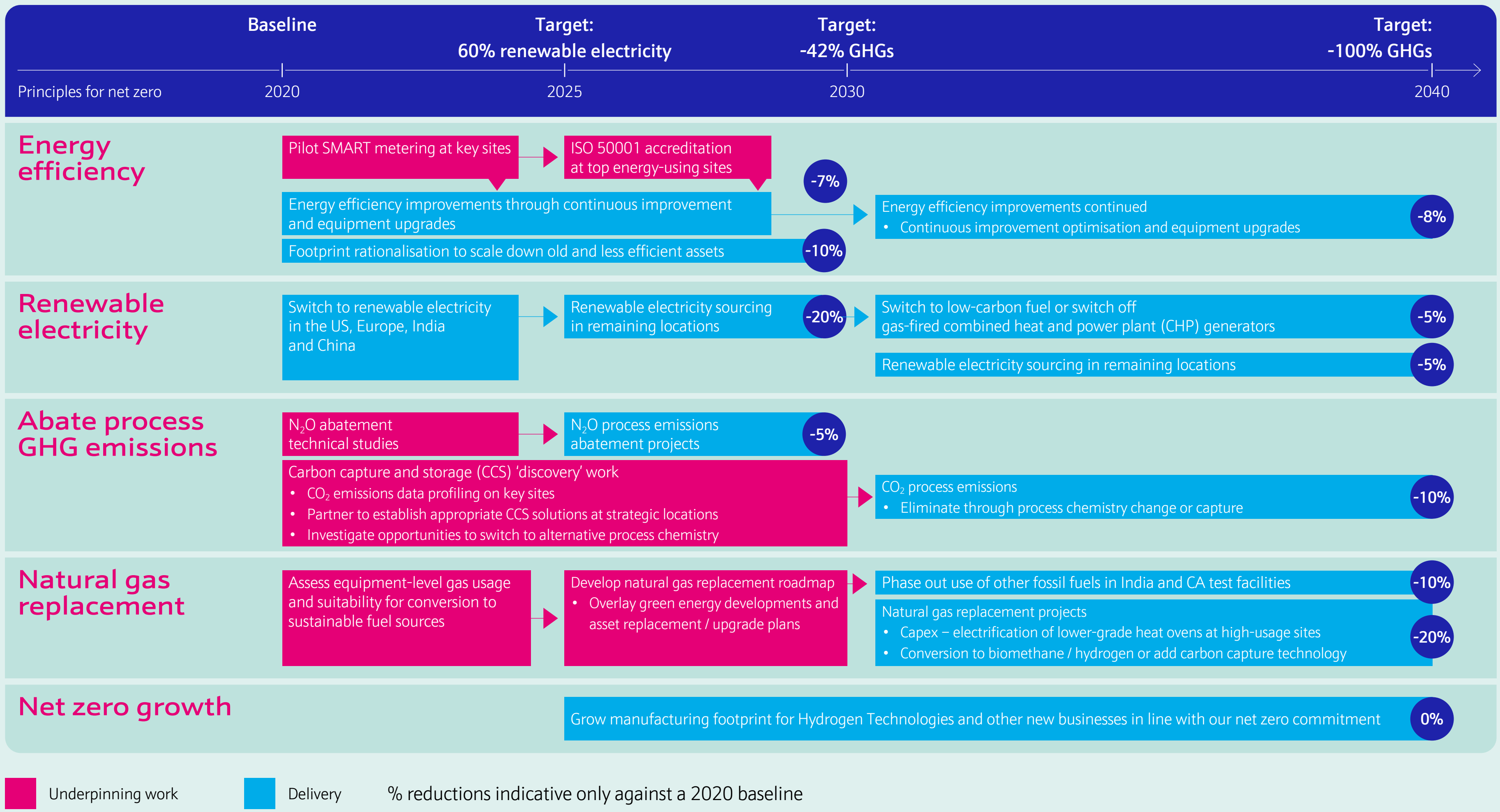
1. Rebaselined to remove divested businesses, please see page 222 for more information
2. https://www.gov.uk/government/statistics/provisional-uk-greenhouse-gas-emissions-national-statistics-2021
3. Using technologies enabled by our products and solutions: avoided emissions compared to conventional technologies in 2020

Planet: Protecting the climate continued

Our goal: Achieve net zero by 2040

We have updated our net zero roadmap for Scope 1 and 2 GHG emissions in line with our more ambitious 2030 target, putting it firmly on the 1.5°C pathway to net zero. We have also submitted our 2040 goal as our long-term net zero target for approval by Science-based targets Initiative (SBTi) under their Net Zero Standard. During the year, each of our businesses has developed a detailed roadmap for improving energy efficiency, switching to lower-carbon forms of energy and reducing the emissions our chemical processes generate. These roadmaps are used for making business investment decisions and monitoring progress to our targets.

Net zero roadmap for Scope 1 and 2 GHG emissions



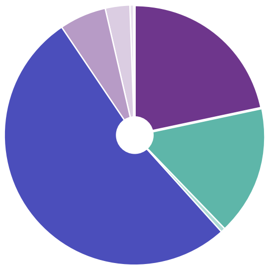
Planet: Protecting the climate continued

Our progress in 2022/23

This year we saw a 11.3% fall in our Scope 1 and 2 GHG emissions from last year, as well as a 8.1% drop in our total Scope 1 and 2 carbon intensity as we began to deliver on our roadmap to net zero by 2040. We have principally achieved this through energy efficiency and renewable electricity procurement, although we did also have an overall drop in production output due to COVID-related disruptions to the automotive industry in China.

Overall our GHG emissions from Scope 3 purchased goods and services decreased by 16% in 2022/23 compared to the previous year, and we reached our previous target for 2030 seven years early. This was achieved through a combination of reduced procurement of primary PGM and through the decarbonisation efforts of our supply chain partners in the PGM mining sector.

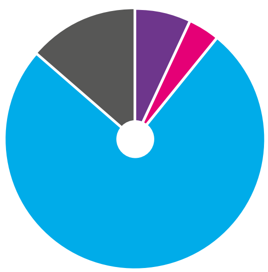
Energy mix



Non-renewable, grid-supplied electricity	21.8%
Certified renewable electricity from the grid	16.2%
Renewable electricity generated locally	0.6%
Natural gas used on site	52.2%
Other fossil fuels used on site	5.8%
Non-renewable steam procured	3.0%
Fuel used on public roads by JM vehicles on company business	0.4%

Total: 1,185,612 MWh

Total greenhouse gas emissions



Scope 1	7.1%
Scope 2	3.9%
Scope 3 – Purchased goods and services	75.4%
Scope 3 – All other categories	13.6%

Total: 3.3million tonnes CO_2e

For more information on our calculation methodology please see our Basis of reporting on pages 222-227

Energy efficiency and security

To ensure we drive energy efficiency in our operations, and underpin our net zero strategy, this year we worked with a third-party provider to create an energy management framework for the whole business in line with ISO 50001. Training relating to this was provided through global sessions along with focused training to our most energy-intensive sites. Four sites already have ISO 50001 and we have completed our gap analysis for another 16 of our largest sites.

Implementation of recommendations has already started, and will continue in the year ahead. For example, at our largest energy-using site, through process and control improvements on two of their larger assets, we were able to demonstrate savings of approximately 2% of the site's total fuel consumption. At our UK refinery, we are carrying out feasibility and heat studies to look at how they can recover more energy. Three of our largest manufacturing sites also make electricity using combined heat and power plants (CHPs) to optimise our energy efficiency. Although these run off natural gas, our CHPs generated 26,974 MWh (5.6% of our total) electricity this year minimising our energy demand.

We established a Winter Energy Taskforce to focus and co-ordinate our efforts to mitigate the risk to our operation from headwinds in the energy markets created by the Ukraine war. We minimised energy cost rises to 82%. We continue to focus on measures to improve our resilience at key locations, including beginning negotiations on direct supply of electricity through power purchase agreements (PPA).

Renewable energy

This year 41% of our electricity consumption came from certified renewable sources, compared to 32% in 2021/22. We remain on track to achieve our target of purchasing 60% of our electricity from certified renewable sources by 2025.

Over the past year we assessed additional renewable energy procurement opportunities and the inherent risks, challenges, gaps or legal changes that may occur along our journey to net zero.

Currently we are using green tariffs to ensure renewable electricity consumption in Europe and the US, and going forward we will focus on Power and Renewable Gas Purchase Agreements in these regions and others where this procurement scheme is available.

In regions like India and China we will continue to purchase recognised Energy Attribute Certificates in the short term. We have also deployed some on-site generation as part of the current energy portfolio in sites in India.

Increasing our energy efficiency with no additional investment

We are always exploring ways to improve our energy efficiency. Our Clean Air site in Poland demonstrates the kind of positive results that can be achieved through innovative thinking and process optimisation. Through adding new logic controls to our existing systems, we have enabled waste heat recirculation from downstream zones of the ovens to upstream zones. We expect this improvement to reduce annual fuel usage on our site by about 10% without the need for any additional capital investment. We are replicating this low-cost improvement across other Clean Air sites globally, with similar savings expected.

Planet: Protecting the climate continued

Scope 1 and 2 greenhouse gas (GHG) footprint and energy efficiency

	2022/23			2021/22[1]			
	Global	UK only	Global (excl UK)	Global	UK only	Global (excl UK)	% change (global)
Total Scope 1 GHG emissions (tonnes CO_2e)	233,300	100,461	132,839	239,862	103,534	136,328	-2.7%
Total Scope 2 GHG emissions (market-based) (tonnes CO_2e)	130,386	1,024	129,362	170,248	1,265	168,983	-23.4%
Total Scope 2 GHG emissions (location-based) (tonnes CO_2e)	204,848	21,696	183,152	225,712	24,942	200,770	-9.2%
Total Scope 1 and 2 GHG emissions (market-based) (tonnes CO_2e)	363,686	101,485	262,201	410,110	104,799	305,311	-11.3%
Total Scope 1 and 2 GHG emissions (location-based) (tonnes CO_2e)	438,148	122,157	315,991	465,574	128,475	337,099	-5.9%
Total Scope 1 and 2 carbon intensity (market-based) (tonnes CO_2e/tonne sales)	3.4	22.3	2.5	3.7	19.9	2.9	-8.1%

	2022/23			2021/22[1]			
	Global	UK only	Global (excl UK)	Global	UK only	Global (excl UK)	% change (global)
Total energy consumption (MWh)[2]	1,185,612	337,488	848,124	1,241,806	373,347	868,458	-4.5%
Total energy efficiency (MWh/tonne)[3]	11.0	74.2	8.2	11.3	70.7	8.3	-3.0%

Scope 3 GHG emissions by category

(tonnes CO_2e)

Category	Category number	2022/23	2021/22[1]	2020/21[1]	2019/20[1]
Purchased goods and services	1	2,495,475	2,978,197	2,812,518	3,433,660
Capital goods	2	177,329	163,641	242,456	367,141
Fuel and energy-related activities	3	41,018	43,505	36,695	38,199
Upstream transportation and distribution	4	81,999	158,625	94,348	97,424
Waste generated in operations	5	4,004	5,220	4,549	3,439
Business travel	6	5,077	1,336	67	9,202
Employee commuting	7	13,627	13,517	25,763	25,763
Upstream leased assets	8	523	698	602	5,094
Use of sold products	11	0	0	0	0
Investments	15	125,196	118,356	119,005	129,337
Total		2,944,248	3,483,095	3,336,003	4,109,259

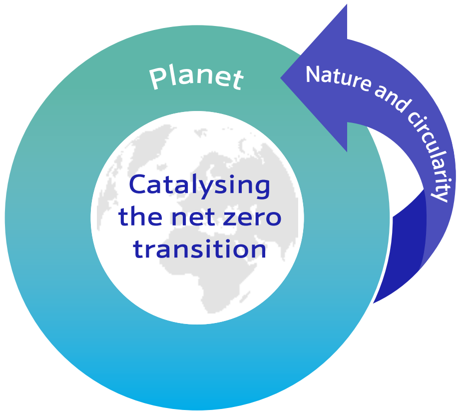
Four-year performance table

	2022/23	2021/22[1]	2020/21[1]	2019/20[1]
Total energy consumption (MWh)[2]	1,185,612	1,241,806	1,168,338	1,202,121
Total energy efficiency (MWh/tonne)[3]	11.0	11.3	11.0	10.6
Total Scope 1 and 2 GHG emissions (market-based) (tonnes CO_2e)	363,686	410,110	409,584	417,818
Total Scope 1 and 2 carbon intensity (market based) (tonnes CO_2e/tonne sales)	3.4	3.7	3.9	3.7
Total Scope 3 GHG emissions (tonnes CO_2e)	2,944,248	3,483,095	3,336,003	4,109,259

1. Rebaselined to remove divested businesses, please see page 222 for more information
2. Energy consumption is reported here in MWh, which is equal to 1,000kWh. Total global energy consumption for 2022/23 is 1,185,612,237kWh
3. This is the total energy used by the business divided by amount of materials sold to customers

For more information on our calculation methodology please see our Basis of reporting on pages 222-227

Planet: Protecting nature and advancing the circular economy



Johnson Matthey is committed to minimising our environmental footprint and conserving scarce mineral resources through our manufacturing choices.

In advance of COP15, in Dec 2022 we signed the "Business Pledge for Nature" and the Terra Carta Charter, which guides organisations in how to put nature, people and planet at the heart of value creation.

2030 target	2021/22	2022/23	% change against prior year
Our goal: Conserve scarce resources			
75% of recycled PGMs content in JM's manufactured products	70%[1]	**69%**	-1%
Our goal: Minimise our environmental footprint			
50% Reduction in total hazardous waste[2]	47,791 tonnes[3]	**41,860 tonnes**	-12%
25% Reduction in net water usage[4]	1,833 ML[3]	**1,752 ML**	-4%

Our goal: Conserve scarce resources

We helped create one of the world's first circular economies – and our increasing use of secondary, or recycled, PGMs is helping to significantly reduce the emissions and environmental impact associated with mining these vital materials. Please see page 226 for a definition of secondary PGMs.

We can also apply our longstanding recycling expertise to emerging technologies that utilise PGMs, like fuel cells and electrolyser stacks. We are upgrading our infrastructure to allow us to recover and refine the PGMs used in these technologies to a very high purity in the same way we do today with production scrap. This will allow us to create an endless loop of PGMs availability.

Our performance in 2022/23

Our ability to meet our target of 75% of our products using secondary PGMs depends on working with our customers and market research team to understand both supply and demand as well as the total volume of secondary PGMs available through our refining circuits and the broader PGMs market. Our focus is on closing the PGMs loop to meet our customers' evolving sustainability demands. But we acknowledge that primary, or new, supply is still critical to maintain market balances and will play an important role in the transition to net zero. Customer demand will help to drive this balance. We are perfecting our secondary offering to customers and working with both internal and external subject matter experts to certify our methodology.

Our performance in this area this year was impacted by the economic headwinds faced by the global economy, more specifically in the auto market supply chain. Secondary scrap availability and a large share of the PGMs products that are manufactured depend on the health of the global automotive market. 2022 presented many challenges to both sides of the secondary metal equation, as global auto sales struggled to maintain post-pandemic momentum. This eventually led to a downturn in automotive scrap being sent back through PGMs recycling channels, but also impacted demand for fresh PGMs products. Despite these challenges, we have been able to manage our metal intake portfolio to remain on track to meet our 2030 target.

1. Restated due to calculation refinement, please see page 222 for more information
2. Total hazardous waste produced and sent off site for treatment by a third party
3. Rebaselined to remove divested businesses, please see page 222 for more information
4. Net freshwater consumption

Planet: Protecting nature and advancing the circular economy continued

Our goal: Minimising our environmental footprint

Our operations span the globe – with 45 major manufacturing sites in over 30 countries supporting our customers in a huge number of ways. We are committed to protecting the ecosystems around our plants and minimising all our potentially harmful interactions. The Societal Value Committee is responsible for our overall approach to environmental performance.

Our global environmental, health and safety (EHS) policies, processes and management system help us maintain a high level of environmental performance. All our sites are assessed against these standards by our centralised EHS audit team at least once every three years. 89% of our manufacturing sites use environmental management systems that are certified as meeting ISO 14001 standard, as of 31st March 2023.

We measure progress against our environmental KPIs monthly and use the data to improve performance.

Minimising waste: reduce, reuse, recycle

We are committed to minimising waste generation and recycling as much as possible. Our operations create waste, which is always treated in line with local regulations. But beyond that we are committed to disposing of it responsibly. We work with specialist treatment companies to ensure this waste is managed safely.

We are always looking for ways to improve. For example this year:

- At our UK refinery, improvements in process operations allowed flue dusts to be reworked into furnaces which eliminated a waste stream. There were general reductions in waste from improving production processes so that less off-specification material was produced.
- At our Smithfield site in the US we upgraded our NO_x abatement system. This reduced our emissions and hazardous waste on site and helped us towards our 2030 target.
- Working with our third-party waste provider in the UK, we also increased the proportion of waste streams being recycled by 5%.

We continue to recycle the majority of our production waste containing PGMs in our own refineries.

Our most significant progress towards our 2030 target on hazardous waste reduction comes this year with the ongoing investment in our new Third Century PGM refinery in Royston. This is due to be operational later in the decade.

Using water responsibly

Climate change and population growth are bringing ever greater stress to availability of freshwater supplies globally. 2022 saw us launch our first global water policy to help sites adopt effective water management plans, improve measurement and reduce water consumption, driving us towards our 2030 water target.

To understand where we need to act most quickly for most benefit, we used the World Resource Institute's (WRI) Water Risk Atlas tool to analyse usage at our sites. The tool identified 12 manufacturing facilities, which are located in regions with a high or extremely high baseline water stress level. This means that they are at higher risk of declining water availability or increased cost in the future due to drought or groundwater table decline. The 12 manufacturing facilities accounted for 399,174m^3 (23%) of our net fresh water consumption in 2022/23.

We discharged 1.36 million m^3 wastewater during the year, 96% to municipal treatment plants and the remainder back to its original freshwater source after treatment. We treated 1.05 million m^3 of waste water on-site, of which we recycled 23% back into our manufacturing processes instead of discharging.

We seek to minimise the chemical burden in our wastewater discharged. 1.36 million m^3 was discharged from our sites with an average chemical oxygen demand (COD) of 242 mg/L.

Reducing emissions to air

Some of our operations produce other air emissions as by-products of chemical reactions, including nitrogen oxides (NO_x), sulphur oxides (SO_x) and volatile organic compounds (VOCs). All our permitted sites monitor these emissions to ensure they comply with local regulations.

This year we saw a decrease in our year-on-year NO_x emissions, despite increasing our coverage of reporting. We fitted an enhanced NO_x abatement at our Smithfield site, US to help reduce them even further in future. We also continued to improve our methodologies around measuring and reporting the emissions we produce globally in a standardised way.

We have reviewed the new UK BAT waste gas for chemicals (UKWGC) and are making preparations to ensure we will be in compliance with the stricter emissions to air limits ahead of the significant change in emissions legislation in the UK in 2027.

We don't produce ozone-depleting substances (ODS) through our operations, however, any small leaks of refrigerant gases are reported in our Scope 1 GHG emissions.

Planet: Protecting nature and advancing the circular economy continued

Water consumption

	2022/23	2021/22[1]	2020/21[1]	2019/20[1]
Net freshwater consumption (000's m^3)	1,752	1,833	1,711	1,849
Total wastewater discharged (000's m^3)	1,356	1,400	1,506	1,394
Average direct Chemical Oxygen Demand of wastewater (COD) (mg/L)	242	220	112	104

Types of waste produced and sent off site for treatment by a third party

Type of waste (tonnes)	2022/23	2021/22[1]	2020/21[1]	2019/20[1]
Liquid hazardous waste	38,520	45,151	41,025	40,017
Solid hazardous waste	3,340	2,640	2,622	2,469
Liquid non-hazardous waste	7,059	8,560	7,013	7,815
Solid non-hazardous waste	13,967	15,290	11,538	13,630
Total hazardous waste sent off site for treatment	41,860	47,791	43,647	42,486
Total waste sent off site	62,885	71,641	62,198	63,931

Methods of waste treatment applied by our third party providers

Type of treatment (tonnes)	2022/23	2021/22[1]	2020/21[1]	2019/20[1]
Off site reuse	1,057	1,020	1,031	720
Off site recycling	36,873	38,277	23,390	19,452
Off site incineration with energy recovery	1,075	2,041	1,023	1,698
Incineration or other off site treatment	19,533	26,161	33,579	38,976
Total waste disposed off site to landfill	4,347	4,142	3,175	3,086
Total waste sent off site	62,885	71,641	62,198	63,931

Emissions to air

Type of emissions (tonnes)	2022/23	2021/22[1]	2020/21[1]	2019/20[1]
Nitrogen oxides (NO_x) emissions to air	336	358	338	320
Sulphur oxides (SO_x) emissions to air	31	73	42	16
Volatile organic chemicals (VOCs) emissions to air	42	50	39	47
Coverage for NO_x reporting	86%	85%	85%	82%
Coverage for SO_x reporting	36%	34%	36%	32%
Coverage for VOCs reporting	57%	56%	54%	53%

1. Rebaselined to remove divested businesses, please see page 222 for more information

Using algae to clean up plant wastewater at our Taloja site

Our catalyst manufacturing site in Taloja, India, is using the power of algae to clean up the waste water created as a by-product of our processes. The impact of this innovative approach could have wide-reaching effects on the chemicals industry.

The wastewater created by the plant is fed into six algae ponds. Using the sun's energy, the microalgae convert the waste discharge into oxygen and renewable biomass. This biomass can then be used for fuel and fertilisers, and the richly oxygenated water is a boost for local aquatic life.

The project has been a huge success. We no longer need to outsource our wastewater treatment – saving us hundreds of thousands of pounds so far. The process offers uninterrupted performance, with no freshwater consumption, and the end results help support the local environment. That's why the project was awarded an internal Johnson Matthey award in 2022.

Planet: Protecting nature and advancing the circular economy continued

Management of hazardous chemicals

The nature of the complex chemistry in our products and manufacturing means that we sometimes have to use chemicals that are potentially hazardous to the environment. Product stewardship is a crucial part of our approach to minimising our environmental impact. By delivering product insight and assured regulatory compliance, we can better manage the sustainability of our portfolio.

Our efforts to improve our environmental and human health performance are recognised through our rating 3rd out of 54 chemical companies in the 2022 Chemscore report. They also get us a seat at the table with policy makers, regulators and industry bodies. This global engagement is allowing us to share our expertise around catalysis, product stewardship, PGM supply and sustainable technologies and contribute to the important discussion about what net zero looks like in practice. It also helps us maintain high standards and adapt to continually evolving regulation in our markets. In the UK we are working with the government, directly and through the Chemicals Industry Association (CIA), on potential revisions to the UK's Registration, Evaluation, Authorisation and Restriction of Chemicals (UK REACH) regulation. We also work with a range of EU industry consortia such as European Chemical Industry Council (Cefic), Eurometaux and European Precious Metals Federation (EPMF).

cefic Eurometaux EPMF European Precious Metals Federation

Finding safer alternatives and reducing risk

Our product stewardship reporting programme helps us track product performance every year. This year, we found no reports of significant health effects from the use of our products, and we continue to comply with all health and safety, labelling and marketing regulations, and voluntary codes. We engage with customers to promote understanding of the hazards of our products, and our New Product Introduction (NPI) framework requires teams to consider ways to reduce hazardous raw material use.

Alongside the broader transformation of Johnson Matthey, we are also upgrading our processes around product stewardship. We have initiated work to roll out a company-wide inventory and information management platform. This will allow us to better track chemicals through our manufacturing processes and understand the impacts of changing regulation or new hazard information faster, which would allow us to identify safer and / or more sustainable material choices.

Per- and polyfluoroalkyl substances (PFAS)

Per- and polyfluoroalkyl substances (PFAS) are a very broad group of 9,000+ chemicals, including fluoropolymers, that are widely used in industrial and consumer applications due to their unique thermal and chemical stability. They are under significant scientific and regulatory scrutiny because some PFAS are persistent and mobile in the environment and are associated with certain potential adverse health effects. Chemical manufacturing processes, including some in JM, often rely on parts, such as process piping and seals that contain these fluoropolymers. Some fluoropolymers are also, currently, essential to the proper functioning of certain electrolysers and fuel cells technologies. In JM, we are aware of the increasing levels of concern over potential risks posed by a subset of PFAS and are committed to reducing our uses, developing alternatives, fully understanding and limiting impacts on human health and the environment from PFAS in our operations and products. We are also working directly with suppliers, customers, peers, business associations, NGOs and regulators to ensure responsible use and proportionate regulations of PFAS.

Working with genetically engineered microorganisms

Genetically engineered microorganisms in our biocatalysts (enzymes) represent just 0.01% of our sales. None of our products contain live organisms at the point of supply to our customers. Biocatalysts are important chemical intermediates in our manufacturing because they can help us make more of a desired chemical product with fewer undesirable by-products.

Product life cycle analysis

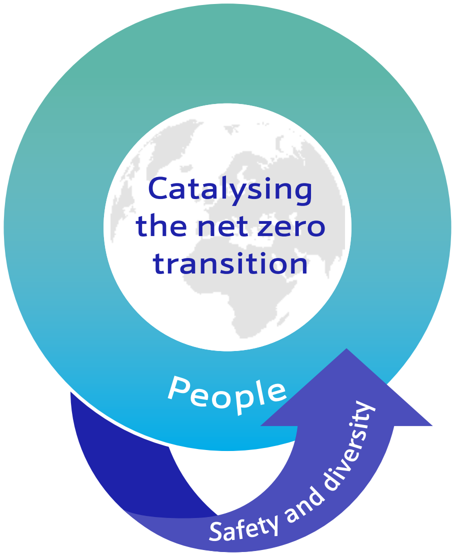
Product life cycle analysis (LCA) is an important way in which we can demonstrate how the environmental benefits of our products outweigh the impact of making them in the first place.

We are committed to making cradle-to-gate LCAs of our products available to our customers on request.

We also contribute to the International Platinum Group Metals Association (IPA)'s publicly available industry standard LCA for the five platinum group metals – Pt, Pd, Rh, Ir and Ru – which is updated annually to ISO 14001 standards.

Visit the IPA website for more information: ipa-news.de

People: Promoting a safe, diverse and equitable society



Our strategy focuses on the core strengths that allow us to play to win in the markets we operate in. We rely on our 12,600+ talented and passionate employees to drive our purpose. Ensuring that they are fulfilled in their careers, work safely and return home well to their families each day is our number one priority.

2030 target	2021/22	2022/23	% change against prior year
Our goal: Keep people safe			
<0.25 Total recordable injury and illness rate (TRIIR) for employees and contractors	0.59	0.47	-20%
0.4 ICCA process safety event severity rate (PSESR)	1.32[1]	1.02	-23%
Our goal: Create a diverse, inclusive and engaged company			
>8 Employee engagement score	Not measured	6.9	–
>40% Female representation across all management levels	27%	28%	+1%
Our goal: Uphold human rights			
% supplier spend assessed for human rights risk and remedial plans in place where high risks identified	-	22%	-
Our goal: Invest in our local communities			
Increase volunteering leave (days)	1,322	2,063	+56%

1. Restated value based on improved reporting of historical process safety events.

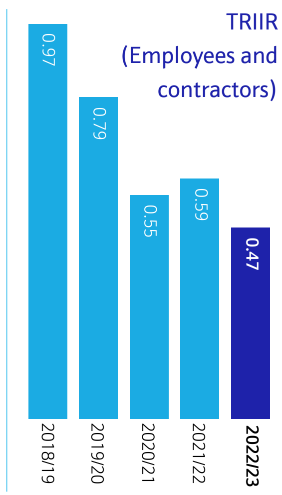
Our goal: Keep people safe

Our ability to catalyse the net zero transition depends on the safe operation of our manufacturing sites. The processes and policies we put in place are one part of our approach, but we are also improving our insight and the tools we provide our people so that they can contribute to our safety culture every day. We have complex chemical processes that often involve heavy machinery and hazardous chemicals. As part of our focus on simplification, we continued embedding the new digital tools we introduced in 2021/22. These are streamlining existing processes and enabling a more data-led approach. To reduce our ergonomic injuries we are using a video tool to highlight ergonomic stress points while carrying out activities and then taking necessary actions to reduce these stress points. Rather than wait for an incident to occur, we are able to proactively spot potential issues and take preventative action. A new central industrial hygiene reporting database is due to go live in the first half of 2023/24.

The Take 5 programme was launched in 2021/22 to help make sure everyone acts in a responsible and safe way at all times. It reminds people to take some time before starting a new activity to make sure they are working in a safe and secure environment. This simple action helps reduce incidents and drive continued improvements in our processes. This year saw the further embedding of this programme. During Q4, we tend to see an increase in the number of incidents across all sites. To help address this we created a toolkit with a range of discussion guides and materials for safety briefings and safety moments focused on 'Make Time to TAKE 5', so that everyone can discuss what we can do to mitigate risks. This resulted in over a 50% reduction in recordable incidences compared to final quarter 2021/22. We further improved our safety performance through engagement and safety leadership by launching our first global safety day and additional regional EHS conferences with the main topic being safety leadership – further details below.

Our occupational health and safety performance

Lost time injury and illness rate (LTIIR) reduced from 0.30 last year to 0.24. We saw a 20% improvement in our all personnel (employees and contractors) TRIIR from the previous year. This is a demonstration of the effectiveness of our Take 5 programme and the impact of having our first Global Safety Day, as well as additional local campaigns at site level which have focused on site-specific safety issues. We have had no fatalities since 2015.



People: Promoting a safe, diverse and equitable society continued

Our process safety performance

Our International Council of Chemicals Association (ICCA) process safety event severity rate (PSESR) has decreased by 23% from 1.32[1] last year to 1.02 PSESR per 200,000 hours worked. There were nine Tier 1 process safety events this year, compared to 11 the previous year. See Basis of reporting on page 227 for a definition of a Tier 1 process safety event.

We continue to embed process safety training across JM. In the last 3 years safety training has been completed by over 2,870 operations-based staff, which is c. 90% of employees who have been identified as needing process safety training. We have also completed individual process safety competency assessments for 305 managers and engineers in process safety-critical roles at facilities rated as 'high hazard'. All roles that have been identified in this category, for our high hazard sites, have now been trained.

Despite these improvements, a significant explosion occurred at one of our US sites in July 2022. Thankfully the incident resulted in no injuries, but we did receive a citation from the regulator and the site's performance remains impacted. Our investigation and root cause analysis highlighted several areas that could be improved – and we continue to implement those changes.

Stronger audits. Stronger oversight

This year saw a return to full on-site auditing as COVID-related restrictions relaxed globally. A total of 17 corporate audits were undertaken during 2022/23. These included four Process Safety-specific audits. All of our high hazard facilities have now been subject to a formal corporate environmental, health and safety (EHS) audit within the last three years and a process safety audit within the last five years.

An independent review and audit of the JM Process Safety Management System, sponsored by the JM Board, has been timetabled for 2023/24 in order to assess the prioritisation of programme implementation and major risk management. The review comprises a review of the corporate process safety systems against industry best practices plus more focused engagements at selected JM sites to audit implementation and progress on recommendations to address the major process safety risks.

Global Safety Day

As part of the new strategy introduced by our CEO in last year's report, just like the rest of our business, 2022/23 saw all our line managers and our EHS team examine our approach to ensuring the safety of our people.

Our first annual Global Safety Day was a huge success – helping to bring our organisational transformation to life by providing site managers with resources and insights into overcoming common barriers to workplace safety. Dedicating a specific day to safety across the whole organisation helped focus everyone's minds on the importance of safety in everything we do and create an opportunity to celebrate our performance and efforts taken in support of safety.

The event was attended by all employees, who took part in activities and talks around the central theme of how to have effective safety conversations. The global event was bolstered by two regional EHS conferences which were attended by site managers and other key functional people with the main theme around safety leadership.

1. Restated value based on improved reporting of historical process safety events.

People: Promoting a safe, diverse and equitable society continued

Our goal: Create a diverse, inclusive and engaged company

As a global company, it is essential that our organisation is reflective of the communities we live and work in as well as a place where people are safe, thriving and building rewarding, long-term careers. Ensuring we have a high-performance culture is critical to the execution of our new strategy. We are creating a more market-focused, agile and less bureaucratic Johnson Matthey – one where our people can be truly customer focused and thrive in their roles. Like our peers, as well as businesses across the global economy, the labour market we operate within remained competitive in 2022/23. This makes attracting the best talent as well as supporting, engaging and developing the people we have hugely important.

Building an engaged, high-performance culture

Immediately after the launch of our refreshed strategy this year, we initiated town halls and team sessions at all levels in the organisation with the purpose of fully communicating the overall strategy and our three core play to win behaviours:

Take accountability | **Keep it simple** | **Drive results**

To accentuate these behaviours we initiated a leader-led culture change programme focused on upskilling people managers and leaders in key areas such as giving feedback to drive performance, and we started work on a new approach to performance management that focuses on the outcomes and results we want to achieve.

An engaged, passionate workforce is the fuel for our transformation. It underpins our whole play to win philosophy and drives us forward in our purpose of catalysing the net zero transition, becoming more customer-focused and unlocking the full value of our operations. We recognise that an important vehicle to driving engagement is all people managers having the ability to regularly track status, progression and provide input for areas of focus relevant to their teams. To this end, we have adopted 'WorkDay Peakon', a globally recognised tool for our regular employee engagement surveys. Further we have decided to increase the frequency of the full survey to annual, and to conduct regular pulse surveys to keep on top of any issues.

Our first full Workday Peakon survey was conducted in March 2023 and we achieved a score of 6.9. The methodology used by Workday Peakon is not directly comparable with the tool we used previously and thus we have not compared the results with past engagement surveys at JM. However, we do recognise that 6.9 places us below the industry average of Workday Peakon users. Whilst this is not where we want to be, this is not surprising given the pace and depth of transformation we are currently undergoing. We have set ourselves targets of 7.2 by end of 2024/25 and a score of greater than 8 by 2030, to move us into an industry leadership position.

We also recognise that engagement is primarily built in the day-to-day interactions with colleagues, which is why many engagement initiatives have also been run locally at sites and in offices. The initiatives take many shapes and forms and adapt to the local opportunities.

To accelerate our work on building engagement in the coming year, we will be increasing our training and support to help managers build engagement across their teams, as well as continuing to examine our employee proposition and culture and making improvements.

Building engagement takes time. Activities we initiated this year to start this journey include:

- We re-clarified our expectations of people managers and their role in engaging and developing their people. We have developed a programme of work to educate and train all our managers and equip them to motivate and develop their people
- We have reviewed our approach to major elements of our reward and incentives programmes to drive and recognise high-performance outcomes and are implementing the changes for 2023/24
- We introduced Workday as a global platform for our people data, giving managers valuable insight into how we can increase retention and streamline processes around activities such as succession planning
- We rolled out our digital platform Say Thanks to the whole of JM where colleagues can express their appreciation of support or contribution from another colleague. In the first six months 18,739 recognitions were provided through the portal
- We refreshed our annual JM Awards, a global competition to allow individuals and teams to be recognised, to be aligned to our new play to win behaviours. Over 190 nominations were received, showcasing many fantastic achievements of our employees globally.

A step change in leadership skills and critical capabilities

Winning requires us to build critical capabilities, ensure we retain experienced colleagues in JM today and provide them with opportunities to develop and progress. We have looked to build the leadership capabilities of the organisation this year. We put in place processes to build a more robust and diverse leadership pipeline.

A big success this year were the leadership masterclasses in which 135 of our senior leaders participated. These brought our new strategy to life and drove our culture transformation forward. The workshops focused on the behavioural change that underpins transformation – storytelling, coaching for performance, accountability and setting objectives. Another 1,663 employees participated in one or more of our general business skill courses.

We have 53 graduates in our two-year graduate programmes, who we continue to develop to become the leaders of the future as they complete eight-month rotations around the company.

We have also focused on building our commercial muscle, through the creation of the Group Commercial Council, which aims to make the voice of the customer front and centre across JM. With the deployment of our play to win strategy, our whole leadership population will be receiving commercial training in the coming year.

In order to win, we must operate efficiently and make the most of our investments for the future. We know from feedback through our benchmarking that our current organisation needs to change to deliver our new strategy. During the year we worked to transform the operating models for our enabling functions, putting in place new organisations for engineering and capital projects. More work is being progressed to sharpen further and reduce costs more quickly in 2023/24.

People: Promoting a safe, diverse and equitable society continued

Advancing diversity, inclusion and belonging

Innovation requires diversity of thought, background and representation as well as a culture of inclusion and belonging. Our success depends on people feeling that they can speak up, talk about ideas, challenge norms and create more value for our customers.

This year we replaced our Equal Opportunities Policy with a Global Diversity, Inclusion & Belonging (DI&B) Policy.

Our Global Diversity, Inclusion and Belonging Policy

Johnson Matthey recruits, trains and develops employees who are best suited to the requirements of the job, regardless of gender, ethnic origin, age, religion or belief, marriage or civil partnership, pregnancy or maternity, sexual orientation, gender identity or disability.

At the core of work to promote DI&B is the work of our Employee Resource Groups (ERGs). As well as giving our people spaces to connect and share experiences, they directly feed into our culture development activities. We now have nine ERGs, following the launch of our Hispanic/Latinx Organisation for Leadership and Advancement (HOLA). Throughout the year, they organised webinars on topics such as LGBT+ paths to parenting, menopause and neurodiversity. Pride in JM and the Black Employee Network continued to lead our reverse mentoring efforts this year. These pairings give our leaders the chance to be mentored by junior colleagues on their lived experiences in the company.

Disability inclusion

Our work on advancing disability inclusion is informed by the DiversAbility ERG. With Liam joining as CEO, we updated and re-signed our commitment to the Valuable 500. We also joined the Business Disability Forum, a leading business membership organisation in disability inclusion. Our first site accessibility audit was completed, and actions taken to improve the accessibility for employees and visitors at our headquarters, and largest manufacturing site, in Royston, UK. An accessibility audit has since been completed at Clitheroe, UK, and plans are being developed to roll out the audits across our other sites.

Our new DI&B policy commits us to:

- Giving full and fair consideration to applications for employment by disabled persons, having regard to particular aptitude and abilities
- Continuing the employment of and arranging appropriate training for employees who have become disabled during employment
- Training, career development and promotion of disabled persons.

Promoting ethnic diversity

We have three ERGs that are helping us to advance ethnic minority groups in different geographies: Asian Network, Black Employee Network (BEN), Hispanic / Latinx Organisation for Leadership and Advancement (HOLA).

To support the development of our Black, Asian and ethnic minority employees, we continued to participate in the Black British Business Awards talent acceleration programme in the UK.

In the US, we ran another cycle of the management accelerator programme with McKinsey & Company – this time with participants on all three, Black, Hispanic / Latinx, and Asian programmes.

The additional focus for next year is on upskilling hiring managers to ensure a fully inclusive hiring process.

In 2022, we partnered with the Association for Black Engineers and the Royal Academy of Engineering on its annual Graduate Engineering Engagement Programme, which aims to improve the transition of engineering graduates from diverse backgrounds into engineering employment. Members of our team supported the mentoring programme, skills and competency workshops, and networking sessions, reaching over 200 diverse candidates.

We also partnered with the Royal Society of Chemistry for its Broadening Horizons in the Chemical Sciences programme, a new three-year pilot to support chemistry students and graduates from Black and minority ethnic backgrounds to pursue careers in chemistry. In September 2022, we joined nine other partners in hosting a taster event to showcase the breadth of careers in the chemical sciences and are now working on visits to our sites across the UK.

Balancing gender representation

Our female representation at all management levels[1] is 28%, a slight improvement on last year, and a step forward towards our target of 40% by 2030, with a milestone of 31% in 2025.

Embedding diversity data into the application process is driving insights on where to attract diverse candidates.

Alongside our Talent Acquisition (TA) team, our DI&B team has built partnerships with organisations like the Society of Women in Engineering to ensure we can source and attract the best talent from a range of diverse backgrounds in the market.

To support our LGBTQ+ colleagues, we published a Transitioning at Work guidance document. It is essential that our trans colleagues can be themselves at work and that we support them, their manager and HR colleagues.

1. All employees whether they are a people manager or not at a minimum pay grade

People: Promoting a safe, diverse and equitable society continued

Freedom of association

We respect and promote the rights of people to freedom of association. In 2022/23 a quarter of our people globally were covered by collective bargaining agreements and / or represented by trade unions.

We work collaboratively with 23 trade unions across our sites, focusing on a range of topics, such as health & safety, well-being, business change needs, employee training and improving the way we work at our local sites. Cost-of-living was a significant part of our union negotiations this year and, for those negotiations that have already concluded, we have agreed larger wage increases than normal and an additional special cost of living lump sum. We also support engagement at regional and national levels where needed.

2022/23 Union representation	% represented	Average number of employees represented	Total average number of employees[1]
UK	21%		
Rest of Europe	24%	668	2,734
North America	17%	397	2,271
Asia	27%	660	2,442
Rest of World	52%	545	1,057
Workforce globally	**25%**	**3,163**	**12,666**

Fair pay

Ensuring our employees are paid fairly for their work also forms part of our core value to protect people and the planet. In the UK, we are an accredited Living Wage Employer and we are exploring to what extent we can apply a living wage policy globally.

We recognise that employees are facing a cost-of-living crisis, and in our most recent pay reviews we increased our pay budgets to recognise this. For non-unionised employees our global salary budget was split for management and non-management roles with non-management roles receiving a higher budget. In addition to their pay increase, employees who fell below the average JM wage in a country where price inflation was abnormally high were given a temporary supplementary allowance. For example, in the UK the non-management budget was 4.5% and the management budget was 3.75%. In the UK, this equated to £50 per month until 31st March 2023 for employees earning £40,000 or less (on a full-time basis). The lowest salary agreement made with our UK unions was a 4.5% salary increase and a £600 lump sum, among other local arrangements

In addition to our employees' pay, we have provided support through Assist, which provides JM employees and dependants with access to a team of highly trained and qualified professionals on a variety of financial well-being topics such as debt management, mortgages and loans; in addition to broader mental, physical and social well-being topics. Our temporary employees received the same benefits as our permanent employees.

We issue a gender pay gap report in accordance with UK law. In 2022/23 our UK gender pay gap was 5.6% which puts us ahead of the national average of 14.9%.

View our Gender Pay Gap Report: matthey.com/gender-pay-gap

Parental Leave

We recognise the significance to our employees of starting and supporting a growing family. Fully encouraging, facilitating and supporting employees to take parental leave is a fundamental part of our employee value proposition. To support employees, we maintain a Global Parental Leave Standard. This standard provides a global minimum standard of 16 weeks fully paid leave for new parents (including adoptive parents) who are regarded as the primary caregiver.

Key workforce statistics[1]

	2022/23	2021/22	2020/21
12-month average headcount	**12,666**	**13,497**	**13,546**
Voluntary leavers turnover rate	12.2%	11.6%	8.2%
Involuntary leavers turnover rate	10.9%	3.8%	7.5%
Total leavers turnover rate	**23.1%**	**15.4%**	**15.7%**

Please see Sustainability Performance Databook for more information on employee by region, age and gender

Gender diversity statistics (as at 31st March 2023)

	% Female	Female	Male	Total
Board	33%	3	6	9
Group leadership team (GLT)	25%	3	9	12
Subsidiary directors	13%	13	86	99
Senior managers[2]	37%	31	52	83
All management levels	28%	478	1,223	1,701
New recruits	33%	748	1,496	2,244
All employees	**30%**	**3,773**	**8,865**	**12,638**

1. Including Health
2. Within JM our senior managers are defined as direct reports of the GLT. The UK Corporate Governance Code 2018 requires companies to disclose the gender balance of senior management, which is defined in the Code as a company's executive committee and the Company Secretary, the statistics for this are included in the GLT row above. Some individuals are included in more than one category.

People: Promoting a safe, diverse and equitable society continued

Our goal: Upholding human rights and high ethical standards

We support the principles of the Universal Declaration of Human Rights and the International Labour Organisation (ILO) Core Conventions. We are aligned with key frameworks that define human rights principles for businesses, including UN Guiding Principles on Business and Human Rights and the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises.

We are a signatory to the UN Global Compact and remain committed to its principles and aims. As part of our membership, this year we took part in the UN's Business & Human Rights Accelerator training programme to build upon our internal knowledge. We published our first UNGP Annual report to "Comprehensive" standard in December 2022

UNGP Annual Report: matthey.com/UNGP-progress

We have the potential to positively impact billions of lives around the world. The benefits of Johnson Matthey should not only be felt by our customers, but by everyone that comes into contact with our business.

This year we published our first standalone human rights policy. It highlights a core group of rights which we believe we impact the most as an organisation and that we have the potential to positively address. It has been reviewed by external specialists to ensure that it meets best practice principles and has been signed off by the Board.

View our Human Rights Policy: matthey.com/human-rights-policy

Our approach to human rights considers our entire value chain – including our own operations, suppliers and customers. We have set ourselves an ambitious commitment to assess all of our value chain partners for human rights risks by 2030. To make that happen, we developed a tailored human rights risk assessment framework in 2021/22 in partnership with KPMG and which we have begun to roll out across our own operations and supply chain this year.

For our own operations

This process identified five high-risk countries where we have operating sites. After applying our assessment to several sites in these countries, we are in the process of raising concerns with local teams and putting remedial actions in place where required.

For our suppliers

We identified 100 key suppliers that accounted for 22% of our annual procurement spend (excluding PGMs). These suppliers were assessed using our human rights risk framework and those identified as higher risk went through enhanced due diligence using third party services. Where required, mitigations and remedial actions have been put in place and continued monitoring has been implemented. Key issues identified with higher-risk suppliers have been escalated to our human rights steering group, consisting of relevant senior leaders.

Human rights awareness formed part of our annual Code of Ethics training offered to all eligible employees. Additional, targeted awareness and training sessions on human rights and conflict minerals were made available to our relevant staff throughout the year.

Our independent Speak Up helpline is available for anyone wishing to raise a human rights concern.

See page 42 for more information on our Speak Up culture

Modern Slavery Statement

We are committed to ensuring no modern slavery exists in our business and to identify, mitigate and remediate any issues we find in our value chain. We publish our Modern Slavery Statement annually to demonstrate our progress.

Full statement: matthey.com/modern-slavery

Ensuring high ethical standards

We are playing to win in the right way – which means holding ourselves to the highest ethical standards in everything we do. This year, we focused on supporting a culture which goes beyond technical legal compliance to include every employee taking accountability for behaving ethically and making good decisions in our everyday work.

Our ethical culture is led from the top by our Board and GLT. An example of this was our annual Ethics Week, where our CEO shared a personal example of how he handled an ethical dilemma during his career. It was a powerful demonstration of his commitment to doing the right thing, even in challenging circumstances. Where instances of serious misconduct are revealed, our Board strongly supports exiting those individuals from our organisation – no matter their level of seniority or the short-term disruption it might cause.

More than 50 sites took part in our annual Ethics Week celebrations. This year the theme was collaboration between senior leaders, site managers and Ethics Ambassadors to generate

People: Promoting a safe, diverse and equitable society continued

real-life conversations about what doing the right thing means for employees in their roles. In addition to Ethics Week, we launched monthly communications to highlight the importance of ethics and integrity in our everyday work.

In line with our strategy we refreshed our annual Code of Ethics training to focus on our values, ethical decision making and scenarios that are applicable to all employees. It has been offered to 11,100 employees[1] and contractors during the year and 87% have completed it. We received positive feedback from our employees.

We also run targeted training courses for our relevant managers and externally facing employees in competition law and our anti-bribery and corruption policies.

Our industry-leading ethical culture heatmap

This year we continued to embed the ethical culture heatmap tool we launched in 2021/22. It is enhancing the ways we can feed ethics and compliance data back to the business and giving us valuable oversight over our operations.

The heatmap focuses on essential ethical culture indicators. Our leaders can see how each of our larger facilities is currently performing and address weaker metrics, suggestive of potential ethical culture issues, more proactively.

The heatmap has been recognised by the wider business community. The Institute of Business Ethics used it as an example of what good looks like in a recent report on ethical culture.

Supporting our suppliers to improve their ESG performance

We have been supporting one of our strategic suppliers, who is located in a higher risk region, and did not have any previous engagement with EcoVadis or other sustainability ratings agencies. As part of our supplier partnering programme, the supplier decided to join EcoVadis at their own cost and completed the assessment. The outcome was a score two points lower than the industry average. We are now supporting the supplier in the development of their policies and processes with an aim to significantly increase their score and achieve an EcoVadis silver medal. We have quarterly reviews with the supplier to monitor their progress. This is a demonstration of how we can partner with suppliers to improve sustainability and drive improvements in our wider value chain.

1. All eligible employees are offered the Code of Ethics training, subject to local laws, union agreements, long-term leave arrangements and start date before the cutoff period

Responsible sourcing

We are a multinational company with a global, multi-tiered supply chain. We rely on our suppliers to provide raw materials as well as goods and services ranging from equipment to utilities and transport. Every year we work with thousands of suppliers and in 2022/23 we spent £3 billion with them (excl PGMs). We increased the ways we support our suppliers globally.

As a values-driven organisation, we work closely with our value chain to uphold human rights and maintain the highest standards in procurement.

Our Supplier Code of Conduct sets out our expectations, and is embedded into our New Supplier Selection Process. All new suppliers complete a self-assessment as part of our on-boarding process. Our most important existing suppliers are assessed annually against our Supplier Code of Conduct using the services of sustainability rating provider EcoVadis. During this year, suppliers accounting for 48% spend (excluding PGMs) in our portfolio have been assessed through EcoVadis, and we plan to increase this further in the coming year.

In addition to that, we started to monitor specific KPIs in EcoVadis that help us to better understand our supplier's performance in human rights and health and safety as well as their journey to net zero. To help our suppliers improve their own sustainability performance, we have embedded sustainability metrics into our supplier partnership programme.

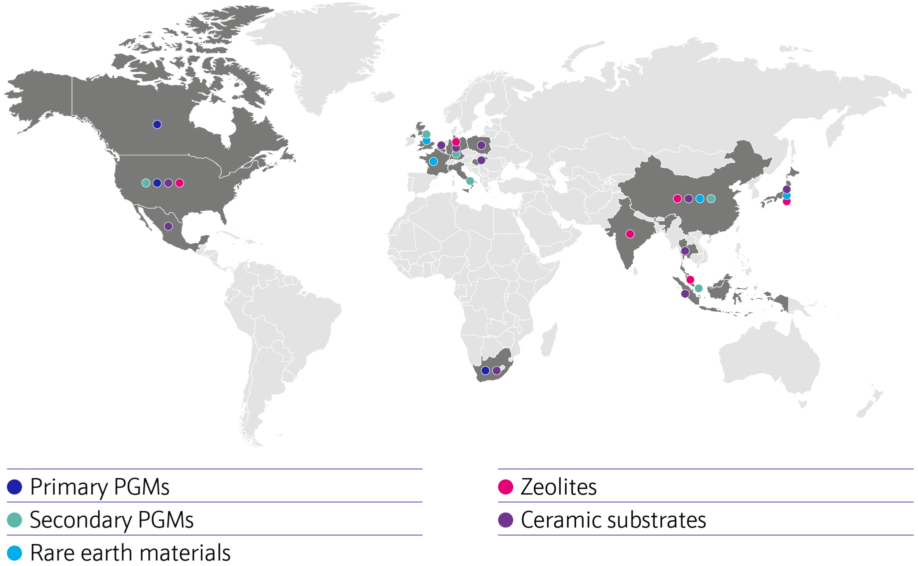
Supplier Code of Conduct: matthey.com/supplier-code

EcoVadis KPIs	% procurement spend 2022/23	% procurement spend 2021/22
Suppliers who have current EcoVadis medal	**38%**	25%
Suppliers who have a good score with EcoVadis but no medal due to adverse media in the past three years	**3%**	1.5%
Suppliers with current EcoVadis rating below medal-achieving level	**7%**	0.2%
Suppliers without an active EcoVadis rating, have declined to share their rating or we have not yet requested it	**52%**	73%

Areas of concern where risks were identified by low scores in EcoVadis	Number of supplier risk identified 2022/23	Number of supplier risk identified 2021/22
Environmental	14	6
Labour and Human Rights	14	6
Ethics	13	11
Sustainable Procurement	6	1
Child Labour	0	0

People: Promoting a safe, diverse and equitable society continued

Where we source strategic raw materials



During the year we have taken big steps regarding supplier diversity. Through our partnership with Tealbook and Minority Supplier Development UK (MSDUK), we conducted a baseline assessment of our supplier base. We have identified that 3% of our spend with suppliers is allocated to diverse / small business, and we identified several opportunities to improve our sourcing practices to be more inclusive as well as enhance our internal training and adoption of the programme. We look forward to evolving this partnership with Tealbook and MSDUK during the coming year.

This year, we also signed an agreement with Carbon Disclosure Project (CDP) Supply Chain to engage with 500 of our most important suppliers, throughout the next financial year, to better understand their carbon footprint and net zero plans.

Conflict minerals and cobalt

We have improved oversight of our conflict minerals and cobalt portfolio of suppliers – in line with both our Conflict Minerals & Cobalt Policy and the OECD's Due Diligence Guidance for Responsible Supply Chains or Minerals from Conflict-Affected and High-Risk Areas.

Current global regulation defines "conflict minerals" as tin, tantalum, tungsten and gold (3TG). This year, we voluntarily updated our existing policy and due diligence process to include cobalt as well. We believe this puts us in a good position for future legislation that is expected to classify this metal as a conflict mineral in years to come. To support this, we have provided refresher training sessions to our employees, who are involved in the collection and verification of Conflict Minerals Reporting Templates (CMRTs) and Extended Minerals Reporting Templates (EMRTs) of the Responsible Minerals Initiative (RMI). We are actively engaging in conversation through our supplier partnering programmes to understand greater detail about the content of 3TGs and cobalt supplied in products to us.

Of the 3TGs, we principally buy tungsten for use in our autocatalyst products, though we recognise we may have small amounts of the others in finished goods and refining intakes. For calendar year 2022, we identified 79 suppliers providing 3TGs and cobalt going into our products. All have provided us with due diligence industry standard reporting templates. Out of the responses, seven of these suppliers did not fully meet our policy expectations (two for 3TG, three for cobalt and two for both 3TG and cobalt). Where non-compliance with our policy has been identified, we are working with suppliers to remediate this.

Platinum group metals

Along with our customers, we work with industry associations like the International Platinum Group Metals Association (IPA) to ensure we source our PGMs in an ethical way. We are pleased to support members' adoption of the Initiative for Responsible Mining Assurance (IRMA) responsible mining standard. We recognise it is a significant undertaking to achieve full IRMA certification for mining operations and continue to support our suppliers on this journey.

More on the IRMA responsible mining standard: matthey.com/IRMA

Our own UK and US refineries are on the London Platinum and Palladium Market's (LPPM) 'Good Delivery' lists for platinum and palladium and are subject to its Responsible Platinum and Palladium Guidance (RPPG). This standard requires us to demonstrate that we have high ethical standards and traceability of metal in our supply chains. We are third-party audited, by RCS Global, annually to confirm our ongoing compliance.

Annual LLP compliance: matthey.com/LPP-compliance

Forestry products

After identifying the presence of palm oil in our supply chain, we moved to ensure we only purchase palm oil from sustainable sources, as set out in our Supplier Code of Conduct. We are now certified members of the Roundtable on Sustainable Palm Oil (RSPO) and expect to be audited against the RSPO Supply Chain Certification Standard by an accredited certification body in the next financial year.

Doing business in higher-risk jurisdictions

In 2022, we ceased all new commercial sales activity in Russia and closed our Moscow office. During 2022/23, we also put our production facility in Krasnoyarsk in dormant status.

We source a number of raw materials critical to our products from China, including PGMs, rare earth metals and zeolites. During the year we conducted due diligence on Tier 1 raw material suppliers with a presence in China. No major concerns have been identified. We continue the process of reviewing the detailed due diligence and will implement mitigations or put remedial actions in place, as required.

People: Promoting a safe, diverse and equitable society continued

Our Speak Up culture

It is essential that our employees, customers, suppliers and other stakeholders feel they can speak freely when they have an ethical concern. We have various channels for them to do this including our independent Speak Up line. In 2022/23 we received 153 Speak Up reports compared to158 in 2021/22. We see this as a positive sign that our people and other stakeholders feel comfortable raising concerns and have faith in our process.

We analyse Speak Up metrics quarterly to identify key themes and significant trends and share these with the Ethics Panel and relevant senior leaders. This year members of senior management were invited to Ethics Panel meetings to address themes, trends and lessons learned in their business to drive further business accountability.

Our Ethics Panel is chaired by our General Counsel and comprised of independent members of the GLT and other senior leaders. It meets quarterly, oversees all Speak Ups and takes appropriate action where necessary. The Board is updated on key Speak Up trends and the most significant cases during Societal Value Committee meetings. See pages 80-89 for more information.

Categories of recommendations made in Speak Up cases closed during the year are summarised in the table opposite.

During the financial year, 14 Speak Ups relating to bribery and corruption were reported, though in some instances multiple reports were raised about the same alleged conduct. JM has a zero-tolerance approach to bribery and corruption, and our Ethics & Compliance team thoroughly investigated to determine whether the allegations could be proven or whether any recommendations should be made, as it does with all categories of Speak Ups. Even where allegations of bribery and corruption are not proven, an assessment was made to ensure the risk of bribery and corruption taking place in the future is properly mitigated. During the financial year no legal cases regarding bribery and corruption were brought against JM or its employees.

Speak Up reports 2022/23

Concern / allegation	Number of cases
Bribery and corruption	14
Conflict of interest	6
Discrimination, harassment, bullying or retaliation	47
Employee rights	56
Enquiry	5
Environmental protection, product stewardship or health and safety	11
Financial crime	2
Insider trading, financial reporting and other securities violations	1
Theft or misuse of assets	6
Trade and export controls	1
Other	4

Recommendations following investigated reports in 2022/23

Recommendation (please note there could be more than one recommendation per report, or in some cases none)	Number of cases
Separation with employee	4
Verbal or written warning	3
Coaching / training	21
Communication	34
Internal review of processes	28
Update / create new standards / controls	16
Senior leadership or management actions	21
Remedy for the reporter	6

Speak Up – Retaliation by a manager

Background
A Speak Up alleged the most senior manager at one of JM's sites tried to retaliate against an employee.

Findings
Upon investigation, a series of serious misconduct was proven, including threats of retaliation, financial irregularities, systemic bullying, and labour rights violations.

Outcome
We separated with the manager and remedial measures were put in place regarding financial controls and strengthening the ethical culture on site.

Find out more about our Speak Up process: matthey.com/speak-up

People: Promoting a safe, diverse and equitable society continued

Our goal: Investing in our communities

As a company driven by our shared purpose, we have a duty to all our stakeholders, including our local communities. Not only do our products and services deliver significant positive impact for society and for our customers, but we recognise the important role our people play in communities too.

Refocusing our approach

Our reinvigorated community investment strategy builds on two core beliefs. Firstly, we believe that science will be key in tackling many of the biggest challenges the world is facing. That's why we remain committed to removing the barriers that exist for young people in accessing and staying in high-quality science, technology, engineering and mathematics (STEM) education. We also know that building a positive legacy in the communities where we operate is of the highest importance to our people. So we are introducing a second strand to our strategy: sustainable communities, which is all about our contribution to green initiatives or other local needs.

Our volunteering and match funding efforts have had an enormous positive impact over the many years we have been offering this support. Our new approach focuses these efforts and resources, and aligns them behind our purpose to catalyse the net zero transition. By 2030 we aim to reach 10,000 young people, typically excluded from science, through quality STEM-related interactions and experiences involving our employees. To get there, we'll be focusing on fewer, stronger, multi-year partnerships with community organisations, better tracking and reporting on the impact of our activities, and establishing clear roadmaps for how we will achieve our objectives.

Our performance in 2022/23

2,063
volunteering days (+56%)

A large part of our work this year has been forming our new approach – but that doesn't mean that there haven't been some great achievements too. We have been able to react to some of the challenges people across our communities faced in 2022/23.

The impacts of the cost-of-living crisis caused by rising inflation and energy costs have been felt across the world. As part of our response, we donated to six organisations tackling food poverty: The Trussell Trust, Feeding America, Stacja 6 – Fundacja, Fuel Macedonia, UNICEF India and Action Aid. We also responded to the Turkish and Syrian earthquake disaster with a donation to The Disaster Emergency Committee appeal and matched any employee donations to the appeal throughout February 2023.

Our people continued to offer their time to volunteer and have a direct impact on their local communities. This year, we recorded our strongest ever numbers of volunteering, and the first year where volunteering activity has exceeded pre-COVID levels. We recorded 2,063 days of volunteering overall, up 56% on the previous year, and our #JMVolunteers campaign saw over 800 of our people come together for two focused weeks of volunteering efforts in December 2022, across 33 sites and 14 countries.

People: Promoting a safe, diverse and equitable society continued

Community Investment summary[1]

£'000	2022/23	2021/22	% change
Direct expenditure	594	168	254%
Indirect expenditure	479	283	69%
Total	**1,073**	**451**	**138%**

STEM outreach

Throughout the year we continued our focus on removing the barriers for young people accessing quality STEM education. We have now awarded £338,000 through 19 grants as part of our flagship Science and Me programme, building lasting local partnerships and delivering projects including Mangorolla Community Interest Group, where we funded their 'I'm a Scientist Get Me Out of Here' online STEM enrichment activity. This allowed school learners to connect to and ask questions of a diverse range of STEM professions and engaged 2,179 learners aged 10-18 years old from schools in Detroit, US and from state schools across the UK.

Our STEM education efforts through Science and Me are on track to impact 24,000 students, and 118 teachers by the end of this calendar year.

Moving into the next year, we will connect with local schools to widen our volunteering efforts, boost engagement as well as tap into opportunities such as micro-volunteering, which means offering shorter volunteering opportunities for example participating in a one-hour STEM careers webinar.

1. For calculation methodology please see page 227

Providing shelter and support for Ukrainian refugees

Building on our support for Ukraine from last year, over 125 Johnson Matthey team members in Gliwice, Poland, joined the local community to refurbish a former school dormitory. The site can now house up to 130 Ukrainian refugees in a safe, community-focused space.

The team also helped to renovate a community centre for displaced children and turned an ice rink into a donation redistribution centre. We donated kitchen equipment and IKEA gave furnishings to help the project – but arguably the most important contribution was the time given by our people and other selfless volunteers.

People: Promoting a safe, diverse and equitable society continued

How we engage with our external stakeholders

Business associations

	Key focus of engagement on Sustainability in 2022/23
Aldersgate Group	We actively participate in sustainability focused policy advocacy papers.
Hydrogen Council	Active CEO engagement promoting the future of hydrogen
IPA	Promoting adoption of IRMA's responsible mining standard and common standards on carbon footprint of PGMs. Engaging with EU policy makers on introduction of Euro 7 standards and the Critical Raw Materials (CRM) Act.
CIA	Active role in the Sustainability Committee, particularly focusing on position on sustainable chemicals.
cefic	Active engagement in sustainable financing task force shaping EU's taxonomy and sustainable financing legislative framework.
Eurometaux	Provided input to their information-gathering on PGMs for the CRM
AECC	Active engagement on environmental regulations promoting clean air, health benefits and sustainable solutions in transport.
CLGs	We re-joined Corporate Leaders Group in 2022 and our CEO signed their pledge to net zero letter to UK prime minister in September.

We increased our engagement with leading organisations in the last year. Where possible, we ensure we are aligned on sustainability priorities; when there is not full alignment we actively participate in discussions to inform and shape policies and positions.

We joined CBI in the UK during 2022/23, but like many companies suspended our membership in April 2023.

Membership of global alliances

	Key focus of engagement on Sustainability in 2022/23
wbcsd	We became a member of the World Business Council for Sustainable Development (WBCSD) and joined their SOS1.5 project in January 2023.
UN Global Compact	We are members of UN Global Compact and we published our first UNGP Annual report to "Comprehensive" standard in December 2022 *UNGP Annual Report: matthey.com/UNGP-progress* We also joined Business & Human rights accelerator and attended UNGC Climate Action Summit.
World Economic Forum	Having suspended our membership of the World Economic Forum, we rejoined in 2022/23 and support their sustainability goals.

On Industry Day at COP 26 (9th November, 2021), the World Business Council for Sustainable Development (WBCSD) and the Sustainable Markets Initiative (SMI) gathered ambitious companies to drive growth in the demand for, and supply of, low-carbon (blue) hydrogen – an essential part of the future net-zero energy system. Pledges were made by 28 companies representing different sectors from mining to energy, vehicle and equipment manufacturers, and financial services. The number of pledging companies has now increased to 35.

We were one of the original 28 pioneering companies, and the our pledge reads: "JM is putting its science and experience at the heart of solutions that support a cost-effective transition to a secure and environmentally sustainable energy system. By 2030, Johnson Matthey pledges to invest c. £1billion in the research, development and deployment of clean hydrogen technologies."

As part of the Pledge, JM committed to provide an update annually, and we can report that our planned investment in this area is well on track to meet the Pledge. These investments include research, development and deployment of processes and catalysts underpinning the production of CCS-enabled (blue) hydrogen, components for the production of renewable electrolytic (green) hydrogen, components for hydrogen fuel cell technologies and the optimisation of refining technologies to recycle platinum group metals from these and other hydrogen-related applications.

Task Force on Climate-related Financial Disclosures

In this section

Introduction

Climate change is one of the most pressing threats facing our planet today. It is affecting our environment and poses a growing risk for people and businesses alike. We recognise that what we do at Johnson Matthey has impacts – both positive and negative. Our products and services help our customers to reduce greenhouse emissions and the new technologies we are designing will help further accelerate the transition to a low-carbon future. But the manufacturing and chemical processes we use have their own environmental impact, creating greenhouse gas emissions and using water.

Our company purpose is catalysing the net zero transition. Therefore, our strategy is shaped around the opportunities and the risks that our changing climate presents. We have set ourselves the target of achieving net zero by 2040 with a series of challenging short-term science-based targets (SBTs) on the 1.5°C pathway as well as an avoided GHG emissions target for benefits to our customers for 2030 (see page 24 for a full table of targets), to ensure we keep driving up the benefits of our products while reducing their environmental impact.

The disclosures in this report are consistent with the TCFD recommendations.

Governance

Given the nature of our business, and how closely aligned our strategy is to a warming world, climate-related risks and opportunities have been on the board's agenda for many years.

Role of the Board and its committees

The Board is responsible for setting and overseeing the implementation of the group's strategy, including the annual budget and detailed business plans. In doing so, it considers climate-related issues, including when approving requests for capital expenditure or new initiatives.

As a result of our internal board effectiveness review, the responsibilities of the Board and its committees in relation to climate-related issues and the broader sustainability agenda have been refined and clarified during the year.

The Societal Value Committee (SVC) is a meeting of the full Johnson Matthey board that focuses more closely on the governance of sustainability matters, including our response to climate change. The SVC meets four times a year, see pages 88-89 for more information about their work in 2022/23. The SVC has been driving the development and validation of roadmaps to deliver on our 2030 GHG reduction targets and the integration of carbon accounting into the company's budgeting and capital allocation exercises, to ensure the right resources were allocated to deliver on our objectives. Given how fast society's response to climate change is developing, the SVC receives papers on emerging issues related to climate at each meeting, such as legislation and stakeholders' expectations. During the year the Committee has invited external experts to get an 'outside-in' view on climate regulation, including Inflation Reduction Action in the US and Green Deal in Europe.

Together with the Nomination Committee, the Board ensures that, among the directors, it has the necessary sustainability and climate-related expertise.

For more details of our non-executive directors' skills and experience, see pages 76-77

The Audit Committee monitors and assesses the level of assurance over TCFD and climate-related issues and performance metrics as we continue to develop our reporting in this area. The Audit Committee is also responsible for reviewing the effectiveness of internal control and risk management, which includes climate-related risk.

The Remuneration Committee set two climate-related targets within the group's Long-term Performance Share Plan (PSP) in early 2022. Our senior leaders and directors participate in this PSP. This clearly reflects our intent to contribute to an acceleration of the transition to a net zero world. The development of the sustainability roadmaps to our 2030 GHG reduction targets were also embedded in the GLT members' shared incentives for this year.

Role of management

The Board delegates responsibility for running the business to the Chief Executive Officer (CEO); this includes overall responsibility for climate-related issues. The CEO is supported by the Chief Sustainability Officer (CSO), who chairs the Sustainability Council which is made up of members from the GLT and the Sustainability Director who together, develop our sustainability vision, goals and targets.

The CSO is responsible for prioritising our sustainability agenda and threading all elements into our business, providing updates to the GLT on the steps taken to develop or implement our sustainability strategy, including key metrics, risks, opportunities and our roadmaps to net zero by 2040.

At a business / working level, there are work streams for advancing specific aspects of sustainability. See our governance structure for climate-related issues for more details.

Governance structure for climate-related issues

Level	Committee / forum	Attendees	Frequency	Objectives	
Board level	Societal Value Committee	• Full board • CSO • External experts	4 times a year	• Formal board governance committee on Sustainability • Gives direction and oversight of ESG strategy, goals, performance	Representation for sustainability topics in parallel board committees – e.g. Audit, Nomination and Remuneration
GLT level	GLT	• CEO – responsible overall for climate-related issues • CSO • Other GLT members	Monthly (CSO updates as required)	• Agree and formally approve global sustainability strategy and goals • Monitor roadmaps and ensure resources in place to deliver strategy and targets	
	Sustainability Council	• Chaired by CSO • GLT members • Sustainability Director	Quarterly	• Driving broader sustainability • Decide on adjustments to the sustainability programme and strategy • Monitor sustainability targets • Other ad hoc topics	Coordination and transparency between Businesses and Functions and Sustainability team
Business / Working level	Sustainability work streams	• Sustainability Director • Operations and Commercial sustainability leads • Sustainability initiative owners from global functions	Bimonthly	• Build and agree roadmaps to targets • Ensure delivery of roadmaps • Discuss new and emerging topics • Ensure customer needs on sustainability are proactively met	Sustainability leads by business and function

Strategy

Our business strategy is based on our purpose of catalysing the net zero transition for our customers through enabling the necessary transitions in transport, energy, industry and the circular economy. Climate change offers us many business growth opportunities through our products and services, as well as some risks. The pace at which the world will adapt to the impacts of climate change is uncertain. So that we properly understand and are resilient to these uncertainties we maintain climate-change scenarios to frame the ambiguities in our long-term business strategy of an increasingly volatile and complex environment.

Climate scenarios for evaluating transition risks and opportunities

Our climate scenarios are used by all of our businesses as a common basis for planning, forecasting and stress testing their strategy and assumptions on growth. These scenarios, which project the impact of climate change on our operational and commercial performance, are essential in informing our strategic decisions, such as how we invest in R&D and assets, or which new products to develop. We also use climate scenarios to consider the resilience to changing weather patterns of our own operations, those of our strategic suppliers and our core supply routes.

Our three transition scenarios represent three global temperature rise pathways.

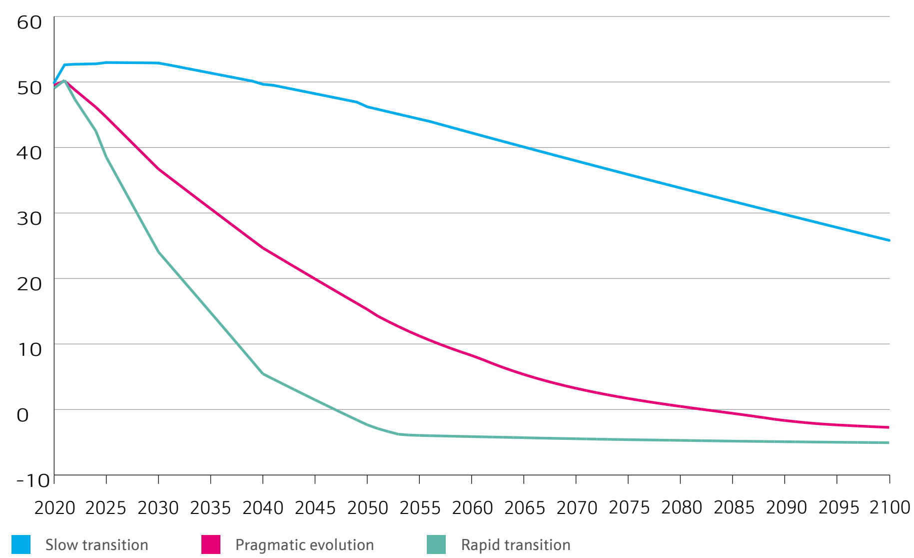
- Rapid transition scenario (aligned to 1.5ºC) – net zero achieved globally by 2050, in line with the goal of the Paris Agreement to limit the world's temperature rise to well below 2ºC. This reflects swift and decisive action regarding policy interventions and decarbonisation commitments.
- Pragmatic evolution scenario (aligned to 2ºC) – net zero achieved globally by 2080, which reflects a step-up in policy interventions and decarbonisation commitments compared with today, but not as decisive as under the rapid transition scenario.
- Slow transition scenario (aligned to 3ºC) – net zero not achieved by 2100, reflecting a global lack of urgency on climate change with limited policy or legislative interventions.

We developed our climate scenarios internally, with support from an external expert, reflecting the latest available research from the International Energy Agency (IEA). The IEA research we used included three scenarios: the Net Zero Emissions Scenario, the Announced Pledges Scenario, and the Stated Policies Scenario. Our methodology breaks down the different energy sources (electricity, hydrogen, gas, coal, oil, renewables, biomass and others) and considers forecasts for each source by demand type: transport, buildings, industry, power and heat. We developed in-house forecasts for specific source / demand combinations close to our areas of expertise in automotive, chemicals, hydrogen and other industries, while ensuring that, at a macro level, we remained within IEA's forecasts.

We update our scenarios annually to reflect changes in external drivers, incorporating the latest from internationally recognised sources alongside our own forecasts. Our updates in the last year point towards an acceleration in demand for low-carbon hydrogen.

We model scenarios up to 2100 (see chart below), but look at shorter-term horizons, specifically 2030 and 2040, to inform our strategic and operational decisions. The table below details the main qualitative and quantitative assumptions we used for our 2040 scenarios. We use the pragmatic evolution scenario as our base case for our strategic planning.

Total anthropogenic emissions ($GtCO_2$/yr)



Climate scenarios for evaluating physical risks

Changing weather patterns as the climate warms may result in physical risks to our assets and supply chains. We have evaluated the exposure of all our assets and those of our strategic suppliers to these risks.

We used the Shared Socio-economic Pathways (SSPs), the latest climate change modelling scenarios from the Intergovernmental Panel on Climate Change (IPCC). The SSPs produce forward-looking climate data by running climate models driven by assumptions about future global GHG emissions, together with plausible future socio-economic development metrics (economic growth / GDP, demographics, land use and urbanisation), and incorporating the likely implementation of adaptation and mitigation measures.
We looked at three SSPs for the locations of all our own operations and those of our strategic suppliers. We considered four time horizons – 2020 (our baseline), 2030, 2040 and 2050 to identify the top hazards and how they are likely to change.

Scenario	Assumed temperature increase (relative to 1850-1900)
SSP 1-2.6	Best estimate of 1.7ºC warming by 2041-2060, and 1.8ºC by 2081-2100
SSP 2-4.5	Best estimate of 2.0ºC warming by 2041-2060, and 2.7ºC by 2081-2100
SSP 5-8.5	Best estimate of 2.4ºC warming by 2041-2060, and 4.4ºC by 2081-2100

SSP 5-8.5 is an extreme scenario that is unlikely to arise, but it is useful for stress testing. We use it to test the resilience of our most important sites.

Market Sector	Metric (2040)	Unit	Rapid transition	Pragmatic evolution	Slow transition
Global	Total primary energy demand	Exajoules (EJ)	500-550	600-650	700-750
	Renewables supply (excluding use of biomass)	% of total energy supply	c. 55%	c. 35%	c. 25%
Automotive	Global sales of zero-emissions vehicles	% of total automotive sales	c. 90%	c. 70%	c. 40%
	Global sales of fuel cell electric vehicles	% of total automotive sales	c. 20%	c. 15%	c. 10%
Hydrogen	Global hydrogen production	Mt p.a	350-400	200-250	150-200

Our climate-related transition risks and opportunities

Through our scenario work, we identified three distinct potential climate-related impacts, which represent both risks and opportunities for our business. We have added the first climate impact risk to our principal risks because it is of strategic importance to our business (see page 62).

We use our climate scenarios to evaluate these risks and opportunities in the short (0–3 years), medium (3–10 years) and long term (10+ years), in line with our usual business planning timescales. We believe the pragmatic evolution climate scenario is most likely to occur, so have used it as the base case for assessing our transition impacts, and the other two scenarios to stress test the sensitivity and resilience of our business plans.

Primary driver of impact	Opportunities (with time horizons)	Risks (with time horizons)	Management of impacts	Financial impacts (after management)	KPIs to monitor impacts
1. Changing customer demand for our products due to climate awareness					
Regulation • Tightening GHG emissions standards for vehicles. • Government incentives or taxation for energy production or use based on carbon footprint (e.g. IRA and ETS). • Requirements for use of bio-based feedstocks. **Markets** • Shifts in customer preferences.	Opportunities for new products in the medium and long term: • Sales of products & services to rapidly growing low-carbon hydrogen generation sector • Products for hydrogen-powered vehicles (FCEV & ICE) and sustainable aviation fuels • Low-carbon solutions for the chemicals industry • Increasing regulations and the introduction of carbon taxes will accelerate growth in our new target markets – sustainable chemicals, sustainable fuels and clean energy (medium term) • Sustained sales of existing products for internal combustion engine vehicles as tighter GHG emissions standards (Euro 7) demand state-of-the-art technology for exhaust pipe catalysts (medium term).	Without adaptation of our portfolio, there is a long-term risk that we may not have a financially viable future business model as society transitions away from fossil fuels. • Ability to invest and scale up rapidly to manufacture new products for new markets (short/medium term). • Uncertainty in the rate of market evolution from existing to new technology options and penetration of hydrogen technologies affecting profitability (medium/long term). • Reduced demand for existing autocatalyst products for ICE vehicles (long term).	We focus on managing our existing businesses effectively, while pivoting away from fossil fuels-based industries to ones based on clean hydrogen, sustainable chemicals and bio-based fuels. • We are closely monitoring the changing market environment drivers including evolving government policy on hydrogen, emissions standards, carbon taxation and incentives such as IRA. • Updating our climate scenarios at least once a year to inform our strategic decisions. • For our growth businesses we are investing in new production assets, forming long-term upstream and downstream strategic partnerships to enable us to play to our strengths to accelerate growth and maintain capital expenditure in line with market expectations e.g PlugPower & Fulcrum. • For our maturing businesses, we have a plan to reduce our cost base to improve efficiency and cash flow. • Divesting businesses not core to our growth strategy to simplify & focus. • We keep investing in innovation to make sure we have products that differentiate us in all our markets.	**Growth** Accelerating profit growth coming from businesses related to the net zero transition. Clean Air remains on track to deliver our cash generation target of at least £4 billion by 2030/31 in base case scenario. **Investments and Costs** c. £0.4 billion of cumulative capital expenditures dedicated to businesses related to the net zero transition in 3 years 2022/23-2024/25.	Progress towards our 2030 sustainability targets for products and services: • Tonnes of GHGs avoided by customers using our products • % Revenue and R&D and revenues aligned with SDG7 and SDG13 • Economic activity aligned with EU taxonomy regulation – climate delegated act.

Primary driver of impact	Opportunities (with time horizons)	Risks (with time horizons)	Management of impacts	Financial impacts (after management)	KPIs to monitor impacts
2. Increasing demand for low-carbon manufacturing					
Markets • Shift in customer preferences towards products with a low-carbon footprint. **Regulation** • Carbon taxation mechanisms in countries of operation e.g. ETS. • Emerging rules on recycled content of consumer goods and the need for companies to declare the carbon footprint of their products.	• Commercial advantage if we adapt our manufacturing plants to low-carbon operation faster than our competitors (short/medium term). • Save future carbon taxation costs, which will reduce operating costs and give us price advantage as schemes become more widespread and expensive (short/ medium term). • As the world's largest recycler of secondary PGMs, we could benefit from the increased demand for goods with low-carbon and/or recycled critical raw material content (short/medium term).	Medium-term risk that we cannot transition our operations for net zero at the correct pace to meet customer demand of low-carbon products. • Loss of customers and failure to attract new customers due to reputational damage if we do not transition fast enough to cleaner energy solutions in our operations (medium/ long term). • Greater capital required to upgrade our assets and site infrastructure to transition to low-carbon manufacturing (medium term). • Inability to access the alternative renewable energy sources needed to reduce natural gas use in our operations (medium/long term). • Loss of competitive advantage due to increased costs to us and our suppliers of goods and logistics due to carbon taxation on raw materials and fossil-fuel derived energy (medium term).	• We have set challenging 2030 GHG reduction targets in line with the 1.5^{0}C pathway and published roadmaps to decarbonise our manufacturing operations. • We use an internal carbon price for our capital investment decisions and the Board consider sustainability reviews of all investment decisions £5million and above to help us make the right choices for decarbonising our operations for net zero in the long term. • We review global carbon pricing trends annually and have embedded carbon price forecasts into our three- and ten-year planning cycles. • Monitor trends in customer requests for product carbon footprint, Life-Cycle analysis (LCA) and recycling information.	Exposure to direct carbon taxation on our manufacturing operation is not forecast to be material in our 3 year viability period, see page 70.	Progress towards our 2030 sustainability targets for products and services: • Scope 1, 2 and 3 GHG emissions • % recycled PGM content in our products • Number of customer requests for low-carbon and recycled content in products • Current and forecast direct exposure to carbon taxation in 2030 for our operations.
3. Increasing stakeholder expectations of corporate climate policy and performance					
Reputation • Increased concerns or negative feedback from stakeholders. **Legal** • Exposure to litigation.	• Developing and delivering robust climate policy will increase our long-term business resilience, attracting shareholders and employees aligned with our values. • Delivering our net zero commitment and science-based targets will help us demonstrate sustainability leadership, and increase our profile with new customers and shareholders.	• Investors, employees and wider society are scrutinising companies' sustainability commitments ever more closely. Failing to meet their expectations could damage our reputation, losing us customers, making it difficult to attract and retain staff, and ultimately increasing the risk of shareholder action (medium/long term). • Our climate policy, net zero ambitions and sustainability targets do not keep up with stakeholder expectations. • Our plans for meeting these commitments are not deemed sufficiently detailed or credible. • We fail to meet these commitments.	We continue to monitor and manage the expectations of our stakeholders as follows: • SVC and Sustainability Council monitor our governance of climate- related issues at every meeting. • Close monitoring of the latest case law and developments in climate litigation. • Developing and monitoring net zero roadmaps to 2040. • This year we have increased the ambition in our Scope1,2 & 3 targets to be in line with 1.5°C pathway and SBTi Net Zero standard. • Maintaining regular dialogue with investors. • Market scanning and benchmarking of targets to ensure our climate-related polices and commitments meet the highest expectations.	Reputational risk is not easily quantified.	How we score on leading ESG platforms: • CDP Investor score • DJSI, Sustainalytics and MSCI climate scores • Progress towards our 2030 sustainability targets for GHG emissions.

Our climate-related physical risks and opportunities

Changing weather patterns as the climate warms may result in physical risks to our assets and supply chains. They could damage our sites and disrupt production, leading to loss of sales and increased costs, as well as posing risks to our employees. They could also hamper our access to strategic raw materials through supply chain disruption, either at our suppliers' sites or in transit. These physical risks can be grouped into two categories:

- Acute, which are extreme events such as tropical cyclones, thunderstorms, severe flooding events, droughts, heatwaves and wildfires.
- Chronic, which are gradual changes like rising sea levels that damage coastal property, or sustained changes to temperature and rainfall.

Primary driver of impact	Opportunities (with time horizons)	Risks (with time horizons)	Management of impacts	Financial impacts (after management)	KPIs to monitor impacts
4. Disruption to our operations resulting in damage to or loss of assets, increased costs and harm to our employees.					
Physical risks (acute and chronic). Increased frequency, severity and variability of extreme weather events and natural disasters.	Competitive advantage by improving our business resilience and controls through diligent climate-related screening of assets, and integration with business continuity plans (medium term).	Damage to our key sites, equipment or stock from severe weather (wind, rain and drought) if any increased risk is not effectively mitigated, leading to disruption of supply to our customers (medium term). Insurance of our sites could become inadequate or more expensive if a site is at very high risk of weather-related disruption (medium term). Increased employee EHS incidents if sites not adapted to increased risk of heat wave.	Our ten most important manufacturing sites identified as being located in areas with increasing risk from high rainfall are undergoing deep-dive assessments of their resilience and implementing mitigation as required, please see case study on page 51. Integration of weather-related risks in business continuity plans and follow-up action plans. Climate change assessment considered as part of due diligence for new investments for growth. We use the WRI tool to monitor where clean water availability could be at risk in the long-term, see page 46. We regularly review the type and limit of insurance available for climate risks to our portfolio.	High level analysis of our ten most critical locations shows that there is no material financial impact from climate change risks on the quantifiable hazards (flood and windstorm in the medium term).	Proportion of physical asset value exposed to a climate change related high or very high hazard levels by 2030: Number of sites in water-stressed areas. Amount of water consumed in areas or high or extremely high baseline water stress.
5. Disruption to our supply chain (upstream and downstream) hampering our access to strategic raw materials (including metals) and products, and increasing costs.					
Physical risks (acute and chronic). Increased frequency, severity and variability of extreme weather events and natural disasters.	Engaging with our suppliers to help them manage climate risks to their sites could enhance our relationships with them and save us money (medium term). Increase in business resilience through more diligent and frequent screening of our suppliers' assets (e.g. through integration with business continuity plans) (medium term)	Disruption of supply of key raw materials risks our ability to deliver goods on time to customers, resulting in loss of sales and future business and damage to our reputation (medium term). Insurance cover of suppliers is inadequate, and uncertainty over the future level of increased risk responsibility that will be assumed by suppliers and / or JM relating to climate risks, or if physical risks should be transferred (medium term, three to ten years).	Climate risk is integrated into our principal risk management structure and Supplier Partnering framework (SRM). We undertake quarterly reviews of the risks identified, supplier remediation plans and alignment with company and category strategies. We work with strategic suppliers to integrate specific climate mitigating actions where high risks are identified to improve their resilience or we switch to alternative partners for high-risk delivery routes (short / medium term). We ensure that the type and limit of our suppliers' insurance is in line with our own risks and external obligations (medium term). We continue to develop a diversified supply portfolio, with emphasis on dual sourcing at supplier and site levels.	No issues identified in the last year.	Number of weather-related supply chain disruptions.

Risk management

All our climate-related risks are subject to our global enterprise risk management process, which provides a systematic approach of understanding, evaluating and addressing all identified risks (see page 62 for more information).

Identifying climate-related risks

Over the last year we continued to review and evaluate our climate-related risks against industry best practice, peer benchmarking and risks identified by business leads and subject matter experts as well as new and emerging risks.

We believe our climate-risks are in line with industry and legislative expectations. During the year, we have not identified any new climate-related risks but we have combined two risks which were previously reported separately as we recognised they were strongly interconnected with both being influenced by pricing and carbon markets.

Assessing those risks

Our enterprise risk framework provides the tools and guidance to our businesses on how to assess all risk types. The framework allows the comparison of risks using the metrics of likelihood, time horizon and financial impact to determine most material risks to our business.

During the year climate risks have been approached with renewed focus through evaluating potential impact and velocity – immediacy of impact. Use of this extra metric has allowed the determination of which climate risks pose most immediate material impact to our operations. This evolution from a reactive to a proactive strategic approach is essential for maturing our assessment and integration of climate risk mitigation into our business strategy.

We also use external third parties to evaluate physical climate risks at our locations and those of our suppliers. Following on from our assessment in 2021, in 2022 we began to carry out detailed site resilience assessments on our top ten highest risk manufacturing locations. We will continue this throughout 2023 to determine the requirements for areas we need to focus on in the short, medium and long term.

Integrating those risks

Through our enterprise risk framework, climate-related risks and opportunities are integrated into our strategic decision making. Climate change considerations are part of how we operate, and climate is included in our bottom-up operational risk management process, providing a clear view of climate-related risks across the organisation.

Managing those risks

The Sustainability Council oversees our sustainability strategy, including managing our climate-related risks. These risks may have a direct or indirect impact on our principal risks and are therefore managed alongside and integrated within our principal risk process.

To drive consistency, each of our climate risks has been assigned a risk owner and sponsor as per our principal risk approach. These individuals are senior stakeholders who are accountable for reviewing, monitoring and assessing the magnitude of the risk as well as overseeing the implementation of appropriate mitigations.

All of our principal risks are reviewed formally, twice a year, by the GLT and the Board.

In the coming year, we aim to develop detailed mitigation plans for each identified climate risk with distinct intermediary goals.

For more information on our risk management approach, please see pages 62-69

Preparing for weather-related issues at our sites

Last year, we completed a global review of our assets to assess the degree of exposure to physical climate risks and identify the high-risk sites. This year, we selected one of those high-risk sites, in the UK, and worked with a 3rd party to conduct a more detailed climate change risk assessment. The assessment covered the site, buildings and processes, and assessed the likely impact from climate change now and in future years. The climate risk assessment identified several climate hazards, and a total of 31 risks.

The highest risks were associated with surface-water flooding and damage from high winds. Several measures for adaption and mitigation have since been implemented at the site, which address those high-priority risks, and the lower- priority risk actions have been incorporated into the ongoing site maintenance plans. Further rollout of these climate change risk assessments will be planned at strategic sites this year.

Metrics and targets

The metrics and targets we use to help us manage our climate risks and opportunities effectively are shown below. They were identified in climate-impact tables on pages 48-50 and their values are summarised here. Our Scope 1, 2 and 3 GHG emissions targets have been submitted to the Science-based Targets initiative for independent verification that they are consistent with the UN Paris agreement on climate change's 1.5°C pathway, and a full breakdown of performance in all categories over the last four years can be found on page 28.

Metric description	Climate-related risk	Target type	Baseline year	Baseline value	2030 target	2022/23 progress	More on page
Tonnes GHGs avoided by customers when using our technologies[1]	1	Absolute	2020/21	200,932[2]	50 million	848,643	25
% sales aligned with SDG7 and SDG13	1	Intensity	2020/21	6.1%	No target	8%	22
% R&D spend aligned with SDG7 and SDG13	1	Intensity	2020/21	22.3%	No target	19.2%	22
Total Scope 1 and Scope 2 GHG emissions (market-based) (tonnes CO_2e)[1]	2,3	Absolute	2019/20	417,818[2]	242,334	363,686	25
Scope 3 GHG purchased goods and services (tonnes CO_2e)	2,3	Absolute	2019/20	3,433,660[2]	1,991,523	2,495,475	25
% recycled PGM content in our products	2	Intensity	2021/22	70.1%	75%	69.2%	29
Potential exposure to carbon taxation in 2030	2	Intensity	2021/22	not disclosed	no target	not disclosed	70
CDP climate score	3	Absolute	2019/20	B	A	B	23
% physical asset value exposed to high weather-related hazard by 2030	4	Intensity	2020/21	35%	no target	35%	50
Water consumed in regions of high baseline water stress (m^3)	4	Absolute	2020/21	406,037[2]	no target	399,174	30
Number of supply chain disruptions due to severe weather	5	Absolute	2020/21	not disclosed	0	0	50

1. Metrics are linked to long-term Performance Share Plan (PSP) for senior directors
2. Rebaselined to remove divested businesses, please see page 222 for more information

Internal carbon pricing (ICP)

Last year, we introduced a shadow carbon price to our capital investment business case assessment process, as recommended by the Bank of England. The intention is that this will incentivise us to reach net zero by ensuring all investments are made in the context of a low-carbon world where the price of carbon is higher than it is today. Although the ICP is not a real cost of the investment, it demonstrates what the impact would be of carbon taxation forecast for 2030 and beyond, and we use it to evaluate and compare potential investments.

We have implemented the ICP for Scope 1 and 2 emissions for the asset when operational. The intention is to extend this to Scope 3 (raw material and supply chain impacts emissions) in the future. We chose not to apply ICP to emissions related to the development of the project itself, such as equipment manufacture, or to construction-related emissions, since such emissions are both short term and generally minor in relation to the overall life of the asset. The price applied in 2022/23 was £100/tonnes CO_2e, with sensitivity analysis conducted at £50/tonnes CO_2e and £150/tonnes CO_2e.

Chief Financial Officer's review

Despite challenging markets, we have made steady progress in implementing our new strategy – doing exactly what we set out to do and starting to win back the trust of stakeholders.

Executing with discipline

During this year, I have spent a lot of time speaking with our internal and external stakeholders, and the message is clear. They see the pathway for strong ongoing cash generation from our mature businesses, as well as the exciting potential of our growth opportunities in hydrogen and catalyst technologies, all underpinned by our leading technology. But they have also been repeatedly disappointed by our performance and investment decisions in recent years and want to know why it will be different this time.

So, 2022/23, with our new leadership team, has been about doing what we said we would do at the start of the year. We have achieved the key milestones we set for this year, and our strategic scorecard is in good shape. This is an important part of showing ourselves, our investors and other stakeholders that we not only have market-leading technology and expertise – but we are positioned for long-term value creation too. While still early days in executing our strategy, I am encouraged by the progress that has been made to date and more convinced than ever that we have set the right path to growth for Johnson Matthey.

We have continued to simplify our portfolio during the year, announcing the sale of Piezo Products and the Diagnostics Services business. We are on track on our remaining divestments. Simplifying the business removes complexity and allows us to focus on our core strengths and the engines of growth within the business.

Internally, our cost-reduction programme is making inroads by simplifying, standardising and getting greater value from our back-office functions. We have delivered c. £45 million in cost savings this year and will further accelerate our efforts on this front in the coming years to more than deliver our £150 million savings target.

Our transformation, including the simplification of the portfolio and streamlining of processes, is further building a strong platform for growth. As Liam has noted, our growth opportunities are even greater than initially anticipated and they are approaching fast. To capture these opportunities we need to invest, and we will do so in a disciplined way, focusing on returns and keeping capex under control. I'm pleased to see the progress we have made with our large projects on time and on budget. And of course, we are focused on investing behind customer demand, which gives us more confidence in the returns from these investments.

It is particularly encouraging that we were able to make so much headway towards our strategic objectives despite a challenging macroeconomic backdrop and difficult operating environment. This is testament to the dedication and hard work of the team at JM, and that we see encouraging signs that our efforts are paying off.

Navigating economic headwinds

JM's underlying operating profit was £465 million, down 21% from 2021/22 as we were impacted by lower auto production, higher inflation and lower platinum group metal prices. As expected, we saw a stronger second half of the year with operating profit down 12% as we increased prices and saw the benefits of our efficiency programmes. Our balance sheet remains strong: net debt to EBITDA was 1.6x, towards the bottom of our stated range, while free cash flow was £74 million. We delivered c. £45 million in efficiency savings during the year, well on the way to achieving our target of £150 million annualised savings by end 2024/25. Our capital projects programme is also on track in terms of the amount invested, expected returns and timing of execution.

We acted quickly to get costs down when the war in Ukraine disrupted supply chains and added to significant inflation. But inflation has impacted a range of inputs to our operations, including energy. Importantly, we did not allow the short-term impacts to deter us from making strategic investments to position JM for long-term growth. These investments are incredibly important as many future opportunities will rely on the expanded capacity we are currently building.

Platinum group metal prices were volatile during 2022/23 and lower on average than the prior year. The PGMS business also saw lower volumes of automotive scrap, which impacted the performance of our refining business. This was partially offset by efficiency savings made during the year. Meanwhile, we continued to invest in updating our infrastructure assets and expanding our capacity.

Catalyst Technologies is making good progress towards its goal of winning large-scale projects, with five added to its portfolio during the year. Higher prices, improved mix and cost savings offset cost inflation and the impact of the loss of business in Russia. Investment continued, however, with the capacity expansion project at our facility in Perstorp, Sweden, proceeding to plan.

The Hydrogen Technologies business was insulated from some of the market headwinds that impacted our other businesses, with sales more than doubling over the course of 2022/23 to reach £55 million. The business is benefiting from rapid growth in interest in hydrogen fuel cells and clean hydrogen production, and we announced a large-scale partnership with Plug Power, which will see us jointly build a significant new facility in the US. HT is already investing to expand its capacity in the UK, with our new major site in Royston in the UK due to complete construction in 2023/24.

While Clean Air’s results were below the prior year impacted by lower auto and truck production and significant cost inflation, we underpinned the longer-term future of that business with some key business wins. Notably, we won all of Mercedes-Benz’s light duty diesel business in Europe. Looking ahead, the Euro 7 proposals and updated US EPA legislation are expected to act as tailwinds for the business. Clean Air increased sales during 2022/23 to £2.6 billion and the business is on track to achieve its target of more than £4 billion of cash in the decade to 2030/31, having delivered cumulative cashflow of £1.4 billion to date.

In the year, we completed the sale of Piezo Products while the sale of Diagnostic Services is expected to complete in the third quarter of calendar 2023. These represent good progress against our strategic milestone of divesting our Value Businesses by the end of 2023/24 and generating at least £300 million in proceeds.

Strengthening our commercial muscle

We have made encouraging progress in bringing greater commerciality into the business. This has included reinvigorating the incentive programme for our sales teams and sharpening our focus on pricing discipline. The fruits of these efforts can be seen in the results for the second half of the year, not least in the increasing recovery of significant cost inflation – such that by the end of the year we had recovered £95 million, of inflation through increased pricing.

The actions we have already taken as part of the transformation programme have laid strong foundations. This is only the beginning of the process, and there is much more work to be done to drive efficiency, remove complexity and further reduce costs. To become a more commercially minded and customer-focused business, we will remain focused on disciplined execution of our strategy and pursuing our purpose of catalysing the net zero transition for our customers.

A bright future ahead

The significant customer wins during 2022/23 are testament to the size of the opportunity ahead for JM. They are also confirmation that our strategy is focused on the right areas. With unprecedented interest (and growing urgency) around the energy transition, the market is well and truly moving towards JM.

It is a great position to be in, but one that we need to be prepared for. We will continue to execute our strategy, cautiously increasing the scale and the pace of our ambition while at the same time driving the transformation of the business for growth and increased profitability.

I can honestly say I am more excited now about the prospects for JM than at any time since I joined two years ago. As we emerge from a difficult economic environment in stronger shape, I’m confident a much brighter future is within our reach, and as we help the world build a more sustainable future.

Finally, I would like to say thank you to our teams for the hard work and dedication they have again shown this year. The transformation of our company is beginning to bear fruit which is a testament to their focus and commitment.

Stephen Oxley
Chief Financial Officer

Financial performance review

		Reported results			Underlying results (continuing)[1]			
		Year ended 31st March			Year ended 31st March			
		2023	2022	% change	2023	2022	% change	% change, constant FX rates
Revenue	£m	14,933	16,025	-7				
Sales excluding precious metals[3]	£m				4,201	3,778	+11	+6
Operating profit	£m	406	255	+59	465	553	-16	-21
Profit before tax (continuing)	£m	344	195	+76	404	493	-18	
Profit after tax (continuing)	£m	264	116	n/a	326	407	-20	
Basic earnings per share (continuing)	pence	144.2	30.9	n/a	178.6	213.2	-16	
Ordinary dividend per share	pence	77.0	77.0	-				

Underlying performance – continuing operations[1,2]

- Sales of £4.2 billion, up 6%, with higher prices to partially recover cost inflation, partly offset by lower average PGM prices
- Underlying operating profit of £465 million, down 21%. Almost half was due to lower average PGM prices with the remainder largely due to cost inflation and lower volumes in PGM Services and Clean Air. This was partly offset by transformation benefits
- Underlying earnings per share of 178.6p, down 16% due to lower underlying operating profit
- Free cash flow of £74 million, compared to £221 million in the prior year largely reflecting lower underlying operating profit and working capital movements
- Strong balance sheet with net debt of £1.0 billion; net debt to EBITDA of 1.6 times

Reported results

- Revenue down 7%, driven by lower average PGM prices
- Operating profit of £406 million, up materially, largely due to the absence of a one-off impairment in the prior period relating to Battery Materials
- Profit before tax (continuing) of £344 million, compared to £195 million in the prior period, reflecting higher operating profit due to the absence of the Battery Materials impairment
- Reported earnings per share (continuing) of 144.2 pence
- Cash inflow from operating activities of £291 million (2021/22: £605 million)
- Ordinary dividend of 77.0 pence per share stable year-on-year

Notes:

1. Underlying is before profit or loss on disposal of businesses, gain or loss on significant legal proceedings together with associated legal costs, amortisation of acquired intangibles, share of profits or losses from non-strategic equity investments, major impairment and restructuring charges and, where relevant, related tax effects. For definitions and reconciliations of other non-GAAP measures, see pages 206-209
2. Unless otherwise stated, sales and operating profit commentary refers to performance at constant exchange rates. Growth at constant rates excludes the translation impact of foreign exchange movements, with 2021/22 results converted at 2022/23 average rates. In 2022/23, the translational impact of exchange rates on group sales and underlying operating profit was a benefit of £193 million and £38 million respectively
3. Revenue excluding sales of precious metals to customers and the precious metal content of products sold to customers

Summary of underlying operating results from continuing operations

Unless otherwise stated, commentary refers to performance at constant rates[1]. Percentage changes in the tables are calculated on rounded numbers.

Sales (£ million)	Year ended 31st March 2023	2022[2]	% change	% change, constant FX rates
Clean Air	2,644	2,457	+8	+2
PGM Services	570	587	-3	-8
Catalyst Technologies	560	454	+23	+17
Hydrogen Technologies	55	25	+120	+112
Value Businesses[3,4]	470	354	+33	+28
Eliminations	(98)	(99)		
Sales (continuing)	**4,201**	**3,778**	**+11**	**+6**

Underlying operating profit (£ million)	Year ended 31st March 2023	2022[2]	% change	% change, constant FX rates
Clean Air	230	302	-24	-28
PGM Services	257	308	-17	-21
Catalyst Technologies	51	50	+2	-2
Hydrogen Technologies	(45)	(33)	n/a	n/a
Value Businesses[3,5]	40	12	n/a	n/a
Corporate	(68)	(86)		
Underlying operating profit (continuing)	**465**	**553**	**-16**	**-21**

Reconciliation of underlying operating profit to operating profit (£ million)	Year ended 31st March 2023	2022[2]
Underlying operating profit (continuing)	465	553
Profit on disposal of businesses[6]	12	106
Major impairment and restructuring charges[6]	(41)	(440)
Amortisation of acquired intangibles	(5)	(6)
Gains and losses on significant legal proceedings[6]	(25)	42
Operating profit (continuing)	**406**	**255**

Notes:
1. Growth at constant rates excludes the translation impact of foreign exchange movements, with 2021/22 results converted at 2022/23 average rates. In 2022/23, the translational impact of exchange rates on group sales and underlying operating profit was a benefit of £193 million and £38 million respectively
2. 2021/22 is restated to reflect the group's new reporting structure
3. Includes Battery Systems, Medical Device Components, Diagnostic Services, Battery Materials and Advanced Glass Technologies
4. Sales relating to divestments: Advanced Glass Technologies (2021/22: £62 million, 2022/23: nil) and Battery Materials (2021/22: £12 million, 2022/23: £21 million)
5. Operating profit or loss related to divestments: Advanced Glass Technologies (2021/22: £16 million, 2022/23: -£1 million) and Battery Materials (2021/22: -£22 million, 2022/23: £3 million)
6. For further detail on these items please see page 168

Full year operating results by sector

Clean Air

Improved sequential performance supported by increased inflation recovery

- Sales up 2% supported by pricing as we partially recovered higher input costs
- Underlying operating profit decreased 28% impacted by cost inflation, product mix and lower volumes
- Margins saw an improvement during the second half resulting from increased inflation recovery and benefits from our transformation programme
- On track to deliver at least £4 billion of cash in the decade to 2030/31, having delivered £1.4 billion since 2020/21 at actual precious metal prices

	Year ended 31st March 2023 £ million	2022 £ million	% change	% change, constant FX rates
Sales				
Light duty diesel	1,075	1,005	+7	+4
Light duty gasoline	599	574	+4	-1
Heavy duty diesel	970	878	+10	+3
Total sales	**2,644**	**2,457**	**+8**	**+2**
Underlying operating profit	**230**	**302**	**-24**	**-28**
Underlying margin	**8.7%**	**12.3%**		
Reported operating profit	**191**	**273**		

Clean Air provides catalysts for emission control after-treatment systems used in light and heavy duty vehicles powered by internal combustion engines.

Sales during the period were up 2%. Vehicle production was impacted by a challenging supply chain environment as well as COVID-related lockdowns in China. Although semiconductor shortages have gradually eased, other supply chain disruptions such as labour availability and logistic bottlenecks have continued to affect vehicle production. As the year progressed, pent-up demand and the easing of supply chain issues led to an improvement in production activity.

Light duty catalysts – diesel and gasoline

Light duty diesel

Light duty diesel sales were up 4%, outperforming a declining market. We saw strong performance in the Americas and good performance in Europe, partly offset by a decline in Asia. In Europe, which represents around 60% of our total light duty diesel sales, our growth was driven by strong platform performance despite some automotive OEMs continuing to prioritise commercial vehicles over the passenger car platforms that we serve. In the Americas we significantly outperformed a growing market, driven by the ramp up of a new platform and strong platform performance.

In Asia, our performance was in line with a declining market, which was impacted by a weak commercial vehicle market in China and an increase in electric vehicle penetration. Our sales decline in the region was also the result of lower revenue per unit as a result of product mix.

Light duty gasoline

Light duty gasoline sales were down 1%, underperforming the overall global market. In Europe and Asia, previous platform losses led to a decline in sales in both regions. In the Americas, sales grew slightly ahead of a strong underlying market as we benefited from the ramp up of new platforms. We continue to invest in light duty gasoline to support our future growth with early signs of success. For example, two OEMs in the high performance sports car segment have chosen JM to be sole supplier which validates the strength of our technology and gives confidence in winning future light duty gasoline platforms.

Heavy duty diesel catalysts

In heavy duty diesel sales were up 3%, significantly outperforming a declining market. We saw strong performance in Europe and the Americas, partly offset by a decline in Asia. In Europe our sales significantly outperformed a growing market due to higher revenue per vehicle and we also benefited from good performance in our off road platforms. In the Americas, the high value Class 8 truck cycle peaked during the last quarter of our fiscal year. As expected, our heavy duty sales benefited from this cycle and were also supported by improved product mix. Sales in Asia declined as COVID lockdowns in China significantly impacted vehicle production and led to customers building stock in the prior year in anticipation of these lockdowns. Looking ahead, our leading position in heavy duty means we are well placed to benefit from future developments including hydrogen powered internal combustion engines.

Underlying operating profit

Underlying operating profit declined 28% to £230 million and margins decreased to 8.7%. This largely reflected cost inflation, product mix, lower volumes, and the transactional impact of exchange rates. We saw a sequential improvement in margins during the year, benefiting from an acceleration in the recovery of cost inflation and benefits from our transformation programme.

On track to deliver at least £4 billion of cash in the decade to 2030/31[1]

We delivered another year of strong cash flow as we continue to focus on driving efficiencies, optimising capital expenditure and working capital. We generated around £600[2] million of cash and a cumulative £1.4 billion[2] since 2021/22, the first year of this guidance.

Notes:

1. At least £4 billion of cash under our range of scenarios from 1st April 2021 to 31st March 2031. Cash target pre-tax and post restructuring costs
2. Delivered around £600 million of cash in 2022/23 at actual precious metal prices, which equates to just over £400 million at constant prices (March 2022). Delivered around £1.4 billion cumulatively since 2021/22 at actual metal prices
3. Gross PGM price impact was c. £55 million, which was partly offset by foreign exchange benefits. Foreign exchange benefit reflects the pricing of PGMs in US dollars

PGM Services

Performance reflects lower average PGM prices and reduced refinery volumes

- Sales performance primarily reflects lower average PGM prices and reduced refinery volumes due to lower auto scrap levels as a result of the continued buoyant used car market
- Underlying operating profit was down mainly due to lower average PGM prices and reduced refinery volumes
- Cost inflation was more than offset by efficiencies as well as higher pricing across both our refining and products businesses

	Year ended 31st March 2023 £ million	2022 £ million	% change	% change, constant FX rates
Sales				
PGM Services	570	587	-3	-8
Underlying operating profit	257	308	-17	-21
Underlying margin	45.1%	52.5%		
Reported operating profit	257	307		

PGM Services is the world's largest recycler of platinum group metals (PGMs). This business has an important role in enabling the energy transition through providing circular solutions as demand for scarce critical materials increases. PGM Services provides a strategic service to the group, supporting Clean Air, Catalyst Technologies and Hydrogen Technologies with security of metal supply in a volatile market, recycling capabilities and manufactures value added PGM products for both internal and external customers.

In PGM Services, sales declined 8% against a strong prior year. This was primarily driven by lower average PGM prices, where average prices for platinum, palladium and rhodium declined around 10%, 20% and 30% compared to the prior year. Recent PGM price weakness has been driven by lower auto demand and also liquidation of some excess rhodium positions in an illiquid market.

In our refineries, intake volumes were down as expected due to lower auto scrap resulting from a buoyant used car market. Sales were partly offset by benefits from operational efficiency and higher pricing. In a volatile market, our metal trading business had another good year, with sales only moderately down against a strong prior period.

Across our PGM products businesses, sales were moderately down. This was primarily driven by lower sales of catalysts for the pharmaceutical and agricultural chemicals markets due to the phasing of customers' orders.

Underlying operating profit

Underlying operating profit declined 21% mainly impacted by lower average PGM prices (c. £55 million impact[3]) and reduced refinery volumes. Cost inflation was more than offset by efficiency benefits, as well as higher pricing across both our refining and products businesses.

Catalyst Technologies

Strong sales growth and improved performance in the second half

- Sales up 17% largely reflecting growth in licensing and catalyst refills, as well as improved pricing
- Strong performance in licensing with five licence wins within low carbon hydrogen and sustainable fuels (includes one win in May 2023)
- Underlying operating profit was in line with the prior year. Improved pricing, licensing and transformation benefits offset significant cost inflation and the loss of Russian business

	Year ended 31st March 2023 £ million	2022 £ million	% change	% change, constant FX rates
Sales				
Catalyst Technologies	560	454	+23	+17
Underlying operating profit	51	50	+2	-2
Underlying margin	9.1%	11.0%		
Reported operating profit	43	78		

Catalyst Technologies is focused on enabling the decarbonisation of chemical and fuels value chains and we have leading positions in syngas: methanol, ammonia, hydrogen and formaldehyde. Catalyst Technologies has three key segments: industrial and consumer, traditional fuels and sustainable solutions that help catalyse the transition to net zero. Our revenue streams include licensing and engineering income, first fill and refill catalysts.

Sales during the period were up 17%, with strong growth in licensing and growth in first fills and refills reflecting higher pricing and positive mix.

Industrial and consumer

Industrial and consumer includes our traditional syngas (methanol, ammonia and formaldehyde) catalyst offerings as well as the majority of our current licensing business. We saw double digit sales growth reflecting strong growth in licensing and first fills as new plants came on stream following licence wins in recent years. In the year, we signed six new licences (2021/22: three licences). Refills also grew well supported by growth in ammonia and formaldehyde.

Traditional fuels

Traditional fuels includes our refining additives, hydrogen and natural gas purification offerings. Growth in the segment was mainly driven by refills. High global demand for liquified natural gas has led to strong sales of our natural gas purification catalysts.

Sustainable solutions

Sustainable solutions includes our new growth markets with our technology in low carbon hydrogen, sustainable fuels and low carbon solutions. In the period to May 2023, we won five large scale projects across low carbon hydrogen and sustainable fuels:

- H2H Saltend, expected to be one of the UK's largest low carbon hydrogen projects
- A large scale low carbon hydrogen licence in North America
- A sustainable fuels project with Strategic Biofuels, also in North America
- A commercial scale sustainable fuels project in North America
- A commercial scale sustainable fuels project in Europe

In addition, we won a low carbon solutions licence in the year which will enable the decarbonisation of one of our customer's existing assets.

Underlying operating profit

Underlying operating profit of £51 million was in line with the prior year and margins declined to 9.1%. However, we saw good improvement in operating margin from the first to the second half of the year (1H: 7.6% and 2H: 10.5%). Higher pricing, licensing and the benefits of our transformation programme offset significant cost inflation and the loss of catalyst sales and higher margin licensing income in Russia (c. £10 million loss of profit).

Hydrogen Technologies

Sales more than doubled and continued investment to scale the business

- Agreed strategic partnerships with Plug Power and Hystar
- Sales more than doubled driven by higher volumes for new and existing customers in fuel cells, growth in electrolysers and increased manufacturing output as we focused on improving operational performance
- Underlying operating loss reflects continued investment to scale the business to meet demand partly offset by higher volumes

	Year ended 31st March 2023 £ million	2022 £ million	% change	% change, constant FX rates
Sales				
Hydrogen Technologies	55	25	+120	+112
Underlying operating loss	(45)	(33)	n/a	n/a
Underlying margin	n/a	n/a		
Reported operating loss	(46)	(33)		

In Hydrogen Technologies, we provide catalyst coated membranes that are critical performance defining components of fuel cells and electrolysers.

In Hydrogen Technologies, sales in the year more than doubled to £55 million. This was primarily driven by growth in fuel cells where we delivered higher commercial volumes for new and existing customers, enabled by improved operational performance. We continue to focus our fuel cell business towards strategic customers to develop deeper and longer relationships. This trend will continue given the recent strategic partnership announcements, for example with Plug Power which entails a long-term supply agreement, joint development agreement and co-investment into new manufacturing capacity. In electrolysers, we saw higher sales from the supply of samples, prototypes and components as we develop strategic partners.

In the year, we saw higher manufacturing output as we focused on operational performance to improve our processes and drive efficiency. Sales also benefited as constraints eased following the greater use of capacity in the prior period to qualify new customer products.

Underlying operating loss

Underlying operating loss of £45 million primarily reflects increased investment into product development and building capability as we scale the business to meet customer demand, partly offset by higher volumes.

Value Businesses

Comparable performance materially improved

- Market recovery and structural improvements driving improved performance
- Completed the sale of Piezo Products, part of Medical Device Components, and agreed the sale of Diagnostic Services with completion expected in the third quarter of calendar 2023

	Year ended 31st March 2023 £ million	2022 £ million	% change	% change, constant FX rates
Sales				
Value Businesses[1]	470	354	+33	+28
Underlying operating profit[2]	40	12	n/a	n/a
Underlying margin	8.5%	3.4%		
Reported operating profit / (loss)	38	(276)		

Value Businesses is managed to drive shareholder value from activities considered to be non-core to JM, and now principally comprises Battery Systems, Medical Device Components and Diagnostic Services. In the year, we completed the sale of Piezo Products, part of Medical Device Components, and we have also agreed the sale of Diagnostic Services and Battery Materials. In 2021/22, we completed the sale of Advanced Glass Technologies.

Overall, sales in Value Businesses were up 28% in the year. On a like for like basis (i.e. excluding Advanced Glass Technologies and Battery Materials), sales were up 55%.

In Battery Systems, sales almost doubled. We ramped up production of higher value next generation e-bike products and satisfied a backlog of orders as supply chain constraints eased. Medical Device Components also saw strong sales growth as we gained market share following recent project wins, and benefited from higher effective production capacity following investments to upgrade assets and drive efficiency. Diagnostic Services also grew strongly reflecting a continued recovery in demand as COVID-related travel disruption eased and a stronger commercial focus, supported by a higher oil price which drove increased customer activity.

Underlying operating profit

Underlying operating profit of £40 million, an improvement of £28 million on the prior year, reflecting both a supportive market environment and the execution of comprehensive value creation plans that each business is driving forward.

Excluding the results of Advanced Glass Technologies and Battery Materials, underlying operating profit was £38 million[2], an improvement of £20 million.

Corporate

Corporate costs were £68 million, a decrease of £18 million from the prior period, largely reflecting transformation benefits as well as a one-off benefit from lower pension charges.

Notes:
1. Sales relating to divestments: Advanced Glass Technologies (2021/22: £62 million, 2022/23: £nil) and Battery Materials (2021/22: £12 million, 2022/23: £21 million)
2. Operating profit or loss related to divestments: Advanced Glass Technologies (2021/22: £16 million, 2022/23: -£1 million) and Battery Materials (2021/22: -£22 million, 2022/23: £3 million)

Financial review – continuing operations

Research and development (R&D)

R&D spend was £213 million in the year. This was up from £201 million in the prior year and represents c. 5% of sales excluding precious metals. We are investing in our growth areas, including Catalyst Technologies and also Hydrogen Technologies as we continue to commercialise our fuel cell and electrolyser offerings. In addition, we are also investing in our Clean Air business to support future platform wins ahead of new emission regulations.

Foreign exchange

The calculation of growth at constant rates excludes the impact of foreign exchange movements arising from the translation of overseas subsidiaries' profit into sterling. The group does not hedge the impact of translation effects on the income statement. The principal overseas currencies, which represented 79% of the non-sterling denominated underlying operating profit in the year ended 31st March 2023, were:

	Share of 2022/23 non-sterling denominated underlying operating profit	Average exchange rate Year ended 31st March		% change
		2023	2022	
US dollar	34%	1.20	1.36	-12%
Euro	37%	1.16	1.18	-2%
Chinese renminbi	8%	8.26	8.75	-6%

For the year, the impact of exchange rates increased sales by £193 million and underlying operating profit by £38 million.

If current exchange rates (£:US$ 1.25, £:€ 1.14, £:RMB 8.70) are maintained throughout the year ending 31st March 2024, foreign currency translation will have an adverse impact of c. £10 million on underlying operating profit. A one cent change in the average US dollar and euro exchange rates have an impact of approximately £2 million on operating profit whilst a ten fen change in the average rate of the Chinese renminbi approximately has a £1 million impact on full year underlying operating profit.

Efficiency savings

We have commenced our new group transformation programme as part of which we expect to deliver efficiencies of at least £150 million by 2024/25. Associated costs to deliver the programme are around £100 million, all of which are cash. In 2022/23, we delivered c. £45 million of savings, ahead of our target of c. £35 million.

£ million	Efficiency savings delivered in 2022/23	Associated costs incurred in 2022/23
Transformation programme	45	20

Items outside underlying operating profit

Non-underlying (charge) / income (£ million)	As at 31st March 2023	As at 31st March 2022
Profit on disposal of businesses	12	106
Major impairment and restructuring charges	(41)	(440)
Amortisation of acquired intangibles	(5)	(6)
Gains and losses on significant legal proceedings	(25)	42
Total	(59)	(298)

A gain of £12 million was recognised relating to the sale of our Battery Materials Canada and Piezo Product businesses.

There was a £41 million charge relating to major impairment and restructuring charges comprised of a net impairment charge of £10 million and restructuring charges of £31 million. The impairment charge includes impact from further consolidation of our Clean Air manufacturing footprint to create a simplified and agile structure, as well as an impairment of goodwill in Diagnostic Services and further impairment charges in relation to parts of the Battery Materials business. Restructuring charges were also recognised in relation to our Clean Air manufacturing footprint as well as the transformation initiatives announced in May 2022 which largely comprise redundancy and implementation costs.

The group paid £25 million in respect of a settlement with a customer on mutually acceptable terms with no admission of fault relating to failures in certain engine systems for which the group supplied a particular coated substrate as a component for that customer's emissions after-treatment systems.

Finance charges

Net finance charges in the period amounted to £61 million, broadly in line with the prior year charge of £60 million.

Taxation

The tax charge on underlying profit before tax for the year ended 31st March 2023 was £78 million, an effective underlying tax rate of 19.3%, up from 17.4% in 2021/22. This largely reflects the settlement of provisions for uncertain tax positions in the prior year.

The effective tax rate on reported profit for the year ended 31st March 2023 was 23.2%. This represents a tax charge of £73 million, compared with £57 million in the prior period.

We currently expect the effective tax rate on underlying profit for the year ending 31st March 2024 to be around 20% reflecting the increase to the UK corporate tax rate.

Post-employment benefits

IFRS – accounting basis

At 31st March 2023, the group's net post-employment benefit position, was a surplus of £165 million.

The cost of providing post-employment benefits in the year was £40 million, down from £62 million last year.

Capital expenditure

Capital expenditure was £303 million in the year, 1.6 times depreciation and amortisation (excluding amortisation of acquired intangibles). In the period, key projects included:

- **Hydrogen Technologies** – investing to increase manufacturing capacity in the UK
- **PGM Services** – investing in the resilience, efficiency and long-term sustainability of our refinery assets, and also our fuel cells capacity expansion

Strong balance sheet

Net debt as at 31st March 2023 was £1,023 million, an increase from £856 million at 31st March 2022 and £963 million at 30th September 2022. Net debt is £19 million higher at £1,042 million when post tax pension deficits are included. The group's net debt (including post tax pension deficits) to EBITDA was 1.6 times (31st March 2022: 1.2 times, 30th September 2022: 1.5 times), which was at the lower end of our target range of 1.5 to 2.0 times.

We use short-term metal leases as part of our mix of funding for working capital, which are outside the scope of IFRS 16 as they qualify as short-term leases. Precious metal leases amounted to £138 million as at 31st March 2023 (31st March 2022: £140 million, 30th September 2022: £129 million).

Free cash flow and working capital

Free cash flow was £74 million in the year, compared to £221 million in the prior period, largely reflecting lower underlying operating profit and working capital movements.

Excluding precious metal, average working capital days to 31st March 2023 increased to 42 days compared to 36 days to 31st March 2022.

Outlook for the year ending 31st March 2024

For 2023/24, we expect at least mid-single digit growth in operating performance at constant precious metal prices and constant currency. This is underpinned by efficiency benefits of c. £55 million in the year.

In Clean Air, we expect strong growth in operating performance. Whilst external data suggest limited growth in vehicle production for 2023/24, margin expansion should mainly be driven by efficiency benefits. PGM Services' performance will be largely driven by precious metal prices, with recycling volumes expected to be subdued. We expect strong growth in operating performance for Catalyst Technologies. This reflects an improvement in licensing income and a significant uplift in margins, benefiting from pricing and efficiencies. We expect sales to grow strongly in Hydrogen Technologies and we will continue to invest for growth resulting in an operating loss at a similar level to 2022/23.[1]

Precious metal prices have been volatile and consequently it is difficult to predict how they may develop. To illustrate the impact they may have on our results, assuming prices remain at their current level[2] for the remainder of 2023/24 there would be an adverse impact of c. £50 million[3] on full year operating performance compared with the prior year. We are focused on mitigating the potential impact on our performance.

At current foreign exchange rates[4], translational foreign exchange movements for the year ending 31st March 2024 are expected to adversely impact underlying operating profit by c. £10 million.

Dividend

The board will propose a final ordinary dividend for the year of 55.0 pence per share at the Annual General Meeting (AGM) on 20th July 2023. Together with the interim dividend of 22.0 pence per share, this gives a total ordinary dividend of 77.0 pence per share, maintained at the same level as the prior year. Subject to approval by shareholders, the final dividend will be paid on 1st August 2023, with an ex-dividend date of 8th June 2023.

Contingent liabilities

See note 32 of the financial statements on page 206.

1. Outlook commentary for Clean Air, PGM Services, Catalyst Technologies and Hydrogen Technologies assumes constant precious metal prices and constant currency
2. Based on average precious metal prices in May 2023 (month to date)
3. c. £50 million adverse impact represents a gross PGM price impact before any foreign exchange movement. A US$100 per troy ounce change in the average annual platinum, palladium and rhodium metal prices each have an impact of approximately £1 million, £1.5 million and £0.75 million respectively on full year underlying operating profit. This assumes no foreign exchange movement
4. At average foreign exchange rates for May 2023 month to date (£:US$ 1.25, £:€ 1.14, £:RMB 8.70) translational foreign exchange movements for the year ending 31st March 2024 are expected to adversely impact underlying operating profit by c. £10 million

Risk report

Risk management is important for JM as it enables protection, facilitates value-added insights, helps identify competitive opportunities and supports the growth afforded by the net zero transition. During the year we have refined our principal risks to provide further clarity and reflect progress made so far.

Managing risks effectively

Our ability to effectively manage the risks that we encounter is an enabler of our strategic performance and owning what we do. Risk management is an essential component of our governance and operations throughout the organisation. We continue to invest in awareness initiatives and the training of our employees to stay ahead of various threats. We manage our risks, procedures and controls with the aid of JMProtect, a comprehensive governance, risk, and compliance (GRC) platform.

'Perma-crisis' is one of the characteristics that is used to describe the world around us, and it is within this environment that risk management helps JM navigate delivery of strategy. The ongoing war in Ukraine, energy supply instability, cyber-attacks and inflationary pressures all impact us or our customers. Our ability to be prepared has been tested, and we responded through taskforces and solutions to mitigate some of the impacts, or with additional efforts to test our resilience and continuity plans.

Climate-related risks and opportunities

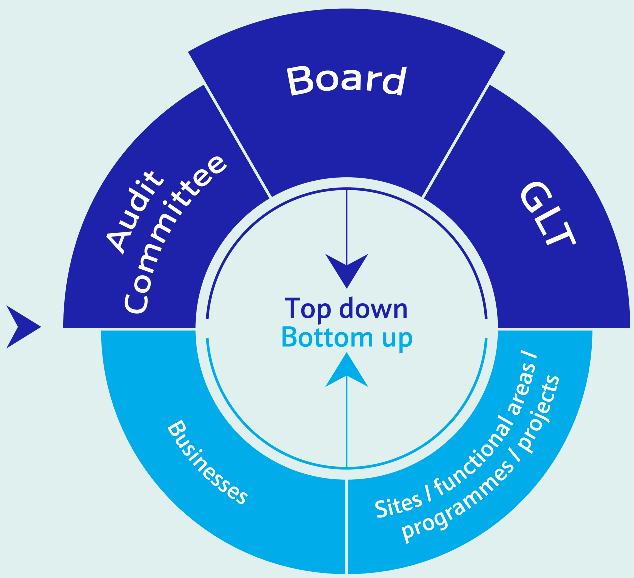
We continue to support the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and disclose how effectively we are managing climate-related risks and opportunities. Further details are included on page 48.

Risk management framework

Group Assurance function

Challenges and helps the Board, Audit Committee, the Group Leadership Team (GLT), businesses and functions to consider the range and materiality of risks identified

Monitors how well mitigating actions or projects are implemented, and how effectively they reduce risk to ensure alignment with our risk appetite



Board

- Sponsors our approach to risk management and internal controls
- Sets the tone for risk management culture
- Approves risk management policies and processes

Audit Committee

- Reviews the effectiveness of our risk management framework and internal controls

GLT

- Regularly carries out top-down reviews of risk
- Develops strategy in line with our risk appetite
- Manages our definitions of risks and mitigation plans
- Monitors whether risks are within our risk appetite

Businesses

- Regularly carries out bottom-up reviews of operational activities
- Ensures sites and functions have risk registers in place
- Reports to the GLT about business risk and issues

Sites / functional areas / programmes / projects

- Reports key risks to businesses
- Regularly carries out reviews as to how controls are implemented and their effectiveness

Risk management framework

Our risk management methodology identifies and considers principal risks, including severe yet plausible scenarios. Its purpose is to reassure stakeholders that we have fully considered and understand a broad range of risks and are managing them in line with defined risk appetites.

The Board, which is ultimately accountable for risk management and internal controls, evaluates how effective these systems are at mitigating principal and emerging risks at least once every year. The GLT provides support for the Board's reviews, which ensures the risks we've identified are relevant to our current aims and strategic goals. The Audit Committee supports the Board in assessing the effectiveness of our risk management and internal control systems, processes and policies.

Our risk management methodology takes a top-down approach to identify our principal risks (i.e. from board level down) and a bottom-up approach to identify operational risks (i.e. from day-to-day level up). We're constantly looking to improve how connected and aligned these approaches are as they operate in parallel.

How we manage risk

We apply the three-lines-of-defence methodology. The first line represents business operations, or the individuals who, employing effective internal controls, own and manage risk daily. Governance and compliance, the second line, are represented by the functions and businesses of the group that oversee and monitor these operations. The third line refers to the independent assurance that our Group Assurance function provides over these activities.

Functions, businesses and site teams are responsible for identifying, assessing and prioritising their risks. They also consider how likely it is that a risk will materialise and what effect that would have on our objectives. This includes reviewing whether a risk has changed, how strong the controls we use to manage the risk are and whether mitigating actions are in place. We use a self-assessment and management attestation processes to report, at least once a year, on whether the relevant controls are effective. This is a maturing process with several initiatives in progress to improve our controls environment.

In the past 12 months, we have continued to improve how we address and monitor risks in a number of ways, including:

- Making continued enhancements to our GRC platform, JMProtect, which offers a combined and centralised view of our risk universe and controls framework
- Incorporating JMProtect risk data into our audit planning process to make sure the highest risk areas of the business are prioritised for assurance activities
- Introducing an Integrated Assurance model that aligns second- and third-line assurance activities for easier collaboration and more effective risk-based assurance.

We prioritise insurance cover for the most significant areas of risk across the Group, and areas where insurance is a legal or contractual requirement. If insurance is available on commercially reasonable terms, we also utilise it as a risk mitigation tool across our wider business. Where appropriate, we get advice from industry to help us assess risks and develop mitigation plans.

Emerging risks and opportunities

We continually monitor our external risk landscape using a mixture of key risk indicators, third party reports, findings from internal and external assurance providers, and feedback from both customers and suppliers. This information allows us to identify emerging risks and prepare reasonable mitigations.

For any identified emerging risks, considered to be a threat to JM or its value chain, we tailor our response to the size of the risk to ensure our mitigation strategy is proportionate. For example, in 2022, we identified significant emerging risks in relation to geopolitical tensions, the macroeconomic downturn and energy availability. We have chosen to include geopolitical and macroeconomic events as a principal risk given our global presence and strategic plans in various geographies including China and USA. This will also ensure we incorporate lessons learned from ceasing operations in Russia.

Principal risks and uncertainties

In the following section, we have outlined our principal risks and how we manage them. We regularly review our risk landscape to best determine our principal risks and key mitigating actions, while also assigning appropriate GLT sponsors to help us overcome our biggest challenges and continue to meet our strategic ambitions. Our GLT sponsors evaluate changes to their risks to better understand our exposure. When necessary, they order these risks by importance and create targeted mitigation strategies.

Over the last year, we have continued to update our principal risks, clarifying associated opportunities and priority actions:

- Three risks have been removed as principal risks – 'Intellectual Property' (IP), 'Ethics and Compliance' and 'Customer Contract Liability'. We consider the controls put in place over the past year to be effectively mitigating the risks
- We have introduced two new principal risks: 'A significant geopolitical or macroeconomic event impacting JM's operations' and 'Failure to deliver business value from strategic capital projects'.

The principal risks we face are listed alongside the measures we've taken to reduce them on the following pages. These risks could materially harm our company's operations, either alone or in combination.

Each of our strategic principal risks, if handled effectively, carries a significant opportunity to deliver above stakeholder expectations. Some of these opportunities have been identified in the table in the following section.

Principal Risks

	Strategic	Operational
Increased	5 A low-performing culture undermines our strategy (F S E)	8 Disruption to inbound goods or services provided (E); 9 Security of metal and failure to manage metal commitments (E)
No change / New	2 A significant geopolitical or macroeconomic event impacting JM's operations (F); 3 Failure to deliver business value from strategic capital projects (E); 4 Development of products that do not meet the future needs of customers (S E); 6 Unsuccessful delivery of key business transformation programme(s) (E)	10 Failure in one or more of JM's critical operational assets (E); 11 Business failure through cyber-attack or other IT incidents (E)
Reduced	1 Significant shift in demand and / or commoditisation of sustainable technology (F)	7 A significant work-related EHS incident (E)

Alignment to our strategy: F Focus S Simplify E Execute

Strategic risks and opportunities

To execute our strategy, we must be mindful of the risks that may undermine us, while ensuring we capture most of the opportunity they present.

1 Significant shift in demand and / or commoditisation of sustainable technology

GLT sponsor: Liam Condon

Risk

JM's strategy is focused on our ability to develop solutions for sustainable chemicals, fuels and energy and catalysing the net zero transition for our customers, pivoting away from fossil fuel-based industries.

JM faces two main risks as part of the global transition to a low-carbon economy:

- Risk that we fail to correctly anticipate climate-related shifts in demand for our products (e.g. driven by regulation, customer needs, societal expectations), as well as the pace of commoditisation. These shifts could impact both our existing products (e.g. in Clean Air) and products which are expected to drive JM's future growth (e.g. in Hydrogen Technologies); there is a risk that these shifts could be slower or faster than anticipated
- Risk that we fail to make the right decisions in response to these shifts, mostly in terms of capital allocation (e.g. R&D, capital expenditure).

Opportunity

If we correctly anticipate future market shifts and respond adequately, we can create value from the transition to the low-carbon economy through increased revenues and profits.

Through our products and services we have an opportunity to affect climate change, nature and society.

Key mitigations

- We continue to monitor the changing market environment (e.g. technology choices, pace of commoditisation) and our customers' requirements. Using this information and our scenario-based approach, we can update our strategic plans and actions where needed
- We keep investing in innovation to make sure we have products that differentiate us in all our markets, meeting our customers' specific needs when required
- For our maturing businesses, we have a plan to reduce our cost base to improve efficiency and cash flow
- For our growth businesses, we plan to invest in our production assets and are working to mitigate the risks associated with this (principal risk 3)

Updates made to principal risk

Formerly 'Strategic growth: business transition to low-carbon economy'.

Risk re-titled to reflect the risk that we may not have a viable business model in the face of rapidly commoditising sustainable technologies, posing a risk to some legacy products and services that are designed for a declining market.

Risk reduced due to the achievements of some strategic objectives, e.g. partnership with Plug Power.

We have continued our investment in growth platforms – particularly in Hydrogen Technologies and Catalyst Technologies.

2 A significant geopolitical or macroeconomic event impacting JM's operations

GLT sponsor: Christian Günther

Risk

Due to the nature of JM's global footprint, there is a risk that we may face disruption in our operations, supply chain and / or customer markets due to geopolitical events. This includes conflict, trade disputes, sanctions, pandemics, macroeconomic events or financial crises in specific countries or regions where we operate, or where parts of our supply chains are located.

Opportunity

A properly mitigated risk may provide some level of competitive advantage, even in the event the risk fails to become an issue – e.g. security of supply for our customers, local content and participation benefits.

Key mitigations

- Ongoing identification, monitoring, assessment of and mitigation of key geopolitical risks
- Our strategic planning considers various aspects of this risk when making future investment decisions
- We set up taskforces to deal with specific risks when we identify them as a material risk

Updates made to principal risk

New principal risk promoted in response to heightened geopolitical tensions.

We completed a review of the countries key to our operations and / or value chains with respect to their geopolitical and macroeconomic landscape, making adjustments to our strategy where necessary.

3 Failure to deliver business value from strategic capital projects

GLT sponsor: Maurits van Tol

Risk

The success of our strategy, especially in growth areas, depends on our ability to effectively prioritise and deliver our strategic capital investment pipeline. There is a risk that we will be unable to meet production capacity expectations, breach budgeted costs or lose our competitive position in markets.

Opportunity

Robust portfolio planning, management and governance, combined with enhanced competence in capital project delivery, will provide us with the platform we need to meet the growth ambitions of our growing businesses and deliver on our wider strategy.

Delivering high-priority projects on time, within budget and to benchmarked costs will enable JM to grow further and faster.

Key mitigations

- Continuously strengthening our central engineering and project organisation and eliminating functional competency gaps
- Enhanced portfolio management and project frameworks, with business-wide compliance as key value driver and a foundation of governance
- Transformed role and confirmed accountability of sponsors for project value
- Established project teams with all key functions represented

Updates made to principal risk

New principal risk added due to the high capital investment being made, especially in high-growth areas such as Hydrogen Technologies.

A transformation programme for Engineering and Capital Projects has now been defined and incorporated into our operating model.

4 Development of products that do not meet the future needs of customers

GLT sponsor: Maurits van Tol and Anish Taneja

Risk	Opportunity	Key mitigations	Updates made to principal risk
There is a risk that we are unable to develop products that are competitive enough to meet our market ambitions and the needs of customers. This includes our ability to identify and understand customer expectations, translating this into effective R&D and developing our technologies into an industrial production scale.	A strong product portfolio, effectively designed in line with our customers' future needs, will enable us to win in our chosen markets for the years to come. Effective product development will continue to improve our brand and enable us to win in new markets as they are identified.	• We aim to maintain strong customer and partner relationships, involving them in the development process • We leverage New Product Introduction (NPI) and people processes from our mature businesses to build capability in our growth businesses • We continue to strongly invest in our R&D capabilities • OneJM strategy ensures a cross-business strategic approach to markets	Formerly 'Maintaining competitive advantage of our products and operations'. Improved business systems and processes to enhance planning effectiveness Simplification of product development workstreams to improve focus Introduction of Group Commercial Council to better understand customer needs and develop the JM value proposition

5 A low-performing culture undermines our strategy

GLT sponsor: Annette Kelleher

Risk	Opportunity	Key mitigations	Updates made to principal risk
A low-performing culture characterised by an insufficiently engaged and inclusive workforce, lacking commitment to taking accountability, keeping it simple and driving results could impact on our ability to attract and retain key talent, and therefore successfully execute our strategy.	A high-performance culture is essential to executing our strategy, delivering growth and being more efficient. High-quality leaders can build diverse, inclusive and engaged teams in which everyone can deliver better results.	• We have implemented an ongoing campaign across JM to create a clear understanding of our people leadership expectations and their importance in delivering our play to win strategy • We have put in place a global digital platform – Workday – to underpin standard HR processes and to provide meaningful insights into our business • We have relaunched our global employee engagement survey, utilising Workday Peakon technology, helping to ensure that everyone in our company can share their views • We regularly review how we work across the business to find ways of working more simply and efficiently	Formerly 'People, culture and leadership'. Risk increased due to high levels of organisational change. Our new HR platform enables better talent development and engagement. We are improving our talent management processes – particularly our approach to diversity and inclusion – so that we're creating the right environment and capabilities to deliver the next phase of our strategy. During 2023/24 we will be implementing a new approach to performance management. We continue to prioritise our people's health, safety and wellbeing.

6 Unsuccessful delivery of key business transformation programme

GLT sponsor: Christian Günther

Risk	Opportunity	Key mitigations	Updates made to principal risk
JM's transformation is scoped to implement the strategy ofcatalysing the net zero transition for our customers in automotive, chemicals and energy. There are currently more than 30 programmes, across group functions and the four core businesses, driving business growth, people growth and efficiency. Failure to successfully deliver these programmes may delay the expected benefits, disrupt services to customers or trigger a loss of key talent.	Together the transformation programmes will address capability gaps and poor competitiveness in key markets. Through the transformation, JM will develop and strengthen its capability for ongoing continuous improvement, delivery of complex projects and agility to respond to future external trends.	• We have established a robust framework for the planning and delivery of transformational change projects, including stage gates to structure key decisions • The JM-wide transformation office provides specialist support to programme teams, tracks progress and ensures effective oversight by senior leadership • Third-line assurance is provided by JM's Group Assurance function, with a focus on the most critical and sensitive programmes	Formerly 'Business Transformation'. The overall rating of this risk has not changed. Over the past 12 months we have established stronger programme and change management capability. This will allow us to expand the scope of changes and accelerate delivery.

Operational risks

Our day-to-day operations carry a level of risk that must be managed effectively to ensure that we are able to keep our people safe and meet our strategic goals.

7 A significant work-related EHS incident

GLT sponsor: Mark Wilson

Risk

If we fail to operate safely, we could injure people, incur significant financial loss or breach applicable laws, which could have a negative effect on our people, the environment or our reputation. This could also mean we lose production time and attract negative interest from the media and regulators, which could lead to fines and penalties.

Like other high-hazard manufacturing companies, our business is controlled by a wide range of challenging health, safety and environmental laws, standards and regulations, which are set by governments and regulatory agencies around the world.

Key mitigations

- We have a strong health and safety culture across the business. This is based on clear policies, guidelines and standards, continual training and awareness activities and audits
- We regularly review process safety hazards at relevant sites by carrying out deep-dive safety audits
- We thoroughly investigate incidents or accidents to identify their root cause and then develop plans to remediate the problem
- We monitor our environmental risk, report on environmental data associated with our sites and always look for opportunities to improve
- We regularly review our regulatory and reputational risks and put mitigation plans in place where we need to

Updates made to principal risk

Formerly 'Environment, health and safety (EHS)'.

Overall, JM's EHS risk is considered to have reduced due to:

- Several actions from high-priority Process Hazard Reviews (PHRs) and process safety audits have been completed
- Over 98% of actions from maximum credible event assessments completed
- Ongoing asset replacement programmes
- Training of over 90% of operational staff in process safety has been completed
- Divestment of the Health business, which had all its sites classified as high process safety risk sites

Nevertheless, we continue to review any emerging EHS risks (especially process safety) across all our businesses, which we are fully evaluating and mitigating.

8 Disruption to inbound goods or services provided

GLT sponsor: Anish Taneja

Risk

Given the types of products and services we provide, there are only a few suppliers that are approved to source certain important raw materials. If there was a significant breakdown in our multi-tiered supply chains, how we supply to customers' demand would be affected or disrupted.

Key mitigations

- We continually review our relationships with our strategic and high-impact suppliers
- We are well connected in the market to anticipate disruption and engage our businesses in proactive scenario planning
- We carry strategic stocks of raw materials, including PGMs, and regularly monitor those stock levels against demand forecasts
- We regularly investigate alternative materials to use, as part of our research and development work
- We complete due diligence when selecting our suppliers to ensure they meet our expectations and all regulations with regard to ethics and sustainability
- When designing our supply base, we consider agility to ensure we are able to overcome geopolitical risks – e.g. through local sourcing

Updates made to principal risk

Formerly 'Supply Failure'.

Risk increased, reflective of the challenging macro environment, including potential supply issues due to second-tier supplier failure, energy shortages and pricing fluctuations.

Following our refreshed JM strategy, we have better defined JM's procurement priorities for each of the businesses. Each business has varying priorities. There are overarching common themes such as supply resilience, where we want to aim for 'resilience by design' and prevent bottlenecks, by building out our supply ecosystem.

9 Security of metal and failure to manage metal commitments

GLT sponsor: Alastair Judge

Risk	Key mitigations	Updates made to principal risk
JM uses significant quantities of high-value precious metals, which are transported, stored and processed across our operations. We do not carry significant exposure to price risk as we hedge all our metal transactions centrally looking at overall group supply and demand. Our PMM business ensures the group has sufficient metal to meet business demands and manages our metal liquidity levels. There is a risk that we do not have sufficient metal available. Therefore, we operate within tight trading limits and defined liquidity levels to manage the demand volatility. Metal price volatility affects how much our Trading business earns. The precious metal industry globally is susceptible to criminal activity resulting in the risk of theft, and we share those challenges. Loss or theft due to a failure of the security management systems associated with the protection of metal may result in financial loss and / or a failure to satisfy our customers which could reduce our customers' confidence in JM and potential legal action. Failure to mitigate this risk can have a significant impact on our working capital, financial viability and/or undermine our ability to meet our customer commitments.	• Long-term strategic planning around metal requirements of the group is undertaken to ensure appropriate positioning for the future • We run a strong operational control environment within our metal trading business • We hedge the majority of our metal transactions centrally through looking at the overall group supply and demand, minimising our exposure to metal price volatility • We maintain a robust security management system to protect our metal holdings • We have appropriate insurance cover in place	Formerly 'Managing our metal commitments'. Due to increased crime within the global precious metal industry, the overall rating of the risk is increasing. We have continued to strengthen physical security and the operational environment to ensure we have a proportionate control structure to manage and optimise our metal holdings. Furthermore, we have launched a metal finance academy to continue strengthening appreciation and understanding of our metal risks across the group.

10 Failure in one or more of JM's critical operational assets

GLT sponsor: Alastair Judge

Risk	Key mitigations	Updates made to principal risk
A critical asset failure may have a material effect on our supply chains, performance, share value and reputation. Our work on the effects of climate change means we understand that more frequent extreme weather events and natural disasters may disrupt our operations and increase our costs.	• We continue to monitor and prioritise critical spare parts and capital expenditure for any ageing assets and infrastructure • The multi-year capital investment programme across PGM Services continues to progress with focus on asset renewal and replacement • We continue to implement robust mitigation's at our sites, including business impact assessments, business continuity management plans, asset management programmes and rigorous support systems for our operational technology • Group Assurance function reviews business continuity planning (BCP) as part of the Site Extended Audits	Formerly 'Asset failure'. We assess this risk based on the high level of exposure faced by our PGMs business. The nature of this business means it would suffer the greatest potential effect of a critical asset failure. A climate resilience site assessment has been completed at one of our sites. The report is being reviewed and action plans are being formulated to address the recommendations and the requirements of future site assessments.

11 Business failure through cyber-attack or other IT incidents — GLT sponsor: Stephen Oxley

Risk	Key mitigations	Updates made to principal risk
A failure to adapt our Information Technology to changing business requirements, the occurrence of significant disruption to our systems or a major cyber security incident may adversely affect our financial position, harm our reputation and could lead to regulatory penalties or non-compliance with laws.	• We continue to refresh and standardise our core systems and applications on an ongoing basis to reduce reliance on legacy systems • We are delivering a programme of work to identify and reduce risk in operational technology • We provide regular cyber security training for employees to raise awareness of cyber risks	We continue to adapt and respond to the increasingly complex and heightened external threat landscape by enhancing cyber-security technologies and processes to improve our ability to Predict, Prevent, Detect, Respond and Recover to cyber risks, aligned to industry standards. Dedicated IT projects have supported our divestment activities, helping us to balance the value of the sale against transitional risks, including the integrity and availability of data.

Managing Intellectual Property

In 2022/23 we removed 'Intellectual Property' as a principal risk. This was due to the implementation of mitigating actions that reduced our risk exposure to a level the GLT assessed to be satisfactory. Implemented mitigating actions included:

As a result, our IP risks are now managed on a 'business as usual' basis and will only be escalated back to the GLT if there is a material increase in our risk exposure. This allows our senior leaders to focus their resources on the highest priority risks to JM.

Going concern and viability

Going concern

In adopting the going concern basis for preparing the accounts, the directors have considered the business activities as set out in the Strategic report and Financial review, pages 1 to 72, as well as the group's principal risks and uncertainties, pages 62 to 69. As part of this assessment, we have considered a base case and severe but plausible trading scenario. Both scenarios showed sufficient headroom under our committed facilities and financial covenants. The directors therefore believe that the group has adequate resources to fund its operations for the period of 12 months following the date of this announcement, making it appropriate to prepare the accounts on a going concern basis. Further details on going concern, viability and facilities can be found in Note 1 on page 150 respectively of the accounts.

Viability

We have assessed how viable we are as a business over a three-year period, in line with our annual planning horizon. During the year, the Board carried out a robust assessment of the principal and emerging risks affecting our business, particularly those that could threaten our business model. The risks, and the actions taken to mitigate them, are described in the Risk report on pages 62-69.

We assess our prospects through our annual strategic and business planning process. This process includes a review of assumptions made including market, vehicle and production outlooks, customer demand, underlying growth / cost assumptions, metal prices, key risks and opportunities as well as an appraisal of our strategy and significant capital investment decisions. The Group Chief Executive Officer and Chief Financial Officer lead these reviews, along with the Chief Executives of each business.

The Board also reviews each sector's strategy throughout the year, looking at our current position and prospects for the coming years. This allows us to reaffirm our overall strategy and reassess the risks that could impact its success.

We do not expect climate change risks to have a material near-term effect on our forward-looking forecasts for going concern or viability. See scenarios opposite for more details of our analysis.

Analysis through four stress scenarios

In making the viability assessment, we have analysed each of the principal risks facing the group – as described in the Risk report on pages 64 to 69 – and identified the items within each principal risk category that might significantly affect cash flow and viability. We have then modelled these in four stress scenarios.

Scenario 1 – Maintaining competitive advantage of our products and operations

This scenario considers the failure to maintain our competitive advantage in existing markets, mostly because of poor execution of key initiatives or operations. It includes the effect of a six- month delay to key capital projects, delays to deliver the transformation savings and a temporary one-month shutdown of a refinery, which leads to higher working capital and lower profits.

Scenario 2 – Geopolitical risks impacting JM's operations

This scenario considers the increased risk presented by geopolitical risks, such as a one-year slowdown in our operations in China, and increased inflation across the period.

Scenario 3 – Disruption to the platinum group metals value chain

This scenario considers the failure to source sufficient metal to manage and satisfy our internal and external obligations. We modelled a shortage in the supply of metal, an increase in individual metal prices to 12-month highs over the period April 2022 to March 2023 of our key metals, and an increase in our metal holdings.

Scenario 4 – Other risks

This scenario includes the effect of all our other principal risks – outlined in the Risk report on pages 64 to 69 where not already considered in the scenarios above. For each risk, we have estimated a financial effect, which considers the impact and likelihood of the risk. Given the wide range of risks we face, we have then applied an overall probability weighting of 20% which allows us to work out the potential financial impact. We have also included impacts of carbon pricing and a one-month temporary shutdown of a key site due to an extreme weather event.

Conclusion

In evaluating our viability under each of these scenarios, we considered our current financing arrangements, see page 150, and assumed we would not refinance any maturing debt – although, in reality, we would expect to refinance our debts well ahead of maturity thereby increasing headroom. Our stress testing shows that, under each of the scenarios described above, we have ample headroom under our committed facilities and financial covenants. As a final review, given the climate of greater political and economic certainty, we have also undertaken a reverse stress test to identify what additional or alternative scenarios and circumstances would threaten our financial covenants or headroom. This shows that we have headroom against either a further decline in profitability of more than 40% in the financial year to March 2024, well beyond the severe-but-plausible scenario, or a significant increase in borrowings (net debt would need to more than double in the financial year to March 2024). In this unlikely scenario, we still have other mitigating actions available, including reducing capital expenditure, renegotiating payment terms or reducing our dividend. Based on this assessment, the directors have a reasonable expectation that the company and group will be able to continue operating, and meet its liabilities as they fall due, making it appropriate to prepare the accounts on a going concern basis.

Non-financial and sustainability information statement

The table below outlines how we meet the non-financial reporting requirements set out in the Companies Act 2006. Our business model is set out on pages 8 and 9. Our purpose described on page 4 and our sustainability strategy on pages 22 to 44 set out how we act as a responsible business. Our non-financial KPIs which support the delivery of our strategic priorities are shown on pages 3 and 12. We have a range of different policies and standards in place to manage our principal risks, pages 62 to 69, which form part of our internal control framework.
A description of all matters relating to climate-related risks and opportunities, including the governance arrangements, scenario testing and metrics and targets, are included within the Task Force on Climate-related Financial Disclosures on pages 45 to 52.

Reporting requirement	Information necessary to understand our business, policies and due diligence activities and outcomes	Policies, guidance and standards which govern our approach. Some of which are only published internally
Environmental matters	Our group policies that govern environmental matters support our commitment to sustainability and help keep our people and the communities we serve safe. Sustainability – see pages 22 - 44 Task Force on Climate-related Financial Disclosures – see pages 45 - 54 Societal Value Committee report – see pages 88 - 89	Environment, Health and Safety Policy + Procurement Policy Supplier Code of Conduct
Employees	At Johnson Matthey, we want our employees to feel safe, promote a culture of inclusion and diversity, and build long-term fulfilling careers. Our HR, Ethics and Compliance and EHS polices help support this. Our people – see pages 33 - 34 Health and safety – see pages 33 - 34 Employee engagement – see page 35 Gender pay gap report – see page 37 Diversity – see pages 37 - 38 Speak Up – see page 41	Code of Ethics Employee Leave Policy Diversity, Equality, Inclusion and Belonging Policy Board Diversity Policy Smart Working Policy Substance Misuse Policy Working Together Policy Environment, Health and Safety Policy Speak Up Policy
Human Rights	We consider our entire value chain when looking at human rights, including our own operations, suppliers and customers. Suppliers – see page 39 Modern Slavery Statement – see page 39 Responsible sourcing – see pages 39 - 40 Ethical standards – see page 38 - 39 Speak Up – see page 41	Code of Ethics Modern Slavery Statement Data Protection Policy and Employee Privacy Notice Procurement Policy Supplier Code of Conduct Human Rights Policy Speak Up Policy
Social matters	Our Code of Ethics helps our people do the right things and helps us put into practice the principles by which the group operates; it also provides a framework for responsible business practices. We ensure that our suppliers are also held to high standards and adhere to our Supplier Code of Conduct. Our stakeholders – see pages 44 and 84 Ethical standards – see pages 38 - 39 Engaging with our communities – see page 42 Sustainability – see page 33	Code of Ethics Supplier Code of Conduct Environmental, Health and Safety Policy
Anti-bribery and corruption	Our global policies support the group with compliance with various laws relating to anti-bribery and corruption. We strive to act with openness, fairness and honesty and expect our stakeholders to do the same. Suppliers – see page 39 Our people – see pages 38 - 39 Ethical standards – see page 38	Anti-Bribery and Corruption Policy Code of Ethics Gifts Hospitality and Charitable Donations Policy Supplier Code of Conduct Conflicts of Interest Policy Global Tax Policy

Section 172 statement

Our Section 172 statement comprises this section and pages 84 to 86 of the Governance report; it describes how the directors have had regard to stakeholders' interests when discharging their duties under Section 172 of the Companies Act 2006. The mechanisms used to engage with shareholders are described on page 84. You can also read more on how the Board considered each matter during the year as follows:

s.172(1) considerations	Relevant disclosures	Page reference
The likely consequences of any decision in the long term		
During the year, the directors focused on the execution of our strategy and strategic milestones to ensure we are positioned to create long-term value for shareholders. This recognises the role we play in wider society helping the transition to a greener economy.	Our purpose	4
	Business model	8 - 9
	Our strategy	12 - 13
	The drivers of our changing world	6 - 7
	Financial review	53 - 54
	Sustainability	22 to 44
Interests of employees		
The directors recognise the importance of attracting, retaining and motivating high-performing individuals. The directors consider the implications for our people where possible. They also seek to ensure we remain committed to promoting a safe and inclusive working environment for all our people.	Our people	33 - 38
	Employee engagement	35
	Diversity, inclusion and belonging	35 - 36
	Speak Up	41
	Culture	35
Fostering the company's business relationships with suppliers, customers and others		
Our relationship with customers, suppliers, governments and partners is essential to ensure the success of our strategy and the long-term success of the Company. The board receives updates on engagement across the group at meetings.	Financial review	53 - 54
	Modern slavery statement	38
	Business model	8 - 9
	Sustainability	22 - 44
	Human rights and ethical standards	38 - 39
Impact of operations on the community and the environment		
Sustainability is at the heart of our strategy, and the impact we have on the community and environment is carefully considered by the Board. The Board closely monitors decisions relating to our sustainability strategy through the Societal Value Committee.	Our purpose	4
	The drives of our changing world	6 - 7
	Sustainability	22 - 44
	Task Force on Climate-related Disclosures	45 - 52
	Societal Value Committee report	88 - 89
Maintaining a reputation for high standards of business conduct		
Our Code of Ethics, Supplier Code of Conduct and Modern Slavery Statement are reviewed regularly by the Board. This ensures the high standards of conduct we expect are upheld by all levels of the business. The Board monitors compliance with these through the internal control framework.	Our purpose	4
	Speak Up	42
	Human rights and ethical standards	38 - 39
	Internal controls	100
	Modern slavery statement	39
	Ethics and compliance	38 - 39
The need to act fairly between members of the company		
Following careful consideration of all relevant factors including the impact on our stakeholders, the directors assess the course of action that enables the delivery of our strategy and the long-term success of the company.	Stakeholder engagement	84 - 86
	Board activities	82 - 83
	Annual General Meeting	130

The Strategic report from pages 1 to 72 was approved by the Board on 25th May 2023 and is signed on its behalf by:

Liam Condon
Chief Executive Officer

Governance

In this section

Fair, balanced and understandable

In accordance with the Code, the Board considers that, taken as a whole, the 2022/23 Annual Report and Accounts is fair, balanced and understandable, and provides the information necessary for shareholders to assess Johnson Matthey's position, performance, business model and strategy. The Audit Committee assesses the process that management uses to support the recommendation to the Board. More details are on page 100.

Compliance with the UK Corporate Governance Code 2018

During the year under review, we have applied all the principles and complied with all the provisions of the 2018 UK Corporate Governance Code (the Code) except the following:

- **provision 5 – engagement with the workforce:** The Board has not engaged with the workforce using the methods prescribed by the Code. Following our strategic review last year, global town halls were held across the group to communicate our new strategy and business priorities. It was felt that this method of engagement would be the most effective for this financial year to ensure that all colleagues had the opportunity to ask detailed questions about the strategy, values and cultural ambition to the Group Leadership Team (GLT). We intend to resume our engagement focus groups in certain countries where JM has a significant footprint during 2023/24. These focus groups will be attended by a non-executive director
- **provision 41– engagement with the workforce on alignment of executive pay with the wider company pay policy:** While we inform our employees of global changes to pay and benefits, we have not actively sought a two-way dialogue over executive pay. We benchmark remuneration against our peers to ensure we offer competitive pay and benefits, so we continue to attract and retain the highest-calibre candidates. During the year, all employees were able to provide feedback on a range of matters, including remuneration, as part of our annual employee engagement survey. Read more in our Remuneration Committee report on page 103.

The Code is publicly available on the Financial Reporting Council (FRC) website, frc.org.uk

How we apply the principles of the Code

How we apply the principles of the Code	
Board leadership and company purpose	
The role of the Board	Pages 78, 82-83
Purpose and culture	Pages 35, 80
Resources and controls	Pages 80, 100
Stakeholder engagement	Pages 72, 84-85
Workforce engagement	Page 80
Division of responsibilities	
Role of the Chair, non-executive directors and Company Secretary	Pages 78-79
Composition of the Board	Pages 76-77
Composition, succession and evaluation	
Appointments to the Board and succession planning	Pages 90-92
Skills, experience and knowledge of the Board	Pages 75-77
Board evaluation	Page 87
Audit, risk and internal control	
Audit Committee report	Pages 94-102
Risk report	Pages 62-69
Remuneration	
Remuneration Committee report	Pages 103-127

Chair's introduction

"The Board's debate and challenge supports the delivery of our strategy"

Governance highlights

- Assessed and approved a refreshed group strategy
- Monitored the transformation programme
- Appointed Barbara Jeremiah as an independent non-executive director
- Approved investments and strategic partnerships linked to our strategic milestones
- Reviewed previous strategic decisions and evaluated the learnings to further improve governance processes

Following Liam Condon's appointment as Chief Executive Officer in March 2022, the Board began the year with several meetings focused on strategy. We discussed, challenged and provided feedback on the strategic review, and our revised strategy was announced in May 2022. It followed a long and detailed process of reviewing our strengths, the markets in which we operate, and getting feedback from our investors, customers and employees. Since then, the Board has overseen the implementation and delivery of our strategy, which is underpinned by our transformation programme. As we move to a faster-paced, more customer-focused culture, we have approved key strategic partnerships, and won business and large-scale projects, delivering against our promises for each of our businesses to accelerate our growth and drive value creation.

Read more about our strategy and progress against our milestones on pages 12 and 13
Read more about the Board's activities during the year on pages 82 and 83

Sustainability is an integral part of Johnson Matthey and embedded into our strategy. We are committed to achieving net zero by 2040, and our progress against the 2030 targets (set out on page 24) is closely monitored by the Societal Value Committee. We are on track for a reduction in scope 1+2 CO_2e (carbon dioxide equivalent) emissions from a 2019/20 baseline. And through our products, we have continued to helped our customers reduce CO_2e emissions.

More information about our Societal Value Committee's work is on page 88

The Audit Committee assessed JM's readiness to implement recommendations from the Department for Business, Energy and Industrial Strategy (BEIS) white paper on restoring trust in audit and corporate governance. This included reviewing our climate-related assurance processes and the creation of our sustainability assurance framework.

More information about our Audit Committee's work is on page 94

During the year, we have continued to focus on succession planning, and the Nomination Committee undertook a search for a new non-executive director. We look forward to welcoming Barbara Jeremiah to the Board in July 2023. Barbara's appointment will further enhance our Board's skills and experience, and she will also take on the role of Senior Independent Director. Further information on the changes to the Board members' roles and responsibilities can be found in the Nomination Committee report on page 90.

The Board understands the importance of diversity and inclusivity, and the innovative thinking and challenge it brings to the boardroom. I am pleased to report that plans are in place for the Board's composition to meet the ambitions set out in the FTSE Women Leaders Review for listed companies to have at least 40% of female representation on the board with at least one of the senior board positions (chair, chief executive officer, senior independent director or chief financial officer) to be held by a woman by the end of 2025.

Read more about the Board's composition and Board diversity policy on page 93

We have spent much of our time discussing the future of Johnson Matthey, our strategy, current performance and the plans in place to catalyse the net zero transition. We have supported and challenged senior leadership to ensure the continued acceleration of our transformation programme. We have also reviewed some of our previous strategic decisions and evaluated the learnings from these processes to continuously improve and challenge management in a robust and constructive way. As a result of these discussions, there are several actions we will be taking to improve the Board's governance processes. In addition, the Board reviewed some of the wider governance processes to ensure they supported our fast-paced cultural ambition. As part of that review, we approved a simplified delegation of authority framework.

I am pleased to report that this year's board effectiveness review confirmed that we continue to operate effectively and have made good progress against the actions recommended in last year's review. In accordance with the Code, the next review will be externally facilitated.

Read more about our board effectiveness review on page 87

Patrick Thomas
Chair

Board at a glance
as at 31st March 2023

Board and committee attendance

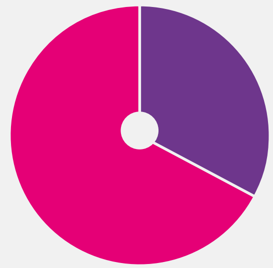
Board attendance	Board	Societal Value Committee	Nomination Committee	Audit Committee	Remuneration Committee
Patrick Thomas[1]	9/9	5/5	7/7	–	7/8
Liam Condon	9/9	5/5	–	–	–
Stephen Oxley	9/9	5/5	–	–	–
Rita Forst[2]	8/9	5/5	6/7	5/6	8/8
Jane Griffiths	9/9	5/5	7/7	6/6	8/8
John O'Higgins	9/9	5/5	7/7	6/6	8/8
Xiaozhi Liu[3]	9/9	5/5	7/7	6/6	7/8
Chris Mottershead[4]	8/9	4/5	6/7	5/6	7/8
Doug Webb	9/9	5/5	7/7	6/6	8/8

1. Patrick Thomas was unable to attend one committee meeting due to unforeseen travel issues
2. Rita Forst was unable to attend one board meeting, two committee meetings and part of another board meeting due to serious illness
3. Xiaozhi Liu was unable to attend part of one board meeting and one committee meeting due to short-notice scheduling changes
4. Chris Mottershead was unable to attend one board meeting and four committee meetings due to serious illness

Non-executive director industry leadership and experience

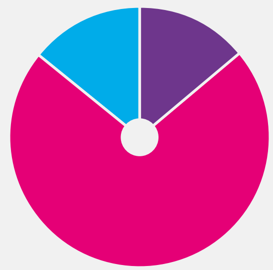
	Patrick Thomas	Rita Forst	Jane Griffiths	John O'Higgins	Xiaozhi Liu	Chris Mottershead	Doug Webb
Automotive	●	●		●	●		
Chemicals	●			●			
Energy				●	●	●	
Oil and gas	●			●		●	
Pharmaceuticals	●		●			●	
Manufacturing	●	●		●	●		●
Professional services		●					●
Technology	●	●	●	●	●	●	●
Sustainability	●	●	●		●	●	

Board composition



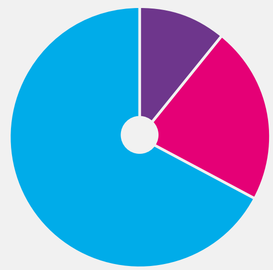
Gender diversity

- Female directors: three 33%
- Male directors: six 67%



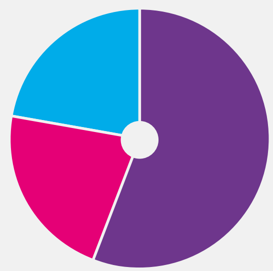
Chair and non-executive director tenure

- 0-3 years: one 14%
- 4-6 years: five 72%
- 7-9 years: one 14%



Role

- Chair: one 11%
- Executive: two 22%
- Non-executive: six 67%



Nationality

- British: five 56%
- Irish: two 22%
- German: two 22%

Board of Directors

Patrick Thomas
Chair

S N R

Appointed to the Board: June 2018

Skills and experience
Between 2015 and May 2018, Patrick was Chief Executive Officer and Chair of the Board of Management at Covestro AG. Between 2007 and 2015, he was Chief Executive Officer of its predecessor, Bayer MaterialScience, before its demerger from Bayer AG. He is a fellow of the Royal Academy of Engineering.

Contribution
Patrick has deep experience of leading international speciality chemical businesses. He also has a track record in driving growth through science and innovation across global markets, with a strong focus on sustainability.

External appointments
Non-Executive Director at AkzoNobel and member of Covestro AG's Supervisory Board.

Liam Condon
Chief Executive Officer

S

Appointed to the Board: March 2022

Skills and experience
Liam was previously a member of the Board of Management of Bayer AG and President of the Crop Science Division, a role he held for nine years. He has also served in senior roles at Schering AG and Bayer HealthCare.

Contribution
Liam is a dynamic and values-driven leader, with an impressive track record of leading science-based businesses while delivering consistent high-quality performance. He balances commercial ability with a strong strategic perspective. He has a proven track record of driving growth and modernising organisations.

Stephen Oxley
Chief Financial Officer

S

Appointed to the Board: April 2021

Skills and experience
Stephen joined from KPMG, where he was a partner. He is experienced in both audit and advisory roles for large, complex international companies across a variety of sectors including FMCG, healthcare, natural resources and industrials. Stephen is a chartered accountant.

Contribution
Stephen brings operational and technical understanding of Johnson Matthey and significant experience working with companies going through major change programmes.

External appointments
Non-Executive Member of the Audit and Risk Assurance Committee for the Sovereign Grant and Trustee of Care International UK.

Rita Forst
Independent Non-Executive Director

S N A R

Appointed to the Board: October 2021

Skills and experience
Rita has spent more than 35 years at the Opel European division of General Motors in senior engineering, product development and management positions, including Vice President, Engineering, forGeneral Motors Europe. She was also a member of Opel's Management Board from 2010 to 2012. Rita was responsible for the development of new generations of engines and car models for Opel and General Motors, as well as European research and development activities.

Contribution
Rita has a deep understanding of the automotive and powertrain sectors. Her extensive knowledge includes research and development of conventional and alternative powertrains, as well as future vehicle technologies.

External appointments
Non-Executive Director of Westport Fuel Systems Inc and member of Technology and Product Strategy Committee, Non-Executive Director of AerCap Holdings N.V. and member of ESG Committee and Portfolio Management Committee, Member of the Supervisory Board of NORMA Group SE and Chair of Group Strategy Committee, and Member of the Advisory Board of iwis SE & Co.KG.

Jane Griffiths
Independent Non-Executive Director

S N A R

Appointed to the Board: January 2017

Skills and experience
Jane held various roles at Johnson & Johnson (J&J) from 1982 until her retirement in 2019, with experience in international and affiliate strategic marketing, sales management, product management, general management and clinical research. Most recently, she was Global Head of Actelion, a Janssen pharmaceutical subsidiary of J&J.

Contribution
Jane has significant experience and understanding of global strategy management across a variety of markets, and a strong interest in sustainability and diversity.

External appointments
Chair of Redx Pharma Plc, Non-Executive Director and Sustainability Committee Chair of BAE Systems plc.

Board committees
- S Societal Value Committee member
- N Nomination Committee member
- A Audit Committee member
- R Remuneration Committee member
- ● Committee Chair

John O'Higgins
Senior Independent Director

S N A R

Appointed to the Board: November 2017

Skills and experience
John was Chief Executive of Spectris plc from January 2006 to September 2018, leading the business through a period of significant transformation. He previously worked for Honeywell as President of Automation and Control Solutions, Asia Pacific, and in other management roles. From 2010 to 2015, John was a Non-Executive Director at Exide Technologies Inc, a battery technology supplier to automotive and industrial users. He began his career as a design engineer at Daimler-Benz in Stuttgart.

Contribution
John has extensive business and industrial experience, as well as a track record of portfolio analysis and realignment, driving growth and improving operational efficiencies.

External appointments
Chair of Elementis plc, Non-Executive Director of Oxford Nanopore Technologies Plc, member of the Supervisory Board of ENVEA Global SA and Trustee of the Wincott Foundation.

Xiaozhi Liu
Independent Non-Executive Director

S N A R

Appointed to the Board: April 2019

Skills and experience
Xiaozhi is the founder and Chief Executive of ASL Automobile Science & Technology, a position she has held since 2009. She was previously a senior executive in several automotive companies, including Chair and Chief Executive of General Motors Taiwan.

Contribution
Xiaozhi has deep knowledge and perspective on sustainable and technology-driven businesses, and strong experience of the global automotive sector, particularly in China, as well as Europe and the US.

External appointments
Chief Executive of ASL Automobile Science & Technology, Non-Executive Director of Autoliv Inc and InBev SA/NV.

Chris Mottershead
Independent Non-Executive Director

S N A R

Appointed to the Board: January 2015

Skills and experience
Chris held roles at King's College London until his retirement in 2021, including Senior Vice President of Quality, Strategy and Innovation, and Director of King's College London Business Limited. Before this, Chris had a 30-year career at BP, including as Global Advisor on Energy Security and Climate Change. He was also Technology Vice President for BP's Global Gas, Power and Renewables businesses. He is a chartered engineer and fellow of the Royal Society of Arts.

Contribution
Chris has a wealth of industrial and academic knowledge, as well as experience in energy technology and related global sustainability issues. As Chair of the Remuneration Committee, Chris is a sounding board for JM's HR function.

External appointments
Member of the Audit Committee of the Crick Institute.

Doug Webb
Independent Non-Executive Director

S N A R

Appointed to the Board: September 2019

Skills and experience
Doug was Chief Financial Officer at Meggitt plc from 2013 to 2018, and was previously Chief Financial Officer at London Stock Exchange Group plc and QinetiQ Group plc. Before that, he held senior finance roles at Logica plc. Doug began his career in Price Waterhouse's audit and business advisory team. He is a fellow of the Institute of Chartered Accountants in England and Wales.

Contribution
Doug has a strong background in corporate financial management and a deep understanding of the technology and engineering sectors. Doug chaired the Audit Committee at SEGRO plc for nine years until April 2019, making him ideally suited to chairing our Audit Committee and acting as its financial expert.

External appointments
Non-Executive Director, Audit Committee Chair and Treasury Committee Chair of United Utilities Group PLC and Senior Independent Director of BMT Group Ltd.

Nick Cooper
General Counsel and Company Secretary

Appointed as General Counsel and Company Secretary: June 2020

Skills and experience
Nick has strong experience working across a diverse range of sectors. After qualifying as a solicitor, he worked in general counsel and company secretarial roles across the retail, software, hospitality and telecommunications sectors. More recently, as Corporate Services Director of Cable & Wireless, he led the migration of its central operations from London to the US.

Contribution
Nick's wide knowledge of corporate law, governance and operational experience means he is ideally placed to support the Board.

External appointments
Non-Executive Director of Springfield Properties PLC, Director of Veranova Parent Holdco, L.P.*

* JM holds 30% of the share capital of this company

Our governance structure

Our board of directors

At the date of this report, the Board comprises nine directors: the Chair, two executive directors, the Senior Independent Director and five independent non-executive directors. The Board is responsible for our long-term success. It provides leadership, direction and monitors Johnson Matthey's culture and values. The Board also sets our strategy and oversees its implementation, ensuring we are managing risks appropriately and acting in the interests of our stakeholders. The responsibilities we do not delegate as a board are included in the matters reserved for the Board in our Governance Framework.

Read JM's Governance Framework on our website, matthey.com/governance-framework

Board composition and roles

Our non-executive directors are determined to be independent by the Board, in accordance with the Code's criteria. The Board members' respective skills, experience and knowledge enable them to discharge their respective duties and responsibilities effectively. Further details can be found on pages 75-77.The Chair was considered independent on appointment.

Board role	Key responsibilities	
Chair Patrick Thomas	• Leads the Board • Ensures an effective Board, including welcoming contributions and challenges from directors • Maintains regular and effective shareholder communications so that the Board has a clear understanding of their views	• Chairs the Nomination Committee, initiating change and succession planning for the Board and senior management • Promotes high standards of integrity, probity and corporate governance throughout JM
Independent Non-Executive Directors Rita Forst, Jane Griffiths, Xiaozhi Liu, Chris Mottershead and Doug Webb	• Constructively challenge the executive directors • Scrutinise management's performance • Provide independent advice on strategy proposals	• Satisfy themselves on the integrity of financial information and on the effectiveness of financial controls and risk management systems • Determine appropriate executive director remuneration
Senior Independent Director John O'Higgins	• Provides a sounding board for the Chair • Acts, if necessary, as a focal point and intermediary for the other directors	• Ensures any key issues not being addressed by the Chair or senior management are acted upon • Is available to shareholders should they have concerns • Leads the annual appraisal of the Chair's performance
Chief Executive Officer Liam Condon	• Day-to-day responsibility for running the group's operations • Recommends and implements group strategy	• Applies group policies • Promotes JM's culture and standards
Chief Financial Officer Stephen Oxley	• Has day-to-day responsibility for managing the finance, IT, security and real estate functions	• Leads the group's finance activities, risks and controls
General Counsel and Company Secretary Nick Cooper	• Together with the Chair, keeps the effectiveness of the company's and the Board's governance processes under review	• Provides advice on corporate governance matters

Our board committees

All independent non-executive directors are members of the principal board committees. The Chair is a member of the Remuneration Committee and the Societal Value Committee, and he also chairs the Nomination Committee.

The number of board and committee meetings held during the financial year is included on page 75. The Board keeps the number of meetings under review to ensure that non-executive directors have sufficient time to discharge their duties.

Governance Framework: matthey.com/governance-framework

Audit Committee

Read more on pages – 94-102

Nomination Committee

Read more on pages – 90-93

Remuneration Committee

Read more on pages – 103-127

Societal Value Committee

Read more on pages – 88-89

Other committees

The Board has delegated specific responsibilities to the Disclosure Committee and the Ethics Panel. These committees comprise executive directors or GLT members and relevant senior management.

Disclosure Committee

Identifies and controls inside information. Determines how or when that information is disclosed, in accordance with applicable legal and regulatory requirements.

Ethics Panel

Oversees concerns raised relating to our Speak Up process and ensures the effective review and investigation of these concerns.

Group Leadership Team

The Board delegates responsibility for implementing operational decisions and for the day-to-day management of the business to the Chief Executive Officer, who is supported by the GLT. Our Delegation of Authorities Framework sets out levels of authority for decision-making throughout the group.

Details of GLT members and their relevant experience are on our website: matthey.com/GLT

Corporate governance report

Purpose and culture

Our purpose, culture and vision are underpinned by our values

The Board monitors culture using a range of metrics, including our global employee engagement survey, customer satisfaction scores, customer behaviour statistics, health and safety reports, financial results, internal audit reports and progress against our key transformation project milestones. Our Speak Up process is our formal channel for employees to raise concerns. Any material issues or key themes arising from Speak Ups are discussed by the Ethics Panel and Societal Value Committee and escalated to the Board as appropriate.

As part of the strategic review, the Board set new cultural priorities aligned to our purpose and values, to drive a simpler, higher-performing and more commercial organisation. During the year, we continued to transform our culture with a focus on efficiency, high performance and commercialism. These new cultural priorities also helped us review some of our own governance practices, to ensure they enabled these behavioural changes and supported the delivery of our strategy.

Our Chief Executive Officer continues to focus on the key themes of people, culture and commercial performance in his board reports throughout the year. This provides us with a valuable insight into the day-to-day operations and the cultural context in which our colleagues work. All our board directors go on site visits to engage with colleagues at all levels of the business and gain a better understanding of the culture at our sites.

Read more about how our purpose and culture impacts our decisions on pages 82-83

Catalysing the net zero transition

Our culture

Focus	Simplify	Execute

Our values

Protecting people and the planet	
Acting with integrity	Innovating and improving
Working together	Owning what we do

Our board committees play an important role in monitoring our culture

The Societal Value Committee ensures we are a truly inclusive organisation with a diverse workforce. It monitors any key themes and issues arising from our Speak Up process

See pages 88-89

The Nomination Committee makes sure succession planning supports our culture and promotes diversity

See pages 90-93

The Audit Committee has oversight of internal controls that safeguard our culture

See pages 94-102

The Remuneration Committee steers the group's approach to reward and benefits to ensure it promotes our culture and long-term success

See pages 103-127

Employee engagement

We are committed to engaging with employees to better understand the issues, challenges and opportunities across the group. In 2022, the Board focused on reviewing our strategy and considered employee feedback from The Big Listen. This employee survey was designed to uncover strengths and barriers to our success from the bottom up. Since The Big Listen, employee engagement has continued to be led by management, as we communicated our refreshed strategy. Town halls and team sessions took place at all levels across the group to share our vision, play to win behaviours and provide progress updates on the execution of our strategy. This was an essential part of ensuring our people had the chance to discuss and question management to better understand their role in delivering our ambitions. The town halls also provided a platform to communicate the cultural and behavioural changes that are vital for the successful delivery of our strategy.

Each year the Board conducts site visits to see operations first hand, meet colleagues and develop a better understanding of the culture. During the Board's visit to our Technology Centre in Sonning in September 2022, the directors met with employees informally over lunch, providing an opportunity for open discussion and the chance for directors to hear the views of our colleagues without having structured topics of discussion.

As described on page 73, this is an area where the Board has not complied with the Code. It was felt that following the strategic review, direct engagement between management and our employees was paramount to ensure the new cultural ambition and strategy was well understood. The Board had previously considered employee engagement methods specified by the Code and felt that our global and diverse employee network required a different approach. We established engagement focus groups in countries where we have a significant footprint, each led by a board member. Following the communication of our strategy, the Board intends to re-establish simplified groups for 2023/24 to obtain a greater insight into the views of our employees. The directors will report back to the Board on the key messages they have heard from their engagement focus group and any actions arising will be monitored through the year by regular reports.

Induction and training

All new directors receive comprehensive and tailored inductions during their first year at JM to gain a deeper understanding of how we work. Induction plans are adapted to support each director in meeting their statutory duties. Through the plan, directors develop a deep understanding of our strategic priorities, as well as an insight into our purpose, values and culture.

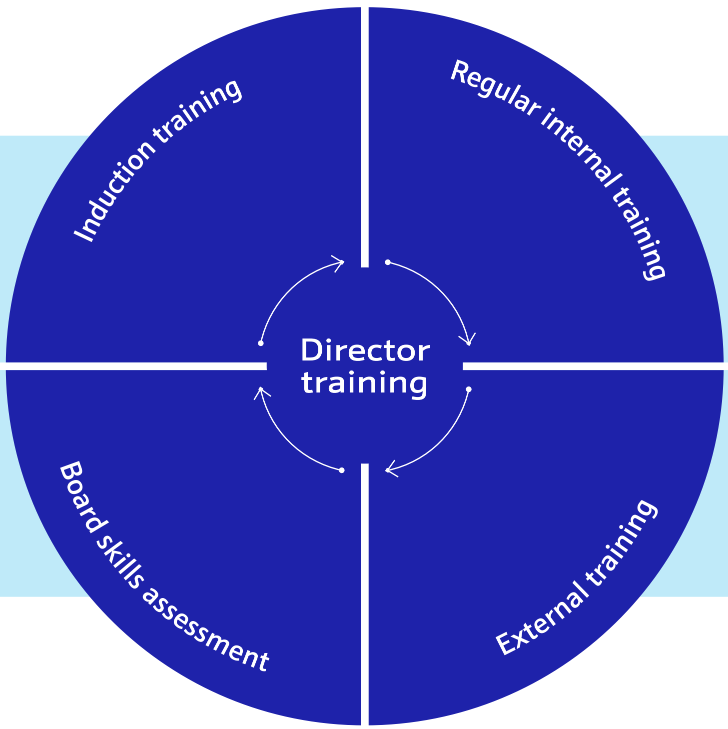
Following their induction, each director receives regular briefings from external advisers or teach-ins on items of strategic importance as part of regular board training. In September 2022, as part of continuous development, the Board received a schedule of teach-ins, which were delivered by subject matter experts from across the group. These covered Hydrogen Technologies, PGM chemistry and applications, renewables and electrochemical transformations, Clean Air (specifically, ammonia cracking, hydrogen ICE and methane abatement), digitalisation of R&D, and metals. This provided the Board with insights into the business and an opportunity to ask questions of the wider workforce about the detailed areas in which they work.

During the year, external legal advisors also provided an update on the UK Market Abuse Regulation. All board members receive regular training on climate-related issues through the Societal Value Committee, where external specialists are invited to present at each meeting. The auditors also presented regulatory updates to the Audit Committee, including the key changes for the next financial year.

Throughout each year, all directors receive information on mandatory training topics, including on health and safety, information security and ethics and compliance matters. Legal and governance updates are regularly provided by the General Counsel and Company Secretary.

The skills and experience of our board members are regularly assessed to ensure they continue to be well placed to provide insight on our purpose and strategy. This, alongside the annual board effectiveness review, informs our training agenda for the year.

- Introduction to key management personnel
- Detailed strategic review
- Sector deep dives
- Detailed strategic review



- Mandatory training to ensure the directors have a clear understanding of our internal processes

- Identify areas of improvement for future board training

- External experts provide training on relevant topics to enhance technical knowledge

Board activities

Our annual agenda plan reflects our strategy and gives us sufficient time to discuss and develop strategic proposals and monitor board performance. Below, we have set out some of the matters we considered during the year, different stakeholder groups central to those decisions, as well as the outcomes. Our Stakeholder engagement on pages 84 to 86 (including our Section 172 statement on page 72), illustrates how the Board considers stakeholder views and the outcome of those considerations.

Read more about our strategy on pages 12 and 13 and risk on pages 62 to 69

	Matters considered	Stakeholders considered	How the Board received stakeholder feedback	Outcomes	Links to risk
Strategy and execution	Strategic discussions included: • Review of a refreshed strategy • Delivery of our transformation programme • Investments and strategic partnerships • Reviews by business Chief Executives	• Customers and strategic partners • Employees • Investors • Suppliers • Society • Communities	• Chief Executive Officer updates • Business updates • M&A updates • Strategy and transformation updates	• Adopted a refreshed strategy, which was presented to the market in May 2022 and agreed a new cultural ambition to support the successful delivery of the strategy • Monitored the progress of the transformation programme • Reviewed each business's strategic update assessing the market, risks and opportunities • Agreed a strategic partnership with Plug Power and investment in a new US facility • Approved the investment in 3CR • Approved several smaller investments that help deliver against our strategic milestones	1 2 3 4 5 6 10
Financial oversight	Scrutinised and monitored financial data and performance, including: • Trading and performance • Full-year and half-year results • Going concern and viability statements • Dividend payments • Annual Report including reporting against the Task Force on Climate-related Financial Disclosure (TCFD) requirements	• Customers and strategic partners • Employees • Investors • Suppliers	• Chief Financial Officer updates • PGM reports • Regular broker reports • Investor perception study • Feedback following full-year and half-year results presentations	• Reviewed in detail the group's financial position, including working capital and net debt • Agreed the budget for 2023/24 and our three-year plan • Assessed the proposed dividend payment • Approved the going concern and viability statements • Reviewed and approved the full-year and half-year results and annual report and accounts	3 6 8 9
Operational management	We received regular updates from the Chief Executive Officer on: • Group operations • Capital project execution • Environmental, Health and Safety (EHS) performance • Business continuity and ongoing site management • Supply chain management	• Customers and strategic partners • Employees • Investors • Suppliers • Society • Communities	• Procurement update • Payment practices reporting • EHS updates • Modern Slavery Statement • Conflict Minerals Disclosure	• Challenged group operations, including capital projects, procurement, security, EHS, IT and supply chain management • Discussed process safety and instructed an independent audit	2 3 5 6 7 8 9 10

	Matters considered	Stakeholders considered	How the Board received stakeholder feedback	Outcomes	Links to risk
Governance	Governance is at the heart of the board agenda, including consideration of: • Stakeholder engagement mechanisms • Board effectiveness • Our Governance Framework • Our Delegation of Authority Framework • Policies and processes	• Customers and strategic partners • Employees • Investors • Suppliers • Society • Communities	• Attendance and engagement at the AGM • Investor perception survey • Feedback following meetings and direct engagement with investors • Review material news or regulatory announcements through the Disclosure Committee	• Progressed the actions from the last year's internally facilitated board effectiveness review and conducted another internal board effectiveness review • Reviewed the investor perception study and associated actions • Implemented changes to improve the Governance Framework and simplified committees at GLT level • Approved changes to simplify the Delegation of Authority Framework • Approved updates to policies to ensure alignment with best practice	5 6 10
People and culture	The Board focused on: • Our people strategy and culture • Diversity, inclusion and belonging • Employee engagement surveys	• Employees • Communities	• Insights gained from site visits • Annual talent review by the Nomination Committee • People strategy and culture updates from the Chief Executive Officer and Chief HR Officer • Results and feedback from our internal engagement surveys	• Reviewed the feedback from employee engagement surveys and agreed an action plan • Reviewed progress on changing behaviours to support our cultural ambition through the transformation programme updates	5 6 7 9 10
Risk	The Board reviewed the group's approach to risk management and completed deep dives of principal risks	• Customers and strategic partners • Employees • Investors • Suppliers • Society	• Board reports on the full-year and half-year risk reviews • Deep dive reports into certain principal risks and areas of emerging risks	• Considered any emerging risks as a result of the external environment • Reviewed each principal risk to ensure they remained appropriate • Approved the risk appetite for each principal risk • Reviewed mitigating activities	1 2 3 4 5 6 7 8 9 10

Key to principal risks

1 Significant shift in demand and / or commoditisation of sustainable technology

2 A significant geopolitical or macroeconomic event impacting JM's operations

3 Failure to deliver business value from strategic capital projects

4 Development of products that do not meet the future needs of customers

6 Unsuccessful delivery of key business transformation programme

7 A significant work-related EHS incident

8 Disruption to inbound goods or services provided

9 Security of metal and failure to manage metal commitments

10 Failure in one or more of JM's critical operational assets

Stakeholder engagement

We are focused on driving long-term sustainable success for the benefit of our stakeholders. This section provides an insight into how we as a board engage with our stakeholders to understand what matters to them. Examples of some of the principal decisions taken by the Board during the year and the stakeholder views and inputs considered as part of these decisions are on pages 84 to 86.

Customers and strategic partners

How we engage at board level

- Customer relationships are discussed at every board meeting
- Several key strategic partnerships were approved by the Board during the year, and the Board assesses potential partnerships against our strategic ambitions and milestones

How we engage across the company

- Customer satisfaction surveys
- Tracking customer perceptions against key indicators
- Engaging customers in the development process of new products

Investors

How we engage at board level

- Regular investor updates are presented at board meetings, including the results of an investor perception study
- Investors have the chance to ask directors questions at the AGM
- The Board approves trading statements, full- and half-year results and the Annual Report and accounts
- The Chair, Chief Executive Officer and Chief Financial Officer have regular engagement with major shareholders
- The Remuneration Committee Chair engages directly on remuneration matters and changes of policy
- The SID and Committee Chairs are available to meet with investors

How we engage across the company

- Regular dialogue with shareholders to support them in their investments
- Investor roadshows
- Roundtable teach-ins

Employees

How we engage at board level

- Review the results of the employee engagement surveys
- Monitor culture and the impact of the transformation programme on our people
- Regular visits to JM sites to meet colleagues
- Review process safety and EHS processes to ensure they keep our people safe
- The Nomination Committee receive talent and succession updates
- The Societal Value Committee review matters raised through our independent Speak Up process
- The Remuneration Committee sets the reward and benefits framework

How we engage across the company

- Regular internal communications and town halls
- Employee engagement survey
- Policies, processes, and events to keep our people safe and promote a culture of diversity, inclusivity and belonging
- Annual JM Awards

Society

How we engage at board level

- Ensure the delivery of our strategy, which addresses key societal issues
- Through the Societal Value Committee review the progress towards our sustainability targets

How we engage across the company

- Play an active role in global associations, including a leading role as UK Hydrogen Champion, an independent advisory role to the government

Communities

How we engage at board level

- The Societal Value Committee receives reports on ESG and actions to support our communities

How we engage across the company

- Employee volunteering
- Match funding for employee donations to certain charitable causes. In 2022/23 JM matched charitable donations made to the Disaster Emergency Committee following the Turkish and Syrian earthquake disaster
- Company donations to support communities in the regions that we operate in

Suppliers

How we engage at board level

- Review payment practices reporting and areas of improvement
- Review and approve the Modern Slavery Statement
- Promote an ethical culture

How we engage across the company

- Continually review relationships with our strategic and high-impact suppliers
- Policies and processes to ensure an ethical supply chain, including the Global Human Rights Policy and Conflict Minerals and Cobalt Policy
- Annual Ethics Week to raise awareness of the importance of our suppliers

Stakeholder engagement in action

Stakeholder engagement is vital to building a sustainable business. The Board recognises the need to foster positive business relationships with suppliers, customers and governments. This section provides more details on how the directors have fulfilled their duties.

The matters we consider differ in relevance for each stakeholder, and sometimes stakeholders may have conflicting interests. We aim to consider the key issues relevant to each stakeholder group, and our decisions will ultimately promote the group's long-term success and support our vision, purpose and strategy. In making decisions, we consider the interests of stakeholders across the company – not just at board level.

1

Transforming the way we operate

Our transformation programme is driving greater efficiency and cost savings through simplifying and modernising the way we work. Following the strategic review, our focus has been structured around key pillars, including external milestones, culture, efficiency and growth. The Board receives updates on transformational workstreams associated with each of these pillars at every meeting. This allows the Board to maintain effective oversight and an opportunity to assess the impact on our different stakeholders.

Stakeholder considerations

Our people: We understand the impact that transformation can have on our people and that driving cultural and behavioural changes takes time. We listened to our people through our employee engagement surveys. These helped shape our discussions during our strategic review last year. As a board we have reviewed our own governance processes and approved a simplified delegation of authority and changes to the Governance Framework, which reduced the number of GLT sub-committees.

Investors: Through our transformation programme updates, we closely monitor performance against external milestones. This allows us to challenge management and demand greater accountability, ensuring the effective delivery of our strategy for our investors and wider stakeholders. Our transformation programme will accelerate our growth, drive efficiencies and cost savings across the group, ultimately providing better long-term returns for our investors.

Suppliers: The Board has considered how best to support suppliers and by simplifying and clarifying processes and systems, it allows greater ability to support smaller suppliers with shorter payment terms. This in turn supports the Board's commitment to prompt payment.

Outcomes and impact on our long-term success

We believe that JM needs to become simpler, more agile and more cost-effective in order to focus on longer-term, sustainable value growth. The transformation programme will drive stronger execution, unlock near-term cost opportunities and strengthen our capabilities in capital project execution and cross-group commercial synergies.

2

Safeguarding our people and our operations

As part of the Board's deep dives, we reviewed process safety across the group. Process safety relates to the risk of major accidents during processing of hazardous chemicals or substances. Such accidents, typically fires, explosions and toxic releases, have the potential to cause severe harm to people and the environment, both on and off-site. Several actions were identified in the review and an independent third party was engaged to undertake an audit of the process safety management programme and major risk priorities.

Stakeholder considerations

Our people, investors and communities: Our process safety and wider EHS procedures keep our people safe in the workplace. Accidents can have a catastrophic impact on people, the environment and business. Whilst these significant catastrophic events are rare within JM and the wider chemical industry, the Board wanted to ensure that the management system was robust, with leadership driving a strong process safety culture. The audit reviewed our practices against industry best practices enabling us to monitor their implementation across various JM sites.

Outcomes and impact on our long-term success

The independent audit commenced in January 2023 and the results will be reported to the Board. As part of the audit, the third party met with group, business and site leadership, covering various topics agreed by the Board, including protocols, process safety performance indicators and escalation methods to management. Following the completion of the meetings with leadership and the final report to the Board, a detailed action plan will be created to ensure that our process safety is in line with industry best practice.

3

Strategic partnerships that deliver against our milestones

The Board approved a long-term strategic partnership with Plug Power to accelerate the green hydrogen economy. This partnership creates a volume and scale for green hydrogen that has not existed until now. It brings together one of the largest green hydrogen and fuel cells companies in the world with our technology and manufacturing capabilities.

Stakeholder considerations

Our people: Plug Power and JM will co-invest in what is expected to be the largest catalyst coated membranes (CCMs) manufacturing facility in the world. The facility will be built in the US and is likely to begin production in 2025. To support this, we are already increasing our manufacturing capability in the UK through a new 3GW gigafactory in Royston, UK. As part of this project and the scale-up of our manufacturing capabilities, there will inevitably be new opportunities created for our people to transfer to different roles as we refocus and redirect the group to support our strategic ambitions.

Investors: Our long-term partnership with Plug Power is a key deliverable in our strategic growth plan for our Hydrogen Technologies business. This partnership confirms our world-class position in catalyst coated membranes, the key performance-defining components of electrolyzers and fuel cells. It further emphasises the key role we have to play in the green hydrogen economy. The Board considered that this partnership would positively contribute to investors' long-term returns.

Customers and innovation partners: JM will become an important strategic supplier of MEA components, providing a substantial portion of Plug's demand for catalysts, membranes, and catalyst coated membranes. This is an incredibly important validation of our technology and our ability to deliver for our customers as we support the rapid scale-up of key raw material value chains by contributing expertise in sourcing, managing and recycling PGMs.

Governments and trade associations: A £400 million government-backed loan (unrelated to the Plug Power partnership) was granted to JM in April 2022. The long-term strategic plan for JM's hydrogen products will further help to deliver the UK government's Ten Point Plan for a green industrial revolution, to help develop global solutions to the climate crisis.

Communities: This partnership will contribute significantly towards our 2030 target for 50 million tonnes of greenhouse gas emissions avoided per year. It will also help Plug Power meet its strategic ambitions, and therefore will help its customers – including Amazon, Carrefour, Walmart and BMW – to meet their business goals, helping to decarbonise the economy.

Outcomes and impact on our long-term success

The partnership enables each company to leverage its specific areas of expertise, working together to accelerate its growth. It also delivers on a key strategic milestone for partnerships for Hydrogen Technologies and materially accelerates our ambition to be a leading provider of CCMs globally.

The partnership will support Plug Power in delivering its targeted revenue of US$5 billion and US$20 billion by 2026 and 2030 respectively. To help achieve these targets, Plug Power and JM will co-invest in what is expected to be the largest (5GW scaling to 10GW over time) CCMs manufacturing facility in the world. Plug Power and JM will also continue to leverage government incentives where possible, including from the Inflation Reduction Act in the US and REPowerEU in Europe to push for exponential growth across the hydrogen industry.

4

Investing in our future and securing our leadership position

We are investing for growth and generating attractive returns. As part of our plans to invest £1.1 billion in capital expenditure from 2022/23 to 2024/25, the Board approved several investments to expand and improve our existing infrastructure in a number of our businesses.

The Board approved a gigafactory to scale up the manufacture of hydrogen fuel cell components. The gigafactory will initially be capable of manufacturing 3GW of proton exchange membrane components annually for hydrogen vehicles and the project is supported by the UK government through the Automotive Transformation Fund.

In PGMS, our refineries need investment to set them up for decades of profitable operation. This year we continued to invest to maintain these assets.

Stakeholder considerations

Our people: Old equipment, challenging conditions and increasingly unreliable assets posed potential EHS risks and placed a strain on our operations, engineering and maintenance teams. We considered the potential benefits to our people, and the invaluable impact replacing the existing metals refinery would have on the working environment and safety.

In addition, we considered the positive impacts of scaling up our operations in Hydrogen Technologies and the role it would play in securing hundreds of highly skilled manufacturing jobs in the UK.

Investors and customers: The scale-up of manufacturing for hydrogen fuel cell components will position Johnson Matthey to be a market leader in performance components for fuel cells and electrolysers, driving long-term value creation for our investors and the improvement of the electric vehicle supply chain for our customers.

The age of the existing refinery and machinery could cause regular issues and delays in refining customer metal, resulting in longer lead times and working capital constraints. The new refinery will increase refining capacity, reduce working capital, and therefore create new commercial opportunities for us. It will bring innovation to our refining processes, including more automation and control systems to optimise the way in which the plant is run and drives circularity for our customers.

Community and society: Decarbonising freight transformation is critical to help societies and industries meet their ambitious net zero emission targets. Our investment into fuel cells will be a crucial part of this transition.

The 3CR project will have significant environmental and social benefits over the existing refinery. It will future-proof the plant against potential tightening of legislation around platinum salts sensitisation through engineering-based controls and containment. 3CR will also deliver energy efficiency and sustainability improvements, including the reduction of hazardous waste, moving us towards our 2030 targets including Scope 1 + 2 emissions.

Outcomes and impact on our long-term success

The scale-up of manufacturing for hydrogen fuel cell components positions us as a market leader in performance components for fuel cells and electrolysers, targeting more than £200 million sales in Hydrogen Technologies by the end of 2024/25.

The refining business underpins the group, providing a secure and cost-effective source of PGMs to our Clean Air and Hydrogen Technologies businesses, while generating significant operating profit for the group. Further investment in 3CR will enable us to refine in a safe, effective and sustainable manner. The investment mitigates the business continuity risk associated with an older asset and will provide improvements in refining lead times, reductions in energy consumption and volume upsides.

Board and committee effectiveness

Each year, the Board reviews its performance and effectiveness, including that of its committees and individual directors. This helps identify areas for improvement and ensure it is well placed to provide constructive challenge.

We carried out an externally facilitated board effectiveness review in 2021. The 2023 review was facilitated internally and led by the Chair, with support from the General Counsel and Company Secretary. The review involved a questionnaire seeking input on a range of topics including leadership, strategy, dynamics and culture. Compiled by Independent Audit Limited, a specialist corporate governance consultancy, the questionnaire was circulated to all board members, certain external advisers and a number of senior leaders who regularly present to us. Obtaining feedback from a wide range of stakeholders provides a more diverse perspective on the performance of the Board. The Chair discussed themes emerging from the questionnaire findings and individual performance with each board member. The results of the review were compiled by Independent Audit Limited, who produced a report for review by the Chair and the General Counsel and Company Secretary.

Outcome

The results of the self-assessment questionnaire indicate that the Board continues to perform well. There is a high degree of openness and trust between board members with a good level of debate. There was recognition of the Remuneration Committee's work on communication, including externally, and the Audit Committee's relationship with the external auditor was praised. The review highlighted the importance of having oversight of culture and ensuring that cyber risk remains an area of focus.

The tables below provides an update on the progress made on the actions from our 2021/22 review and the actions agreed as part of the 2022/23 review:

2021/22 Action	2021/22 progress and insight
• Consider the output of the strategic review on the Board's processes, including agenda planning and the skills of the Board members	• Board agendas have been refined to give more time to business updates, in order to update the Board on progress of our strategic milestones • The Nomination Committee reviewed the board skills matrix and agreed this remained appropriate in light of the company's refreshed strategy • The Board approved a new delegated authorities framework to support more efficient decisions and to empower management
• Review how culture is monitored in order to drive our strategy	• This action was deferred as we communicated our strategy to our people and engaged with our senior leaders on the values and behaviours needed to transform our business
• Review the principal risks and their prioritisation in light of the strategic review to continue to embed risk management across JM	• The principal risks were reviewed and revised by the Board to ensure they aligned to our strategy
• Clarify the roles and responsibilities of the Board committees with a particular focus on climate-related issues	• During 2022, a workshop including the Chief Financial Officer, Audit Committee Chair, Chief Sustainability Officer and Director of Risk and Assurance was held and the roles and responsibilities of each committee were clarified. The changes were incorporated in the respective committee terms of reference
• Create a greater focus on executive succession planning through the Nomination Committee	• At its meeting in November 2022, the Nomination Committee undertook a detailed review of executive succession plans. This included a discussion of individuals who were "ready now" as well as potential successors in the medium and longer term

Action 2022/23	Responsibility
Review and discuss how cyber risk is managed and mitigated across the group	Stephen Oxley
Discuss the approach to culture and agree the methodology of reviewing progress (deferred from 2021/22)	Liam Condon
Secure more opportunities for board members to meet members of the senior leadership teams outside of formal board meetings	Nick Cooper

Review of the Chair's performance

Led by John O'Higgins, the Senior Independent Director, the non-executive directors met without Patrick Thomas to discuss his performance as Chair. They considered he continues to provide robust leadership for the Board and facilitates open and constructive debate.

Societal Value Committee report

"Our sustainability targets and goals are focused on the areas where we can make a real difference."

Membership

The Committee comprises all members of the Board.

Members' attendance at committee meetings during the year is on page 75

Regular attendees at committee meetings

- Chief Sustainability Officer
- Chief HR Officer
- General Counsel and Company Secretary
- Group Sustainability Director
- Group Head of Ethics and Compliance
- Corporate Affairs Director

The Committee's Terms of Reference set out its full responsibilities
matthey.com/governance-framework

Sustainability disclosures

The Committee reviewed and recommended to the Board the approval of the disclosures in the Sustainability report on pages 20 to 44, including our TCFD disclosures on pages 45 to 52.

Sustainability Performance Data Book: matthey.com/sustainability-databook

Established in 2021, the Societal Value Committee supports the Board by providing oversight, challenge and rigour to our sustainability strategy, diversity and inclusion agenda and ethical conduct. Following the Company's strategic review, the Committee spent time discussing Johnson Matthey's vision for sustainability and its importance in everything we do. Since her appointment as our first Chief Sustainability Officer in May 2022, Anne Chassagnette has worked closely with the Committee. Her in-depth experience in leading sustainable transitions has been a great resource for our discussions.

We ensure our sustainability goals and targets are focused on the areas where JM can have the greatest positive impact on society. Having updated our materiality assessment and in light of our refreshed strategy, the Committee recommended our 2030 goals be reorganised under two pillars, 'Planet' and 'People' and focus on ten public targets.

As part of our ongoing review and monitoring of climate impacts, we approved a raised climate ambition to put us firmly on SBTi's .5˚C pathway to net zero for 2029/30. This commits us to reducing Scope 1+2 and Scope 3 emissions by 42% by 2030, compared to 2019/20 levels.

Creating and embedding a sustainable culture across all areas of JM is hugely important. Diversity, inclusion and belonging is key to executing our strategy, leading to more innovation, high-performing teams and helping us attract and retain talent. During the year we reviewed progress and provided feedback on the roadmap to achieve our diversity and inclusion goals. We approved a standalone human rights policy, which defines our commitments to, and our expectations from, our colleagues and value chain partners.

At JM we uphold the highest ethical standards in everything we do, underpinned by our value, acting with integrity. The Committee is regularly updated on the plans and actions to embed an ethical culture. We discuss ethical dilemmas that arise and are briefed on notable ethics and compliance trends. The ethical dilemmas review actual JM fact patterns and provide recent examples of how we live by our values. We confront geopolitical and ethical issues involving sanctions and export controls on the world stage. This includes specific commercial opportunities where we have chosen to walk away, because they did not comply with our business ethics.

The world is changing rapidly and as a committee, we need to consider different external perspectives, trends and the industry landscape. Through presentations and discussions with both internal and external experts, the Committee is kept informed of new developments and best practice in relevant areas under the societal value remit. During the year, we deepened relationships with external associations and think tanks, committed to advancing sustainable business priorities through presentations and discussions on global human rights, the EU plan for hydrogen and the impact of the US Inflation Reduction Act.

The Committee has been impressed with progress made this year on embedding the sustainability strategy, driving the diversity and inclusion agenda, and ensuring high standards of ethical conduct.

Our internal committee effectiveness review showed that the Committee continues to operate effectively and has become more embedded into our governance framework.

Jane Griffiths
Societal Value Committee Chair

The Committee's role

Societal value covers a range of economic, social and environmental topics. Given the central role of sustainability to our overall strategy, the Committee was established to bring continued focus to this area. The Committee assists the Board in overseeing the group sustainability strategy, including net zero commitments and science-based greenhouse gas targets; driving a truly inclusive organisation; overseeing the group's ethical conduct; and keeping up to date with societal value topics, including stakeholder expectations.

More information on the governance of sustainability matters beyond the Committee can be found within our TCFD disclosures

How we delivered on our responsibilities

Sustainability	Climate change	Diversity and inclusion	Ethics and compliance
What we did			
• Oversaw plans and actions to execute the group sustainability strategy including 10 roadmaps to deliver on our 2030 target • Discussed the results of an update to our third-party materiality assessment, validated our sustainability framework and refocused our 2030 targets • Challenged sustainability performance data • Reviewed the approach to communication on sustainability • Reviewed the proposed approach on advocacy, including links with external organisations (e.g. trade associations) • Received regular horizon scanning updates, competitor analysis and ESG benchmarking	• Challenged and validated increasing our ambition for GHG emission reductions onto SBTi's 1.5˚C pathway to net zero • Reviewed our strategy's product portfolio alignment with our company purpose of catalysing the net zero transition and estimated GHG emissions avoided by our product sales by 2030 • Agreed the application of internal carbon pricing for capital decisions • Received updates on hydrogen geopolitics and legislative developments	• Reviewed our diversity and inclusion gender target for 2030 and actions to support its achievement • Discussed the approach to employee engagement and areas for immediate focus	• Reviewed actions to continue promoting our ethical culture • Received updates on Speak Up themes and trends • Discussed real examples of ethical dilemmas and how they were managed including actions on responsible sourcing • Received an external presentation on global human rights and legislative developments
Outcomes			
• Agreed the realignment of our sustainability goals to our strategy and recommended to the Board that our public targets for 2023 be refocused to 10 targets • Agreed our new communications and advocacy approaches on sustainability • Agreed and recommended to the Remuneration Committee sustainability targets for 2023 and the next three years for incorporation into our Performance Share Plan. • Reviewed and recommended that the Board approve the sustainability section of the Annual Report	• Confirmed support for our updated 2030 climate ambition in line with SBTi Net Zero Standard • Reviewed and recommended that the Board approve the TCFD report • Recommended GHG emissions targets be included within the Executive Directors' Long-Term Incentive Share plan	• Challenged management on our diversity and inclusion target and provided feedback on ways to improve diversity, inclusion and belonging	• Reviewed and recommended that the Board approve the Modern Slavery Statement and Conflict Minerals Disclosure • Approved a standalone Human Rights Policy

Nomination Committee report

"We are committed to ensuring we have the right leaders to execute our strategy."

Membership

The Committee comprises the Chair and all independent non-executive directors.

Members' attendance at committee meetings during the year is on page 75

Regular attendees at committee meetings

- Chief Executive Officer
- Chief HR Officer

The Committee's Terms of Reference set out its full responsibilities
matthey.com/governance-framework

As we deliver our strategy and simplify our structure, the Committee has focused on the composition of the Board and the collective skills needed to oversee this transformation. We strengthened the Board's composition with the appointment of Barbara Jeremiah as an independent Non-Executive Director.

Having been a member of the Board for eight years, and chaired the Remuneration Committee for the last six, Chris Mottershead will retire from the Board in January 2024. The Committee has recommended, and the Board has approved the appointment of John O'Higgins as the new Chair of the Remuneration Committee, with effect from our 2023 AGM.

At the beginning of the year, the Committee oversaw several new appointments to the GLT, and changes to responsibilities of existing members, which were reported on in the 2022 Annual Report and Accounts.

Following this period of executive change, the Committee's activities in 2022/23 turned to executive succession. We need to ensure we have the right leaders, both now and in the future, to drive performance for the group's long-term success. As part of these discussions, the Committee also recommended the promotion and appointment of Simon Price as General Counsel and Company Secretary, with effect from 7th June 2023, succeeding Nick Cooper. Nick will remain a member of the GLT and take on a new role as Global Business Services Director.

In all the Committee's decisions, we place great importance on diversity, inclusion and belonging. Our board and committee effectiveness review confirmed that our discussions are open and honest, with an atmosphere of trust. As a board, we must continue to make sure everyone is welcomed and able to be themselves across all areas of JM.

Patrick Thomas
Nomination Committee Chair

How we delivered on our responsibilities

	Board composition	Tenure of directors	Election of directors	Succession planning and senior leadership appointments	Talent management framework	Diversity and inclusion	Performance and effectiveness review
What we did	• Discussed and recommended proposed appointments to the Board and its committees	• Discussed and reviewed the tenure of directors	• Evaluated the performance of individual board members, their contributions to the Board, tenure and time commitment	• Reviewed the succession plans for the most senior roles and ensured plans were in place to meet future succession needs	• Reviewed and discussed the approach to talent and leadership development plans for the GLT and senior leaders	• Reviewed the directors' skills, experience and diversity through self-assessment, to identify areas for development • Reviewed our Board Diversity Policy	• Considered the outcomes of the internal effectiveness review with regard to board composition, talent management and succession planning
Outcomes	• Approved the appointment of Barbara Jeremiah as an independent Non-Executive Director from 1st July 2023 and Senior Independent Director from 20th July 2023 • Approved the appointment of John O'Higgins as Chair of our Remuneration Committee from 20th July 2023 • Approved the appointment of Simon Price as General Counsel and Company Secretary from 7th June 2023	• Recommended the re-appointment of Doug Webb and Jane Griffiths for a further three-year term, subject to annual re-election by shareholders	• Recommended that the Chair and all directors are elected or re-elected at the 2023 AGM	• Oversaw the appointments of Anne Chassagnette, Anish Taneja, Mark Wilson and Simon Price as members of the GLT	• Non-executive directors challenged and provided feedback on the key activities to strengthen the talent pipeline	• Identified areas for development to ensure the directors can drive our strategic priorities • Agreed an updated Board Diversity Policy reflecting our commitments to maintain a level of 33% of females appointed to the Board and at least one director from an ethnic minority group	• Agreed that the board skills matrix remained appropriate in light of our refreshed strategy • Agreed to review the approach to executive succession planning

Succession planning

The Committee ensures we are led by a diverse, high-quality board, with the appropriate skills, knowledge and experience to support the group's strategic priorities. This includes overseeing succession plans for all board roles. In accordance with the Code, the Committee monitors the tenure of JM's non-executive directors against the recommended nine-year term to ensure an orderly succession. The tenures of our non-executive directors, Senior Independent Director and the Chair are on page 75.

Non-Executive

By January 2024, Chris Mottershead will have achieved a nine-year tenure on the Board. In anticipation of his retirement, the Committee discussed the roles and responsibilities of the board members.

Having reviewed the skills and expertise of the current board members, we recommended that a further non-executive director be appointed to the Board as Senior Independent Director. The Committee sought an individual with strong leadership experience, experience of delivering transformation programmes and an understanding of the US commercial market. Egon Zehnder, a third-party search and recruitment specialist, assisted with the search. Following evaluation of the final short list of candidates, the Committee recommended Barbara Jeremiah's appointment. It was felt that Barbara's understanding of metals, along with her investor experience, would enhance the Board's deliberations.

Executive

The Committee also oversees succession planning for senior leadership roles and talent development to build capability for the future. Our senior leaders are a source of future GLT and board talent, with some of our most recent GLT appointments progressing through this route. The Committee reviews, at least annually, the existing formal succession plan against the internal talent pipeline of candidates, for immediate and medium to longer-term movement into key leadership roles. This is routinely challenged to understand the breadth of potential and to balance internal succession planning with the need for external perspectives.

During the year, Egon Zehnder provided senior-level recruitment services, including assessment and people development services. It has no other connection with the Company or any other directors.

Board skills

We regularly assess the Board's collective skillset by asking each non-executive director to identify their strengths, scoring their level of expertise on a scale of one to five. The table on page 75 shows the skills held by our non-executive directors that are most relevant to their role at Johnson Matthey. This assessment helps us identify any gaps that can be addressed through future appointments or additional training.

Board inductions

All new directors receive a tailored induction programme upon joining the Board. The diagram below shows some of the key activities that are undertaken by all new directors.

Briefings on directors' duties	**Pre-reading board and relevant committee papers**	**Introductions to the businesses and leadership teams**	**Financial briefings**
Training on health and safety and compliance topics	**Meeting the external auditor, brokers and company advisers**	**Meeting key customers**	**Visits to our key sites to meet employees**

Diversity and inclusion

The Committee continues to drive the diversity agenda across JM. A diverse and inclusive organisation is fundamental to our vision, and our Board Diversity Policy ensures that the tone is set from the top.

At the beginning of the year, the Committee reviewed our Board Diversity Policy and refreshed its objectives to maintain:

- 33% female representation on the Board
- One director from an ethnic minority group.

Throughout the year and as of 31st March 2023, these targets were successfully met. Details of gender and ethnic representation as prescribed by Listing Rule 9.8.6 are set out in the tables on this page. The Board and GLT members confirmed their gender and ethnicity for the purpose of collecting this data.

Board Diversity Policy: matthey.com/board-diversity

As at 31st March 2023, the Board does not fully comply with the new board diversity targets set by the FCA for at least 40% of individuals on the board to be women, and for one of the senior board positions (Chair, Chief Executive Officer, Senior Independent Director or Chief Financial Officer) to be held by a woman. Following the appointment of Barbara as Non-Executive Director on 1st July 2023 and her appointment as Senior Independent Director from 20th July 2023, female representation on the Board will meet the FCA targets and exceed those set out in our current Board Diversity Policy.

We are pleased that the Board's composition meets the FCA's ethnicity target to have one member of the board from a minority ethnic group. The Committee intends to review the Board Diversity Policy in 2023/24 and will set new targets.

All of our non-executive directors are members of each committee, which provides the most diverse perspective and assists our decision making in these forums.

The Board also supports the terms of the Enhanced Voluntary Code of Conduct for executive search firms. All our appointed executive search firms are required to secure a diverse longlist of candidates, including Black, Asian and Minority Ethnic talent.

Beyond the Board, we aspire to have gender balance across all levels of the group. One of our key milestones is to achieve greater than 40% of female representation across professional management by 2030. While gender diversity has improved, we want to accelerate the pace of change. Further details on how we are improving gender diversity across the group, the gender balance of senior management and our Diversity, Inclusion and Belonging Policy are set out on pages 36 to 37.

Gender representation as at 31st March 2023

	Number of board members	% of the Board	Number of senior board positions (CEO, CFO, SID, Chair)	Number in executive management	% of executive management
Men	6	67	4	9	75
Women	3	33	0	3	25
Other categories	0	0	0	0	0
Not specified / prefer not to disclose	0	0	0	0	0

Ethnic representation as at 31st March 2023

	Number of board members	% of the Board	Number of senior board positions (CEO, CFO, SID, Chair)	Number in executive management	% of executive management
White British or other White (including minority-white groups)	8	89	4	10	84
Mixed/Multiple Ethnic Groups	0	0	0	1	8
Asian/Asian British	1	11	0	1	8
Black/African/ Caribbean/ Black British	0	0	0	0	0
Other ethnic group, including Arab	0	0	0	0	0
Not specified/ prefer not to say	0	0	0	0	0

Audit Committee report

"The Committee's work provides a focus to ensure robust controls support the execution of our group strategy"

Membership

The Audit Committee comprises all independent non-executive directors. Doug Webb, our Committee Chair, is a chartered accountant who brings a wealth of recent and relevant financial experience, including acting as Chief Financial Officer at the London Stock Exchange Group, QinetiQ and Meggitt.

Members' attendance at committee meetings during the year is on page 75.

Other regular attendees at committee meetings

- Chair of the Board
- Chief Executive Officer
- Chief Financial Officer
- General Counsel and Company Secretary
- Group Assurance and Risk Director
- Director of Group Finance
- PwC Audit Partner

The Committee's Terms of Reference set out its full responsibilities.
matthey.com/governance-framework

The Audit Committee forms a critical part of the overall framework of corporate governance for JM. We are responsible for overseeing the financial reporting, internal financial controls, internal control and risk management systems, and maintaining an appropriate relationship with the external auditors.

The Committee supports the Board by obtaining assurances that controls are working as designed and by challenging those assurances. We receive and consider reports from management on the effectiveness of the systems that have been established, to ensure that both JM's management and PwC, our external auditor, are appropriately challenged and held to account. Management and PwC have again worked hard during 2022/23 to maintain the ongoing integrity of our financial reporting, and I have continued to hold regular dialogue with management, the Group Assurance and Risk Director, and PwC.

The last three years have seen Covid-19, the Russia/Ukraine conflict and other issues cause political and economic turmoil. This has put significant pressure on the risk environment and companies' financial reporting processes. Accordingly, we have continued to focus on financial reporting and related internal control risks as well as ensuring the company maintains a strong performance on ethics, compliance and audit quality.

The focus of assurance activities during the year has been post Covid-19 controls' culture across the group's locations and key strategic and emerging risks. In this context, a comprehensive improvement programme across JM's financial and operational controls, including raising awareness and simplifying requirements, has been established and is sponsored by the Group's Chief Financial Officer. Within Group Assurance and Risk (GAR) a new form of site extended audit covers several core processes based on an assessment of risk, to provide assurance on the control environment and framework at site level. These typically cover design and effectiveness of operating controls, including Internal Controls for Financial Reporting (ICFR), metal controls, procurement, ethics and compliance, business continuity planning, security, and technology controls. It has been important to validate these controls following the return to site post Covid-19 pandemic and to respond to new risks occurring at unprecedented speeds and various pressures on our entities. These audits also provide insight on the culture found at the site.

Flexibility of our assurance plans has proven helpful during the year, especially in the context of emerging risks in the fast-moving external environment. The GAR team has been providing live assurance as part of various business-led task forces, such as JM's energy resilience in response to the conflict in the Ukraine. Specific focus has been dedicated to our sustainability agenda, an area of increasing importance from an assurance perspective. Our internal audit activity has been focused on driving improvements in quality of the data and management reviews.

During the year, we looked at the anticipated impact and readiness of our internal controls financial reporting framework and fraud risk management programme. We examined these factors in relation to the recommendations of the Department for Business, Energy and Industrial Strategy (BEIS) white paper on restoring trust in audit and corporate governance.

The position paper issued by the Financial Reporting Council (FRC) in July 2022 proposed that the revised UK Corporate Governance Code will apply on or after 1st January 2024. For us this will apply to the financial year ending 31st March 2025. With ongoing work to strengthen our internal control environment and address additional reporting requirements, we concluded that existing procedures, our in-progress work on controls and other areas of change, would meet evolving corporate governance requirements. We await additional clarification on some requirements, and these are subject to ongoing monitoring by group and business management.

To address the anticipated changes, the outcome of our review on the key changes and impact for JM is as follows:

- Statement on internal controls – substantial work has been carried out over recent years to improve JM's overall control environment and provide sufficient evidence that controls are operating effectively, using JMProtect, our integrated governance, risk and compliance platform
- Resilience Statement – updated requirements are expected to be substantially covered by work already performed to support the existing disclosures in the Viability Statement on page 70
- Dividends and capital maintenance – existing disclosures will be reviewed once guidance is available from the FRC
- Audit and Assurance Policy (AAP) – the Committee approved an internal policy drafted by the GAR team, with cross-functional support. Committee reviews began at the end of 2022 and take account of guidance from the FRC
- Fraud Statement – an assessment of fraud risks, current detection, and prevention mechanisms, reporting and documentation of associated controls was completed in 2022. Fraud training for JM's extended finance community began in 2022. A regular governance mechanism was established via monthly Governance, Risk and Compliance (GRC) committee meetings. A fraud risk policy will be incorporated into the AAP, and fully integrated into JMProtect.

The Committee also reviewed the key changes and impact for JM of the new requirements for auditors and the regulator. We will assess this area in more detail once the FRC issues more guidance.

In 2022, the group refreshed its sustainability goals and 2030 targets. ESG data in annual reports is coming under increasing scrutiny as the investor community relies on it to evaluate the value proposition of listed companies. We are conscious of the need for transparency, accuracy and the avoidance of overstating our performance in these measures. We reviewed the group's processes for ESG data management and independent assurance for the Task Force for Climate-related Financial Disclosures (TCFD). The Committee also reviewed a final report of JM's 2022 sustainability audit, carried out by our internal audit team. The purpose was to understand and review the processes for generating data for the products and services sustainability targets and metrics, and to assess the efficiency and effectiveness of any second line review controls. During the year, the Committee reviewed our Climate-related Assurance Plan for 2023. A workshop was held with management, internal audit and myself to define our longer term assurance expectation over its sustainability data, the output of which was reported to the Committee. This resulted in a sustainability assurance framework, and also clarified the roles and responsibilities of each of the Audit Committee and the Societal Value Committee (SVC). The SVC oversees the delivery of our sustainability strategy and determines the related KPI's to be reported, and the Audit Committee is responsible for the quality of the data in the sustainability reporting.

The FRC's Audit Quality Review (AQR) report, following inspection of PwC's 2022 audit of JM, was completed in early January 2023 and the Committee reviewed the detailed findings. Following receipt of the report, we discussed the findings with PwC, none of which were considered significant. Recommendations have been built into ongoing processes and the Committee was satisfied with the external auditor's commitment to audit quality, the robust and professional working relationship with management, and demonstration of strong technical knowledge. The Committee considered whether the report gave us any concern about the quality of the 2022 audit and associated report, and we concluded that it did not.

I am pleased that our internal committee effectiveness review this year confirmed that the Committee continues to operate well and remains informed of relevant changes and developments in the external audit market. We have identified areas for further improvement, including focusing on reviewing our fitness for purpose and approach; the effectiveness and impact of the overall risk management framework and activity; and focusing on the future development and effectiveness of the internal audit function.

Doug Webb
Audit Committee Chair

How we delivered on our responsibilities

Our responsibility	What we did	Outcomes
Published financial information		
Monitoring the integrity of the reported financial information and reviewing significant financial considerations and judgements.	• Reviewed, discussed and challenged management's reports on the group's full-year results and half-year results, and considered the significant accounting policies, principal estimates and accounting judgements used in their preparation. • Reviewed the matters, assumptions and sensitivities in support of preparing the accounts on a going concern basis and assessed the long-term viability of the group. • Considered the impact of scenario testing on financial disclosures in relation to TCFD. • Reviewed the financial reporting framework of the Company's financial statements. • Assessed the process management used to support the Board when giving its assurance that the 2023 Annual Report and Accounts, taken as a whole, is fair, balanced and understandable (FBU). • Reviewed reports from the General Counsel and Company Secretary on group litigation and disputes. • Reviewed reports on credit controls and credit risks. • Approved the Audit Committee report within the 2023 Annual Report and Accounts. • Reviewed elements of the 2023 Annual Report and Accounts. • Reviewed and discussed the results of the Committee's assessment of its effectiveness.	• Recommended the approval of the half-year and full-year results to the Board, following a thorough review, and challenging management assumptions. • Recommended to the Board the going concern and viability statements following an in-depth review and assessment of scenarios with management. • Determined that the FBU process undertaken by management for the Annual Report and Accounts was effective. • Reviewed credit controls and risks in the context of continuous challenging market conditions. • Discussed the outcome of an internal evaluation and concluded that the Committee continued to be effective. • Recommended to the Board the approval of elements of the 2023 Annual Report and Accounts.
Risk management and internal control		
Reviewing the group's internal financial controls and its risk management systems and monitoring the effectiveness of the group assurance function.	• Received reports from the Group Assurance and Risk Director on group assurance, risk reviews and risk management processes. • Monitored progress against the 2022/23 group assurance and risk plan. • Agreed the 2023/24 group assurance and risk plan. • Considered changes to internal control weaknesses brought to the Committee's attention by PwC. • Reviewed an assessment of the results and further improvements in the overall internal control environment of the internal control self-assessments. • Challenged management to enhance the assurance processes supporting sustainability sections in the Annual Report. • Monitored the effectiveness of the GAR function. • Reviewed precious metal governance. • Carried out a deep-dive into liquidity risk-based methodology. • Received presentations from the security team, and reports on finance and controls from the business finance directors. • Reviewed fraud risk and fraud investigations including those raised via the Speak Up process. • Met the Group Assurance and Risk Director without management present. • Reviewed a summarised appraisal of the group's year-end control environment to assess any control issues identified. • Assessed the anticipated impact of, and JM readiness for, recommendations resulting from the BEIS 'Restoring trust in audit and governance' white paper. • Reviewed our internal AAP. • Reviewed the Committee's Terms of Reference.	• Determined that risk management and internal controls effectively meet the group's needs and manage risk exposure. • Challenged management to resolve any issues relating to internal controls and risk management systems. • Approved the change to the metal liquidity risk methodology in the group's Precious Metals policy. • Continue to monitor emerging regulatory developments and assess applicability of any new guidance to JM. • Agreed with management's determination that there were no significant control weaknesses or lack of adherence to policies and procedures identified. • The Committee made no changes to its terms of reference during the year. • Approved JM's internal AAP. • Approved the Sustainability Assurance Framework.

Our responsibility	What we did	Outcomes
Our external auditor		
Overseeing the relationship with the external auditor, monitoring the external auditors' independence and objectivity, approving its fees, recommending its re-appointment or not, and ensuring it delivers a high-quality effective audit, based on a sound plan.	• Considered reports from PwC including their views on our accounting judgements and control observations. • Monitored the transition to the new lead audit partner to ensure it was effective. • Met PwC without management present. • Considered and reviewed indicators of audit quality. • Assessed PwC's independence and objectivity. • Reviewed the non-audit fees incurred during the year and the non-audit fee policy. • Reviewed the inspection of PwC's audit of our financial statements for the year ended 31st March 2022 and discussed with PwC the actions to be taken in response to the findings. • Oversight of recommendations from PwC's FRC AQR being built into ongoing processes.	• Approved, after due challenge and discussion, PwC's audit plan and fees for 2022/23. • Determined a good-quality, comprehensive audit was completed, following a review of PwC's regular reports to the Committee, the outcome of PwC's FRC AQR, and feedback from the Independent Quality Review Partner. • Recommended the re-appointment of PwC as auditor. • Approved the non-audit fee policy.

Financial reporting

Significant issues considered by the committee in relation to the group's and company's accounts

It is a fundamental part of the committee's role that we act independently from management to ensure that the interests of shareholders are properly protected in relation to financial reporting. When the accounts are being prepared, there are areas where management exercises a particular judgement or degree of estimation. The committee assesses whether the judgements and estimates made by management are reasonable and appropriate. In the process of applying the group's accounting policies, management also makes judgements and estimates that have a significant effect on the amounts recognised in the financial statements. The group's key accounting judgements discussed and challenged by the Audit Committee are set out below.

Significant current year considerations in relation to the accounts	Work undertaken / outcome
Major impairment and restructuring activities Key judgements in relation to impairment testing relate primarily to estimates in assessing recoverable value. Key judgements in relation to restructuring provisions related to estimates of future cost.	We received a report from management which explains the basis of recognition and estimate for impairments and restructuring costs. The report also detailed how transformation-related costs were reconciled back to previously announced transformation programmes. We challenged the rationale behind the presentation of the costs as non-underlying, with particular focus on areas that required judgement around recognition. We concluded that management has appropriately accounted for and disclosed the impacts from major impairment and restructuring activities (see note 6 in the annual report).

Significant current year considerations in relation to the accounts	Work undertaken/outcome
Gains and losses on significant legal proceedings Significant progress was made during the year with the settlement of legal proceedings requiring accounting consideration.	We received a report from management which summarised the outcomes and accounting implications for legal proceedings, one of which was settled in the year at a loss of £25 million. The report also detailed the nature of other key legal provisions. We agreed with management's rationale behind the presentation of the loss as non-underlying.
Profit on disposal of businesses and businesses classified as "held for sale". Key judgements in relation to assessing the fair value less costs to sell of businesses classified as "held for sale".	We reviewed and discussed the accounting for the following disposals: On 1st June 2022, the group completed the sale of its Health business for a consideration of £325 million. On 26th May 2022, the group completed the sale of part of its Battery Materials UK business for a consideration of £20 million. On 1st November 2022, the group completed the sale of its Battery Materials Canada business for a cash consideration of £12 million. On 31st January 2023, the group completed the sale of its Piezo Products business for a consideration of £18 million. We concluded that management's key assumptions and disclosures on the profit on disposal of businesses above were reasonable and appropriate. We also considered the assessment in arriving at the fair value of the Diagnostics Services (Tracerco), Battery Materials Germany and Poland businesses and noted that classifications as "held for sale" were appropriate.
Impairment of goodwill, other intangibles and other assets Key judgements are made in determining the appropriate level of cash generating unit (CGU) for the group's impairment analysis. Key estimates are made in relation to the assumptions used in calculating discounted cash flow projections to value the CGUs containing goodwill, to value other intangible assets not yet being amortised, and to value other assets when there are indications that they may be impaired. The key assumptions are management's estimates of budgets and plans for how the relevant businesses will develop or how the relevant assets will be used in the future, as well as discount rates and long-term average growth rates for each CGU.	We reviewed a report from management explaining the methodology used, assumptions made and significant changes from those used in prior years. In light of the current volatile macroeconomic environment, including high inflation, interest rates and increased energy costs, management considered impact within underlying forecasts and discount rates. We challenged management on the rationale behind the key assumptions and sensitivities such as discount rates and growth rates in the goodwill value in use calculations, especially within Clean Air and Catalyst Technologies to ensure we were satisfied on their reasonableness. The impairment reviews were an area of focus for PwC who reported their findings to us. We concluded that management's key assumptions and disclosures are reasonable and appropriate.

Significant current year considerations in relation to the accounts	Work undertaken/outcome
Refining process and stock takes When agreeing commercial terms with customers and establishing process loss provisions, key estimates are made of the amount of precious metal that may be lost during the refining and fabrication processes. Refining stocktakes involve key estimates regarding the volumes of precious metal-bearing material in the refining system and the subsequent sampling and assaying to assess the precious metal content.	We received a report from management which summarises the results of the material refinery stock takes. The report was reviewed to ensure that the results were in line with expectations and historic trends. The refining process and stock takes were an area of focus for PwC who reported their findings to us. We concluded that management's accounting for refining stock take gains and losses was in accordance with the agreed methodology.
Post-employment benefits Key estimates are made in relation to the assumptions used to value post-employment benefit obligations, including the discount rate and inflation. The key assumptions are based on recommendations from independent qualified actuaries.	We received a report from management which summarises the key assumptions used to value the liabilities of the main post-employment benefit plans. The assumptions were compared with those made by other companies and PwC's assessment of the reasonableness of the assumptions was considered. We concluded that the assumptions used, and accounting treatment, are appropriate for the group's post-employment benefit plans.
Tax provisions Key estimates are made in determining the tax charge in the accounts where the precise impact of tax laws and regulations is unclear.	We received a report from management which explains the issues in dispute, or at risk of this, with tax authorities across the business, the calculation of tax provisions and relevant disclosures. We also considered the sensitivities around the provisions and debated the circumstances in arriving at the key provisions. Tax provisioning was an area of focus for PwC who reported their findings to us. We concluded that management's key assumptions and disclosures are reasonable and appropriate.
Climate change Key estimates are made in relation to climate change and the impact on the going concern period and viability of the period over the next three years. Additionally, the potential impact of climate on the financial statements including forecasts of cash flows used in impairment assessments, recoverability of deferred tax assets and expected lives of fixed assets and their exposure to the physical risk posed by climate change.	We received a report from management which summarises the potential impacts of climate change to the business. This was based on a Zurich insurers report commissioned in 2021/22. Management has considered the impact of climate change in their goodwill impairment calculations and going concern/viability forecasts. We concluded that management's key assumptions and disclosures are reasonable and appropriate. We also received a report outlining how TCFD considerations are factored into the financial statements.
Provisions and contingent liabilities (judgement) Key estimates are made in determining provisions in the accounts for disputes and claims which arise from time to time in the ordinary course of business. Key judgements are made in determining appropriate disclosures in respect of contingent liabilities.	We received a report from management which provides information in respect of disputes and claims and identifies the accounting and disclosure implications which were challenged and discussed. The report included an assessment of a claim from the purchaser of the Health business. This was supported by the group's advisors whom we also discussed the matter with. We concurred with management's conclusions regarding provisioning and contingent liability disclosures.

Going concern and viability statement

We reviewed the matters, assumptions and sensitivities being used to assess both the going concern basis and the long-term viability of the group. This included assessing risks that would threaten our business model, current funding position as well as different stress scenarios and mitigating actions. Further details on our going concern and viability, and the scenarios considered, are on page 70.

Following our review and recommendation, the Board concluded that Johnson Matthey is able to continue operating and can meet liabilities over at least three years, which remains the most appropriate timespan.

Fair, balanced and understandable (FBU)

We review and assess management's process to support the Board, so it can give its assurance that the 2023 Annual Report and Accounts, taken as a whole, is FBU and provides the information necessary for shareholders to assess JM's position and performance, business model and strategy.

Management selected three individuals from across the group to form an FBU panel and carry out a detailed review of the Annual Report. To maintain objectivity, the FBU panel members were not involved in drafting the 2023 Annual Report and Accounts, but all were familiar with our strategy and business model. The panel members were also briefed on the role and provided with detailed notes on what to consider during their review. The FBU panel, PwC and Annual Report project team determined whether key messages aligned with the group's position, performance and strategy, and whether the narrative sections and financial statements were consistent.

The FBU panel presented a report to the Board, highlighting the key themes from the review and discussion points. The Disclosure Committee reviewed the verification process dealing with the report's factual content to further support the Board's review.

Risk management and internal control

The Committee reviews the adequacy and effectiveness of control and risk management systems. These controls are a critical component of our governance and assurance framework, and they detail the minimum controls we need to keep our people safe, ensure compliance with our standards and regulations, protect our physical and intellectual assets, and facilitate the accuracy and completeness of financial reporting. During the year, the Committee assessed the effectiveness of these controls, considered the key identified control gaps, and assessed how management planned to address the findings.

The Group Assurance and Risk Director independently assures that our risk management and internal control processes operate effectively. Working closely with leadership and management, she provides regular oversight of risk matters that affect our business, makes recommendations to address key issues, and ensures that any mitigating actions are properly tracked, challenged and reported. During the year, our co-sourcing partnership with Deloitte ensured we had access to additional specialist skills and expertise.

The group's internal controls over financial reporting include policies and procedures designed to ensure the accuracy of our financial statements. JM's control self-assessment and business filing assurance processes provide management with a view of the operation of these controls. The results are presented to the Committee as part of their assessment of the year-end control environment.

The Committee is satisfied that the group's internal financial controls operated effectively throughout the year and up to the date of approval of this report. However, these controls do not provide absolute assurance against material misstatement or loss and are assessed based on materiality and level of activities within the business.

Operation of controls and assurance

There is an ongoing comprehensive improvement programme across JM's financial and operational controls including control self-assessment which replaced our key control questionnaire. While this has led to positive development in our internal controls over financial reporting, we will continue to make improvements in this area.

During the year, we spent time reviewing the control strategy, which focused on several cultural and operational factors to ensure JM's readiness for the enhanced reporting on the operating effectiveness of controls expected to be required from 2024/25. To provide management with independent assurance over the effectiveness of the control self-assessment process, structured, internal controls testing will be introduced from 2024.

Group assurance and risk

The Group Assurance and Risk Director provides regular reports on internal audit reviews, including key findings, actions needed and progress on their implementation. We focus on local, business and executive managers' engagement levels in implementing corrective actions and in strengthening the control framework across all our sites. The focus of assurance activities during the year has been on post Covid-19 controls' culture across the group's locations and key strategic and emerging risks. Establishing site extended audits re-evaluated and re-assessed how our businesses adjusted to the new realities and how the control mindset has been applied across a selection of our sites. It was expected that in this changed landscape, the audits would uncover some weaknesses; however they have also allowed us to see how the businesses have managed the challenges caused by the extraordinary measures implemented during that period. One issue highlighted was the need for further training and awareness around certain controls, systems and simplification of processes. The comprehensive improvement programme across our financial and operational controls, sponsored by the CFO, has been established to raise awareness and simplify the requirements. The GAR team has also undertaken various 'lessons learnt' activities, including for major business decisions and capital investment projects. The recommendations have been captured and are being implemented by the business and transformation office.

We continually review the effectiveness of the GAR function, using inputs including audit reports, management's response to audit actions and discussions over risk exposures. We look at whether the function has adequate standing across the group, is free from management influence or other restrictions and is sufficiently resourced.

An independent external quality assessment (EQA) of the Internal Audit function within GAR was undertaken by EY last year. As a result, the function has worked through the actions agreed to ensure it has become better aligned with the changing shape of the group. This is a continuous activity for the function, underpinned by regular dialogue with management, external auditors, and benchmarking within industry and beyond.

The integrated assurance mapping allows us to have a fuller understanding and visibility of risk coverage in a consistent manner across the organisation. We aim to have a clearly articulated link between levels of assurance and risk appetite across key organisational and strategic risks.

Group assurance and risk annual plan

We review the GAR annual plan to ensure that it reflects challenges and changes to our business. We are confident that it provides the appropriate level of assurance over the group's key risks.

When we reviewed the 2023/24 plan, we specifically considered whether it provided the level of assurance over JM's principal and operational risks and continues to contribute to the improvement in our overall controls culture and maturity of the second line of defence.

The GAR annual plan is based on a risk-based audit universe covering areas of risk across financial and operational functions including IT and transformation activities at group and business levels. We consider a wide range of risks that fall into those areas including level of change and transformation in the group and organisational culture. Close collaboration with the business ensures it adds value to management with pragmatic and manageable action plans. The plan also allows greater flexibility to ensure that the GAR team has capacity to deal with unexpected events.

We believe our 2023/24 assurance plans are adequate for JM's size and nature. It is our opinion they will continue to provide the group with necessary focus on maturing controls culture across business and IT processes. The quality and standing of GAR function is appropriate to provide necessary challenge and support to the transforming organisation.

Risk management

We work with the Board to review and refine the risk assurance processes – including the integrated assurance framework and control self-assessment. We concentrate on reviewing the mitigating controls and the levels of assurance, while the Board is directly responsible for managing risks and establishing levels of risk appetite for the group's principal risks.

The GAR function carries out any additional assurance and reports back to the Committee.

Speak Up process

Every year, we review our Speak Up whistleblowing process to ensure procedures are proportionate and independent. We reviewed the process and agreed that the procedures allow proportionate and independent investigation and appropriate effective follow-up action. We report the findings of this review to the Board as appropriate. The Societal Value Committee reviews the outcomes of significant investigations and remedial actions.

More information on Speak Up can be found on page 42

External auditor

Auditor independence is an essential part of our audit framework and the assurance it provides. We confirm ongoing compliance with the Competition and Markets Authority's Statutory Audit Services Order.

Tenure

Our shareholders appointed PwC as the group's external auditor in July 2018, following a formal tender process. This is the fifth year that PwC has audited the group, with Graham Parsons as current lead audit partner. We have no immediate plans to retender the auditor; however we anticipate that it would be carried out to coincide with when Graham Parsons is required to rotate off after the 2027 audit, in accordance with the current regulation that requires a tender every ten years. The proposed tender date is in the best interests of shareholders and the Company as PwC has a detailed knowledge of our business, an understanding of our industry, and continues to demonstrate that it has the necessary expertise and capability to undertake the audit.

External audit plan

In developing the external audit plan for 2023, PwC carried out a risk assessment to identify potential risks of material misstatement in the financial statements. This risk assessment considered the nature, magnitude and likelihood of each identified risk, together with relevant controls, to identify audit risks. Graham Parsons reviewed the plan with a fresh perspective on the risk assessment. PwC refer to key audit matters in the independent auditors' report on pages 133 to 143, which formed the basis of the external audit plan.

In determining the scope of coverage, PwC considered management reporting, the group's legal entity structure, the 2022 financial results and the financial forecast for 2023. PwC set out details of the coverage and the agreed scope in the independent auditors' report on page 133. The methodology of assessing materiality was consistent with the prior year and agreed at approximately 5% of the three-year average profit before tax adjusted for loss on business disposals, loss on significant legal proceedings, major impairment and restructuring charges.

Following discussion and challenge, we concluded the proposed external audit plan was sufficiently comprehensive for the audit of the group's accounts and approved the proposed fee.

How we review PwC's performance

Throughout the year, we review the ongoing effectiveness and quality of PwC and the audit process. We look at several factors: the auditors' reports to the Committee; Graham Parsons and the PwC team's performance in and outside committee meetings; how the PwC team interacts with and challenges management; and on PwC's efforts at building relationships with our Internal Audit team. We ensure that we spend sufficient time with the auditors without management present as part of our assessment.

We considered how PwC challenged management's judgements and assumptions on matters highlighted on pages 98 and 99, and asked PwC to confirm if those matters had been addressed correctly by management. Following detailed analysis of the assurance completed, PwC agreed with management's judgements and assumptions.

How we gather feedback on the effectiveness of our external auditor and external audit process

Third-party reviews

- External reviews of PwC by the FRC's AQR team and the Quality Assurance Department of The Institute of Chartered Accountants in England and Wales

Information provided by the auditor

- Details on the audit plan delivery and any changes to the scope of work
- Assurance on the operation of PwC's audit quality control procedures and insight into their outcomes as they relate to the audit and key members of audit team

Management feedback

- Survey of audit quality and effectiveness by executive directors and senior management including recommendations for improvement
- Seek assurance on the disclosure process for the provision of information to the auditor

Committee assessment

- Quality of regular audit reports
- Feedback from committee members and regular attendees, including the Director of Group Finance and the Group Assurance and Risk Director

We seek direct feedback from the independent Quality Review Partner to review its assessment of PwC's key planning judgements and the execution of PwC's response to significant risks and reporting. We also ask PwC to share with us the results of their internal quality inspections of the audit as well as those conducted by the FRC. In addition, we feel it is important to understand management's opinion of audit quality and effectiveness: the executive directors and senior management complete a questionnaire on the external auditor each year.

Provision of non-audit services

Our Non-Audit Services Policy ensures the provision of non-audit services is no threat to PwC's independence and objectivity as an auditor. In accordance with the FRC's Revised Ethical Standard 2019, the auditor can only provide additional services directly linked to the audit.

Our policy sets out how approval should be obtained before PwC is engaged to provide a permitted non-audit service. Services likely to cost £25,000 or less must be approved by the Chief Financial Officer; services likely to cost more than £25,000 but less than £100,000 must be approved by the Committee Chair. Services likely to cost over £100,000 must be approved by the Committee.

We reviewed compliance with the Non-Audit Services Policy, the provision of non-audit services, details of the non-audit services provided by PwC and associated fees. Audit-related assurance services reported as non-audit services related to the review of half-year financial information and reporting, amounting to £325,000, other non-audit services in the year were £28,200, in total representing 8% of the audit fee, compared with audit fees of £4.64 million. More information on fees incurred by PwC for non-audit services, as well as the split between PwC's audit and non-audit fees, are in note 4 to the accounts, on page 169.

Objectivity and independence

We are responsible for monitoring and reviewing the objectivity and independence of PwC. We considered the information provided by PwC, confirming that no PwC employees involved with the audit have links or connections to JM, and that they complied with the FRC's Revised Ethical Standard. We conclude that PwC is independent.

Proposed re-appointment of PwC

Following our assessment, we believe that PwC provides a robust audit and valuable technical knowledge and is free from third-party influence and restrictive contractual clauses. As a result, we have included a resolution proposing PwC's re-appointment as auditor and authorised the Committee to determine PwC's remuneration in our Notice of AGM.

Remuneration Committee report

"Our Directors' Remuneration Policy has been designed to incentivise and reward for delivering sustainable value creation and long-term growth. This will be achieved through a combination of business transformation and strategic execution all underpinned by a high-performance culture."

Membership

All six of our independent non-executive directors sit on the Remuneration Committee.

Members' attendance at committee meetings during the year is on page 75

Regular attendees at committee meetings

- Chief Executive Officer
- Chief HR Officer
- Group Total Reward, Wellbeing & People Services Director

The committee's Terms of Reference set out its full responsibilities
matthey.com/governance-framework

Key activities during 2022/23:

- Triennial review of the Directors' Remuneration Policy
- Reviewed our short and long-term incentives and their alignment to the company's strategy
- Reviewed broader employee total reward, including pay equity and benchmarking

Our focus areas for 2023/24:

- Oversee the implementation of the new Directors' Remuneration Policy
- Set the incentive plan performance targets for the upcoming year
- Continued focus on broader employee remuneration

Introduction

I am pleased to present our Annual Report on remuneration for the year ended 31st March 2023. This report is divided into three sections, i) my annual statement, ii) the Directors' Remuneration Policy being put to shareholders at the 2023 Annual General Meeting, and iii) our Annual Report on remuneration for the year ended 31st March 2023.

Our approach to remuneration

Our overall purpose at Johnson Matthey is catalysing the net zero transition. We currently have an important role to play in this process through the application of our sustainable technologies, products and services. We will have an increasingly important role to play as we further commercialise long-term sustainable technologies, including our portfolio of hydrogen technologies, that will enable decarbonisation and enhance circularity.

This year has been a year of progress in delivering on our strategy following the appointment of our current Chief Executive Officer, Liam Condon, in March 2022. We have simplified our portfolio of businesses and have also implemented a revised business reporting structure with Catalyst Technologies and PGMS now identified separately and, in addition, we have strengthened our senior leadership team. These changes, in conjunction with establishing a higher performance culture, create a strong platform for delivering on our purpose and strategy.

In the context of the above, undertaking our triennial Directors' Remuneration Policy review was timely given the need to determine if our remuneration structures remained appropriate as we look to the future. In undertaking the review, we took feedback from both internal and external stakeholders, along with benchmarking our remuneration practices, and concluded that the focus on long-term performance within our current remuneration policy remained appropriate to our purpose and strategy. As a result, the committee was comfortable retaining our current pay model and philosophy, and so the changes we are making are limited to ensuring our performance metrics better align with our reinvigorated strategy and we simplify our approach where possible.

Overview of company performance

In the face of a challenging environment brought on by political and economic uncertainty, our Chief Executive Officer and the senior leadership team have delivered a robust underlying financial performance and made good progress against our strategic milestones.

During the year, Clean Air was impacted by automotive customers constraining their production volumes, and PGMS was impacted by lower precious metal prices and lower refinery intake volumes due to lower scrap levels with the semi-conductor chip shortage creating a buoyant second-hand car market. However, we've made good progress on our group transformation and cost reduction targets; have made excellent progress with Euro 7 business wins in Clean Air, and several new large-scale project wins in our Catalyst Technologies business.

In addition, in January 2023 we entered a long-term strategic partnership with Plug Power, a leading provider of turnkey hydrogen solutions for the global green hydrogen economy, to accelerate the deployment of fuel cells and electrolysers (green hydrogen). This partnership is evidence of clear progress towards JM's published milestone in Hydrogen Technologies and will significantly contribute towards JM's 2030 target for 50 million tonnes of GHG emissions avoided per year.

In the context of a challenging market environment, and the progress made against our long-term strategy, the committee considered the level of payout from our incentive plans as appropriate.

2022/23 incentive plan outcomes

The Committee always seeks to ensure that there is a clear link between pay and performance. Additionally, we will continue to focus on setting stretching performance targets and consider the performance of the wider business and individual accomplishment over the period, including how the performance was delivered. In that context, we believe that the payments outlined in this report fairly reflect the performance achieved.

Annual Incentive Plan (AIP)

The maximum bonus opportunity for 2022/23 remained unchanged at 180% of salary for the Chief Executive Officer and 150% of salary for the Chief Financial Officer. The bonus was based on underlying PBT (50%), working capital (20%) and strategic and transformation objectives (30%).

Based on a robust underlying financial performance, the outcome of our AIP results in a bonus of 75% of maximum is payable to both Liam Condon and Stephen Oxley. The committee is comfortable that the outcome of the bonus is appropriate and so no discretion has been applied. One half of the bonus payable will be deferred in shares for a period of three-years. More details on the performance against the annual targets and strategic objectives are set out on page 121.

Performance Share Plan (PSP)

Neither Liam Condon or Stephen Oxley have any Performance Share Plan (PSP) awards that were eligible to vest in respect of the three-year performance period ending 31st March 2023.

The PSP award granted on 1st August 2020 was based on challenging earnings per share and total shareholder return performance targets for the three-year period ending 31st March 2023. The outcome of this award was a performance below the threshold targets. As a result, there is no vesting for either executive directors or any other participants in the PSP. The committee was comfortable that the formulaic outcome is appropriate and so no discretion has been applied.

Overall, the committee is satisfied that the Remuneration Policy operated as intended during the year.

Directors' Remuneration Policy

The 2023 AGM marks the three-year anniversary of our current Remuneration Policy. As a result, we will be seeking shareholder approval for an updated Remuneration Policy at our forthcoming AGM.

During the year a full review process was undertaken that considered the pay model, the historic relationship between performance and reward, the alignment between performance metrics and strategy, and alignment with institutional investors' best practice. All of this was considered in light of our reinvigorated strategy.

Having had regard to these factors, with the current Remuneration Policy operating effectively against each of the review criteria, the committee concluded that subject to some minor refinements to the approach to target setting and the choice of performance metrics, the current Remuneration Policy would be largely retained. A summary of the minor changes to the policy are set out on page 107.

Applying the Remuneration Policy in 2023/24

Base salary

With high inflation impacting the cost of living, the company set aside a higher pay budget for its annual pay awards in July 2022 with a greater portion of the budget set aside for non-management roles. In addition, the company paid a temporary monthly allowance to employees below a certain earnings level to provide additional support until June 2023.

The pay budget for the forthcoming year has also been set at a higher level compared to historic norms given that the cost-of-living pressures continue in many countries. Again, a greater proportion of the budget is being allocated to lower paid employees. For example, for the coming year the UK salary budget for non-management roles is 5.25% and for management roles is 4.0%.

With regard to the salary increase for executive directors the committee considered the UK salary budget for the forthcoming year and deemed it appropriate that the salary increase awarded to executive directors should be at a discount to that awarded to other employees. As such executive director salaries were increased by 3.5% with effect from 1st April 2023.

AIP

The maximum opportunity will remain at 180% of salary for the CEO and 150% of salary for the CFO, and the target will continue to be set at 50% of the maximum. However, the payout for threshold performance will reduce from 15% of maximum (equivalent to 30% of target) to 25% of the target bonus opportunity, which represents a modest toughening of the bonus structure. This change is being made for all participants in our annual incentive plans and will result in greater focus on delivery against the group's targeted performance levels.

The performance targets for executive directors will be based on group underlying PBT (50%), working capital days (20%) and strategic targets (30%) that are aligned with delivering against our transformation strategy.

PSP

The Remuneration Committee intends to grant awards at the same level as in 2022/23, being 250% and 175% of salary for the CEO and CFO respectively.

The performance measures will continue to be a combination of growth in underlying EPS (30%), relative total shareholder return (versus the FTSE 31 to 100 companies but excluding those in financial services) (40%), and strategic and sustainability objectives (30%). The main change compared to the awards granted last year is a greater weighting to the strategic and sustainability targets (up from 20%) which reflects the strategic priorities over the next three-year period.

The EPS growth targets to apply to the awards are considered similarly challenging to the targets set in prior years. However, in recognition of ongoing uncertainty and volatility in external markets, we have set a wider range of targets versus historic awards.

Our strategic and sustainability targets are focused on increasing the GHG emissions avoided through the use of our products and solutions, reducing our own GHG (Scope 1 and Scope 2), increasing the percentage of female representation across our management levels and delivering a key business transformation associated with global business services.

Given our refreshed strategy will require investment over the coming years, a final change to the PSP awards is the removal of the discretionary return on invested capital (ROIC) underpin. However, the Committee retains discretion to adjust the vesting outcomes based on underlying performance and having had regard to ROIC.

Prior to granting the 2023/24 PSP award the committee intends to undertake a final review of the performance targets allowing for the prevailing market conditions versus the time at which the proposed targets were set. Full details of the intended awards are set out on page 122.

Chair and non-executive director fees

The fees payable to the Chair and non-executive directors are reviewed annually. In line with the increase in base salaries for executive directors, the Chair fee and non-executive director base fee will be increased by 3.5% from 1st April 23 (lower than the increase to the wider workforce). The additional premiums for acting as a Chair of a committee were also reviewed and increased.

Wider employee remuneration

Paying our employees fairly for their role, skills, experience and performance is central to our approach to remuneration, and our reward framework and policies support us in doing this.

Equal pay is also critical, and we review our pay levels on an ongoing basis to ensure that employees are paid fairly. During the year we reviewed a global analysis, conducted by an independent reward consultancy (Willis Tower Watson) on pay levels and pay equity across the organisation, which showed that nearly 95% of roles are paid fairly, and we continue to make targeted actions to remove any form of potential inequality. We are also committed to the real living wage and narrowing the gender pay gap that exists among our employees, and to tackling the root causes of gender imbalance to ensure a truly inclusive culture that supports diversity. Our commitment in this area has resulted in a reduction in our gender pay gap in the UK from 9.2% to 5.6% over the past few years, and we are starting to make progress in other countries.

We aspire to offer a well-balanced, progressive and structured approach to reward, with appropriate variation by location. We also find that the non-financial reward elements are essential to a supportive culture, with the wellbeing of staff a prominent part of our employment proposition.

This year, all employees were able to provide their feedback on a range of matters, including remuneration, through The Big Listen, our annual employee engagement survey (YourSay) and local and global town hall meetings. This provided valuable employee context to decision making when considering changes to the Remuneration Policy and how the company rewards employees for the impact of their contributions.

Shareholder engagement

Ahead of the 2023 AGM, we engaged with our largest investors as well as Institutional Shareholder Services ('ISS'), The Investment Association ('IA') and Glass Lewis, to understand their views on our proposed new policy and the proposed implementation in 2023/24. The feedback we received was supportive of retaining our current approach to directors' remuneration and the minor refinements we proposed.

2023 AGM

I would like to thank shareholders for their input and engagement during the year in relation to the Remuneration Policy. We believe that our policy remains simple, transparent and effective, strongly supporting our business strategy with remuneration outcomes aligned to the shareholder experience.

I ask you to support the binding vote on Directors' Remuneration Policy and the advisory vote on this Annual Statement and the 2023 Annual Report on Remuneration at our AGM on 20th July 2023. This AGM will be my last as Chair of the Remuneration Committee as I stand down as Committee Chair with effect from the upcoming AGM but will continue on the Board until January 2024 when I will retire from the Board. I'm pleased to advise that John O'Higgins will take-over from me as the Chair of the Remuneration Committee following our AGM.

We welcome an open dialogue with our shareholders, and I will be available at the meeting to answer any questions about the work of the Remuneration Committee.

Chris Mottershead
Chair of the Remuneration Committee

Remuneration at a glance

Aligning remuneration with strategy

We will use our deep knowledge of metals chemistry to help our customers address the complex technical challenges of the four transitions – transport, energy, decarbonising chemicals production and a circular economy – by delivering sustainable products, services and technologies.

Our strategic objectives

- Invest in growth areas targeted at climate change and circularity
- Manage our established businesses to support growth
- Promote a fast-paced, efficient business and high-performance culture

KPIs

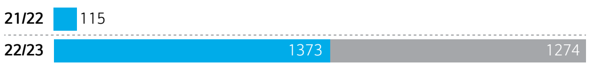
Group profit before tax	**Annual Incentive Plan**
Group working capital days	**Annual Incentive Plan**
Earnings per share	**Performance Share Plan**
Total shareholder return[1]	**Performance Share Plan**
Sustainability-related KPI[2]	**Performance Share Plan**

1. Measure included in awards from 2020 onwards
2. Sustainability KPI added in 2022

2023 pay outcomes

The pay breakdowns for the executive directors in 2021/22 and 2022/23 are set out below:

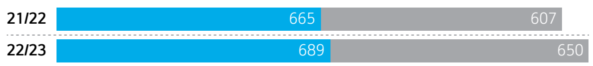
Liam Condon[1] — Chief Executive Officer



Element	2021/22	**2022/23**
Fixed pay (£'000)		
Salary	79	**950**
Benefits	24	**280**
Pension	12	**143**
Variable pay (£'000)		
Annual Incentive Plan	0	**1,274**
Performance Share Plan	0	**0**

1. Liam Condon was appointed Chief Executive Officer on 1st March 2022

Stephen Oxley[2] — Chief Financial Officer



Element	2021/22	**2022/23**
Fixed pay (£'000)		
Salary	565	**582**
Benefits	15	**20**
Pension	85	**87**
Variable pay (£'000)		
Annual Incentive Plan	607	**650**
Performance Share Plan	0	**0**

2. Stephen Oxley was appointed Chief Financial Officer on 1st April 2021

Outcomes of variable remuneration[1]

	Weighting	Liam Condon – Formulaic outcome (% base salary)	Stephen Oxley – Formulaic outcome (% base salary)
Annual bonus			
Profit before tax	50%	81.0%	67.5%
Working capital days (excluding PGMs)	10%	18.0%	15.0%
Working capital days (including PGMs)	10%	8.1%	6.7%
Strategic objectives	30%	27.0%	22.5%
Total	**100%**	**134.1%**	**111.7%**
Performance Share Plan			
Compound annual growth rate in earnings per share	50%	-	-
Total Shareholder return	50%	-	-

1. Liam Condon and Stephen Oxley did not hold any 2020–23 Performance Share Plan awards

Remuneration Policy

Set out below is a summary of the modest revisions to apply to the 2023 Directors' Remuneration Policy when compared against the policy approved at the 2020 AGM.

The table that follows describes each component of the Directors' Remuneration Policy, its purpose and link to strategy, how it works, the opportunity, boundaries and performance measures and any clawback or withholding conditions that apply. The policy was informed by consultation with key stakeholders, including our institutional investors and shareholder advisory bodies.

Subject to approval, the policy will apply for three years from the 2023 AGM. The key changes to the policy are set out below:

- The payout for achieving the threshold performance target under the AIP is to be reduced to 25% of the target opportunity. It was previously 15% of the maximum opportunity, which is equivalent to 30% of the target opportunity. This change represents a modest toughening of the bonus structure and affects all participants in our annual incentive plans and will result in greater focus on delivery against the Group's targeted performance levels.
- The threshold vesting percentage for each performance measure within the long-term PSP will be set at the time of each award having regard to the targets set. The vesting at threshold for each performance measure will be no more than 25%. For example, if the committee set a broader range of EPS targets than in prior years this may result in threshold vesting being as low as 0% as opposed to 15% (or higher) for that part of the award.
- Given our refreshed strategy will require investment over the coming years there will be no defined ROIC underpin applied to future PSP awards. Instead, the committee will be able to take ROIC performance into account as part of a broader discretion to adjust vesting outcomes based on an overall assessment of company performance.

Remuneration Policy Table

Purpose and link to strategy	Operation (and changes if appropriate) of the element	Potential value of element and performance measures
Base salary		
Base salary is the basic pay for doing the job. Its purpose is to provide a fair and competitive level of base pay to attract and retain individuals of the calibre required to lead the business.	Base salaries will normally be reviewed annually, and any changes normally take effect from 1st April each year. In determining salaries and salary increases, the Remuneration Committee will take account of the performance of the individual director against a broad set of parameters including financial, environmental, social and governance issues. The Remuneration Committee will also take into account the director's knowledge, contribution to the role, length of time in post, and any additional responsibilities since the last salary review, as well as the level of salary increases awarded to the wider Johnson Matthey workforce. Salaries across the group are benchmarked against a comparator group of similarly sized companies, predominantly within the FTSE, with a comparable international presence and geographic spread and operating in relevant industry sectors. New appointments or promotions will be paid at a level reflecting the executive director's level of experience in the particular role and experience at board level. New or promoted executive directors may receive higher pay increases than typical for the group over a period of time following their appointment as their pay trends toward an appropriate level for their role.	**Maximum opportunity** No salary increase will be awarded which results in a base salary which exceeds the competitive market range considered appropriate by the committee for the role. Details of the current salaries for the executive directors are included in the Annual Report on Remuneration on (see page 119).
Benefits		
Benefits are provided to support the director in his or her performance in the role. They help to remove certain day-to-day concerns from executive directors, to allow them to focus on managing and directing the business. In general, benefits will be restricted to the typical level in the relevant market for an executive director.	Benefits include, but are not limited to, medical, life and income protection insurance, medical assessments, company sick pay, and a company car (or equivalent). Other appropriate benefits may also be provided from time to time at the discretion of the Remuneration Committee. Directors' and officers' liability insurance is maintained for all directors. Directors who are required to move for a business reason may, where appropriate, also be provided with benefits such as relocation benefits (e.g. the provision of accommodation, transport or medical insurance away from their country of residence) and schooling for dependants. The company may pay the tax on these benefits. Directors may be assisted with tax advice and tax compliance services. The company will reimburse all reasonable expenses (including any associated tax charges) which the executive director is authorised to incur while carrying out executive duties.	Benefits are not generally expected to be a significant part of the remuneration package in financial terms. Car benefits will not exceed a total of £25,000 per annum. The cost of medical insurance for an individual executive director and dependants will not exceed £25,000 per annum. Company sick pay is 52 weeks' full pay.
Pension		
Provides for post-retirement remuneration, ensures that the total package is competitive and aids retention.	All executive directors will be eligible to participate in a company pension plan and/or paid a cash supplement in lieu of membership in a pension plan.	The maximum company contribution is 15% of base salary for executive directors. This is aligned to the typical cost of providing pension benefits to other employees in the UK. To the extent there is a reduction in this typical cost the company's contribution for executive directors will reduce.

Purpose and link to strategy	Operation (and changes if appropriate) of the element	Potential value of element and performance measures
Annual Incentive Plan		
The AIP provides a strong incentive aligned to strategy in the short term. It allows the board to drive and reward both financial and non-financial metrics, including leadership behaviours, in order to deliver sustainable growth in shareholder value. The AIP bonus plays a key part in the motivation and retention of executive directors, one of the key requirements for long-term growth. Bonus deferral as well as malus and clawback provisions ensure that longer- term considerations are properly taken into account in the pursuit of annual targets.	The Remuneration Committee sets the AIP performance measures and targets for each new award cycle. At the end of the year, the committee determines the extent to which these have been achieved. The committee retains the discretion to reduce any bonus award if, in its opinion, the underlying financial performance of the company has not been satisfactory in the circumstances. **Deferral** Of any bonus paid, up to 50% is paid in cash and the remaining balance is deferred into shares for a three-year period as an award under the deferred bonus plan. As defined in the relevant plan rules, no further performance conditions apply to awards under the Deferred Bonus Plan. Dividends that accrue on the deferred shares during the vesting period will be paid in either cash and/or shares at the time of vesting. **Malus and Clawback** The cash and deferred elements of the bonus are subject to malus and clawback provisions such that they can be forfeited or recouped in part or in full in the event of a misstatement of results, error in the calculation, misconduct by the individual or serious reputational damage. **Adjustments** The Remuneration Committee retains discretion to change the performance targets if there is a significant and/or material event which causes the committee to believe the original targets are no longer appropriate (e.g. to reflect material acquisitions or disposals). The Remuneration Committee also retains discretion to amend the level of annual bonuses determined by the performance condition to seek to ensure that the incentive structure for executive directors does not raise environmental, social and governance risks by inadvertently motivating irresponsible behaviour. For example, reducing or eliminating bonuses where the company has suffered reputational damage or where other aspects of performance, including leadership behaviour, have been unacceptable. The Remuneration Committee retains the ability to increase bonus awards from the formulaic outcome where there is identifiable and exceptional performance by the executive director. Bonus payments in such circumstances would remain within the maximum bonus opportunity and shareholders would be fully informed of the justification.	**Maximum opportunity and vesting thresholds** • Chief Executive Officer – 180% of base salary. • Other executive directors – 150% of base salary. Where financial measures are set the threshold performance level will result in a bonus of up to 25% of the target bonus opportunity. On-target performance will result in 50% payment of the maximum opportunity. Where non-financial targets are set, it may not be practicable to set targets on a sliding scale. **Performance measures** Bonuses are based on the achievement of demanding financial and, where appropriate, non-financial targets. The committee may use different performances and/or weightings for each performance cycle as appropriate to take into account the strategic needs of the business. However, a substantial proportion (i.e. at least 60%) will be based on key financial measures, for example, underlying PBT. Targets are set applying a robust bottom-up process to achieve full accountability. The financial performance targets are retrospectively published in the immediately following Annual Report on Remuneration. Details of last year's bonus awards are on pages 106 and120. The performance period for annual bonus purposes matches the financial year (currently 1st April to 31st March).
Performance Share Plan		
The Performance Share Plan (PSP) is designed to ensure that executives take decisions in the interest of the longer-term success of the group. Having measures that look at profitable growth and performance relative to a comparator group over the longer term ensures that the interests of executives are aligned with shareholder interest for long-term value.	Shares may be awarded each year and are subject to performance conditions tested over a minimum three- year performance period. Subject to the performance conditions being met the shares will vest after which the directors will be required to hold any vested shares until the fifth anniversary of the award. The performance targets are set by the Remuneration Committee based on internal and external growth forecasts to ensure they remain appropriate and aligned with shareholder expectations. The awards are granted in accordance with the rules of the plan approved by shareholders. The maximum award level is 250% of base salary. Awards may be granted in the form of conditional shares, nil or nominal cost options or cash (where the awards cannot be settled in shares). Dividends that accrue during the post-vesting holding period will be managed in accordance with our dividend re-investment process. **Malus and clawback** PSP awards are subject to malus and clawback provisions that can apply in the case of a misstatement of results, error in the calculation, misconduct by the individual, serious reputational damage, failures of risk management or corporate failure.	**Award levels and vesting thresholds** The maximum award level is 250% of salary. The current award levels are: • Chief Executive Officer – 250% of base salary • Other Executive Directors – 175% of salary. Threshold performance will result in vesting of up to a maximum of 25% for each performance measure. The actual threshold vesting will depend on the performance metric and the performance range set for the specific award. Vesting at maximum is 100% of the relevant part of the award, increasing on a graduated scale.

Purpose and link to strategy	Operation (and changes if appropriate) of the element	Potential value of element and performance measures
Performance Share Plan (continued)		
	Adjustment The Remuneration Committee has the power to adjust the annual award level, for example in the event of a material fall in share price, as well as the power to adjust the vesting level of an award based on the underlying performance of the company. The committee may adjust the performance measure to reflect material changes (e.g. significant acquisitions or disposals, share consolidation, share buy-backs or special dividends). Any such change would be fully explained to shareholders.	**Performance measures** PSP awards vest over a minimum three-year performance period and will be subject to financial and/or shareholder return targets. In addition, strategic and/or sustainability targets may be included in future awards. In all cases, the majority of the award will remain linked to financial and/or shareholder return targets. It is expected that during the policy period the following three metrics will form the majority of awards: a) The compound annual growth rate (CAGR) of underlying EPS; b) The Total Shareholder Return (TSR) relative to a comparator group (e.g. the FTSE 31-100 excluding financial services companies); c) Strategic and/or sustainability targets. Vesting is also subject to a broad committee discretion that will enable the committee to adjust the extent to which an award vests by exercising appropriate discretion to the formulaic outcomes in order to reflect the wider financial performance and / or circumstances of the group. The prospective weightings, targets and measures for the year commencing 1st April 2023 are shown on page 122. The Remuneration Committee retains the discretion to amend the weightings, targets and the performance measures detailed on page 122 for future awards as appropriate to reflect the business strategy.
All employee share plan		
Encourages share ownership	Executive directors are entitled to participate in the company's all-employee plan under which regular monthly share purchases are made and matched with the award of company shares, subject to retention conditions. Executive directors would also be entitled to participate in any other all-employee arrangements that may be established by the company on the same terms as all other employees.	Executive directors are entitled to participate up to the same limits in force from time to time for all employees.

Purpose and link to strategy	Operation (and changes if appropriate) of the element	Potential value of element and performance measures
Shareholding requirements		
To encourage executive directors to build a shareholding in the company and ensure the interests of management are aligned with those of shareholders	Executive directors are expected to build up a shareholding in the company over a reasonable period of time, and upon cessation of employment are expected to retain a shareholding for a period of up to two years. Shares that count towards achieving these guidelines while an executive director include: all shares beneficially owned by an executive director, or a person connected to the executive as recognised by the Remuneration Committee; deferred bonus shares and PSP awards which have vested and so are no longer subject to performance conditions but are within a holding period. Executive directors are expected to retain at least 50% of the net (after tax) vested shares that are released under the PSP and Deferred Bonus Plan until the required levels of shareholding are achieved. Executive directors are not required to make personal share purchases should awards not meet the performance conditions and so a newly appointed director may take longer to reach the expected level, depending on the company's performance against targets over the period. In addition, a director who ceases employment with the company is not required to purchase shares to satisfy the post-cessation shareholding requirement.	The minimum shareholding requirement while an executive director and for the two-year period after cessation of employment is as follows: • Chief Executive Officer – 250% of base salary. • Other executive directors – 200% of base salary. If the executive director has not been able to build up their shareholding prior to cessation they are not required to purchase shares upon cessation to satisfy the requirement. There is no requirement for non-executive directors to hold shares, but they are encouraged to acquire a holding over time.
Non-executive director fees		
To attract, retain and motivate non-executive directors with the required knowledge and experience.	Non-executive director fees are determined by the board and the non-executive directors exclude themselves from these discussions. The fees for the Chair are determined by the Remuneration Committee taking into account the views of the Chief Executive Officer. The Chair excludes himself from these discussions. Non-executive directors are paid a base fee each year with an additional fee for each committee Chair or additional role held. Non-executive director fees are reviewed every year. Any increase will take into account the market rate for the relevant positions within the comparator group of similarly sized companies with a comparable international presence and geographic spread and operating in relevant industry sectors and the experience of the individuals and the expected time commitment of the role. In exceptional circumstances, additional fees or non-executive benefits (e.g. assistance with tax filings or an allowance for intercontinental travel including any associated tax) may be payable to reflect a substantial increase in time commitment. The company will also reimburse the Chair and non-executive directors for all reasonable expenses (including any tax thereon) incurred while carrying out duties for the company.	Details of the current fee levels for the Chair and non-executive directors are set out in the Annual Report on Remuneration on page 119. The fee levels are set subject to the maximum limits set out in the company's Articles of Association.

The committee is responsible for determining, and agreeing with the board, the Directors' Remuneration Policy and has oversight of its implementation. The committee has clear terms of reference, works with management and independent advisers to develop proposals and recommendations, and exercises independent judgement when making decisions. This process is considered to manage any potential conflicts of interest.

The policy is performance focused and, given the long-term nature of JM's business, is weighted towards long-term performance and includes market standard shareholding expectations and recovery and withholding provisions.

The committee considered the principles listed in the 2018 UK Corporate Governance Code when reviewing the Directors' Remuneration Policy and took these into account in its design and implementation.

Clarity	Remuneration arrangements have defined parameters which can be transparently communicated to shareholders and other stakeholders.
Simplicity	Remuneration arrangements for executive directors consist of: • Salary, benefits, and a fixed pension contribution – set to reflect the typical rate provided to the UK workforce. • Annual Incentive Plan (AIP), a portion of which is deferred into shares. • Annual long-term Performance Share Plan (PSP) awards which provide focus on performance over the longer term. Unnecessary complexity is avoided by the committee in operating the arrangements.
Risk	The remuneration arrangements are designed to have a robust link between pay and performance, thereby mitigating the risk of excessive reward. In addition, behavioural risks are considered when setting targets for performance-related pay, and the arrangements have safeguards to ensure that pay remains appropriate, including committee discretion to adjust incentive outturns, deferral of incentive payments in shares, recovery provisions and share ownership requirements. To avoid conflicts of interest, committee members are required to disclose any conflicts or potential conflicts ahead of committee meetings. No executive director or other member of management is present when their own remuneration is under discussion.
Predictability	The committee set specific targets for different levels of performance which are communicated to the individuals and disclosed to shareholders.
Proportionality	The AIP and PSP have performance metrics that are aligned with the company's KPIs, and the payouts reflect achievement against the targets. The committee may reduce payouts under the AIP and PSP if they are not considered aligned with underlying performance. Safeguards are identified to ensure that poor performance is not rewarded.
Alignment to culture	The directors' remuneration arrangements are cascaded through the organisation ensuring that there are common goals. The committee reviews remuneration arrangements throughout the company and takes these into account when setting directors' remuneration.

Selection of performance targets

Annual Incentive Plan

Financial performance targets under the AIP are set by the Remuneration Committee with reference to the prior year and to the budgets and business plans for the coming year, ensuring the levels to achieve threshold, target or maximum payout are appropriately challenging.

The performance targets for 2023/24 are predominantly based on financial measures (70% of maximum opportunity) including budgeted underlying PBT and working capital days to ensure that there is strong attention paid to delivery of current operational plans and operational efficiency.

Commercial sensitivity precludes the advance publication of the actual bonus targets, but these targets will be retrospectively published in the Annual Report on Remuneration for 2023/24.

Performance Share Plan

The performance targets under the PSP are set to reflect the company's longer-term growth objectives at a level where the maximum represents genuine outperformance. The performance measures are currently based on underlying EPS, TSR and strategic objectives (including sustainability).

Underlying EPS is considered a simple and clear measure of absolute growth in line with the company's strategy.

TSR is considered a simple and clear performance relative to a comparator group (FTSE 31-100 excluding financial services companies).

The strategic objectives will consist of four equally weighted metrics. For 2023/24, three metrics will relate to our sustainability framework, and one will relate to a business transformation objective.

Discretion

The Remuneration Committee can exercise discretion in a number of areas when operating the company's incentive plans, in line with the relevant rules of the plan. These include (but are not limited to):

- The choice of participants
- The size of awards in any year (subject to the limits set out in the Directors' Remuneration Policy table)
- The extent of payments or vesting in light of the achievement of the relevant performance conditions
- The determination of good or bad leavers and the treatment of outstanding awards (subject to the provisions of the plan rules and the remuneration policy provisions)
- The treatment of outstanding awards and assessing performance in the event of a change of control.

In addition, if events occur which cause the Remuneration Committee to conclude that any performance condition is no longer appropriate, that condition may be substituted, varied or waived as is considered reasonable in the circumstances, in order to produce a fairer measure of performance that is not materially less difficult to satisfy.

Remuneration scenarios

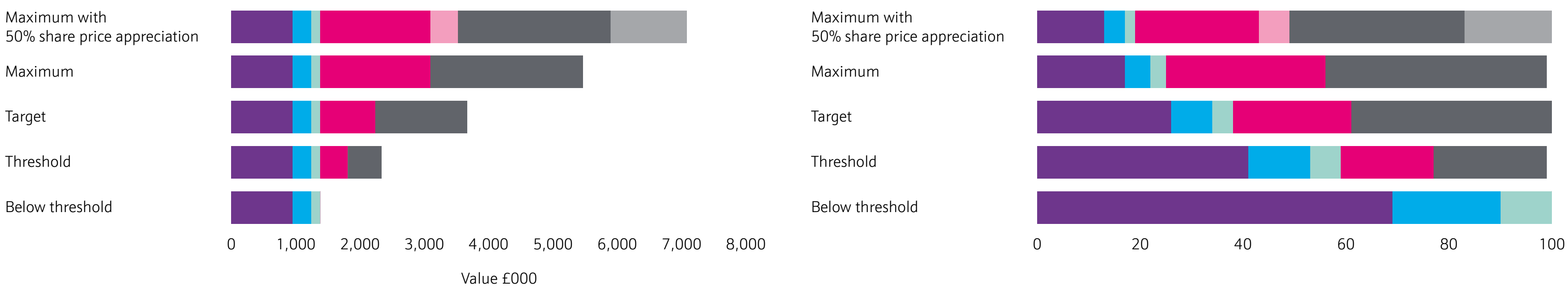
Below is an illustration of the potential future remuneration that could be received by each executive director for the year starting 1st April 2023, both in absolute terms and as a proportion of the total package under different performance scenarios. The value of the PSP is based on the award that will be granted in August 2023. In developing the scenarios, the following assumptions have been made:

Below threshold	Only fixed elements of remuneration (base salary, pension and benefits) are payable
Threshold	Fixed elements of remuneration plus 25% of target bonus and 22% vesting of PSP award are payable
Target	Fixed elements of remuneration plus 50% of maximum bonus and 60% vesting of PSP award are payable
Maximum	Fixed elements of remuneration plus 100% of maximum bonus and 100% vesting of PSP award are payable
Maximum plus 50% share price appreciation	Maximum plus a 50% share price appreciation on the PSP award and Deferred Bonus Plan (DBP) award

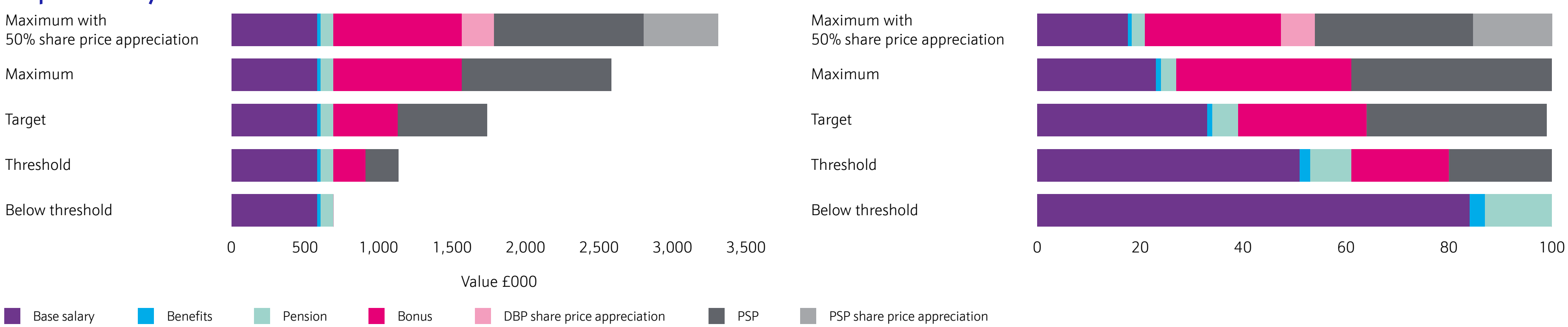
Value of package

Composition of package

Liam Condon



Stephen Oxley



Group employee considerations

The Remuneration Committee considers the directors' remuneration, along with the remuneration of the Group Leadership Team (GLT), in the context of the wider employee population, and is kept regularly updated on pay and conditions across the group.

We aspire to offer a well-balanced, progressive and structured approach to reward, with appropriate variation by location. We also find that the non-financial reward elements are essential to a supportive culture, with the wellbeing of staff a prominent part of our employment proposition.

The general principle for remuneration in Johnson Matthey is to provide a competitive package of pay and benefits in all markets and at all job levels to attract and retain high-quality and diverse employees. Equal and fair pay is also a critical component of our proposition, and we regularly review our pay levels and develop actions to remove any form of potential inequality. The proportion of variable pay increases with progression through management levels, with the highest proportion of variable pay at executive director level, as defined by the Remuneration Policy.

This year, all employees were able to provide their feedback on a range of matters, including remuneration, through The Big Listen and our annual employee engagement survey (YourSay). This provided valuable employee context to decision making when considering changes to the Remuneration Policy. While we inform our employees of global changes to pay and benefits, we have not actively sought a two-way dialogue over executive pay during 2022/23.

Corporate Governance: matthey.com/corporate-governance

The table below sets out how our remuneration arrangements cascade through the organisation:

<table>
<tr><th></th><th>Executive directors</th><th>Senior managers</th><th>Middle managers</th><th>Managers</th><th>Wider workforce</th></tr>
<tr><td>Base salary</td><td colspan="4">Base salary is set with reference to the relevant local market and takes account of the employee's knowledge, experience and contribution to the role. Base salaries are usually reviewed annually and take into account local salary norms, local inflation and business conditions. Increases in base salary for directors will take into account the level of salary increases granted to all employees within the group.</td><td>Base salary is either subject to negotiation with local trade unions or follows the market pay approach outlined for managers.</td></tr>
<tr><td>Pension and benefits</td><td colspan="5">Employment-related benefits are offered in line with local market conditions.</td></tr>
<tr><td>Short-term incentives</td><td>Annual incentive based on 70% financial metrics plus 30% strategic objectives. Compulsory deferral into shares for three years.</td><td>Annual incentive based on 70% financial metrics or strategic business goals, plus 30% individual performance. Compulsory deferral into shares for three-years for certain levels within this category.</td><td colspan="2">Annual incentive based on 70% financial metrics or strategic business goals plus 30% individual performance.</td><td>Annual incentive is either subject to negotiation with local trade unions or follows the standard AIP framework with financial, non-financial and individual performance measures used.</td></tr>
<tr><td rowspan="2">Long-term incentives</td><td>PSP awards are subject to a three-year performance period and a two-year holding period. Performance conditions are designed to drive company financial performance and align with stakeholder interests.</td><td colspan="2">PSP awards are subject to a three-year performance period. Performance conditions are designed to drive company financial performance and align with stakeholder interests.

Restricted Share Plan (RSP) awards may be granted as special recognition or to motivate and retain key talent. They are typically subject to a three-year service condition.</td><td colspan="2">RSP awards may be granted as special recognition or to motivate and retain key talent. They are typically subject to a three-year service condition.</td></tr>
<tr><td colspan="5">Eligible employees may participate in JM's Share Incentive Plan (ShareMatch). Two free matching shares are awarded for every one partnership share purchased by the employee, subject to an annual maximum employee contribution of £1,500.</td></tr>
</table>

Shareholder considerations

The committee has a standard annual agenda item whereby the feedback from shareholders and investor advisory bodies is presented and discussed following the AGM. The Committee Chair is also available for questions at the AGM. The feedback that the committee receives then informs discussions for the formulation of future policy and subsequent remuneration decisions. The committee is also regularly updated on the collective views of shareholders and investor advisory bodies by its independent advisor.

As part of the policy renewal process, the Committee Chair consulted with major shareholders, as well as proxy voting bodies and shareholder advisory groups. Based on the feedback from our engagement, shareholders welcomed the proposed changes to the remuneration policy and so no amendments were required to the proposed policy.

Approach to recruitment

The recruitment policy provides an appropriate framework within which to attract individuals of the required calibre to lead a company of Johnson Matthey's size, scale and complexity. The Remuneration Committee determines the remuneration package for any appointment to an executive director position, either from within or outside Johnson Matthey.

The following table sets out the various components which would be considered for inclusion in the remuneration package for the appointment of an executive director and the approach to be adopted by the Remuneration Committee in respect of each component.

In the case of an internal promotion to the board, the company will honour any contractual commitments made prior to the promotion.

Area	Policy and operation
Overall	The policy of the board is to recruit the best candidate possible for any board position and to structure pay and benefits in line with the Remuneration Policy set out in this report. The ongoing structure of a new recruit's package would be the same as for existing directors, with the possible exception of an identifiable buy-out provision, as set out below.
Base salary or fees	Salary or fees will be determined by the Remuneration Committee in accordance with the principles set out in the policy table on page 107.
Benefits and pension	An executive director will be eligible for benefits and pension arrangements in line with the company's policy for current executive directors, as set out in the policy table on page 107.
Annual Incentive Plan	The maximum level of opportunity is as set out in the policy table on page107. The Remuneration Committee retains discretion to set different performance targets for a new externally appointed executive director, or to adjust performance targets and/or measures in the case of an internal promotion, to be assessed over the remainder of the financial year. In this case any bonus payment would be made at the same time as for existing directors, such award to be pro-rated for the time served in the performance period.
Performance Share Plan	The maximum level of opportunity is as set out in the policy table on page 107. In order to achieve rapid alignment with Johnson Matthey's and shareholder interests, the Remuneration Committee retains discretion to grant a PSP award to a new externally appointed executive director on or soon after appointment if they join outside of the normal grant period.
Replacement awards buy-out	The Remuneration Committee retains discretion to grant replacement buy-out awards (in cash or shares) to a new externally appointed executive director to reflect the loss of awards granted by a previous employer. Where this is the case, the Remuneration Committee will seek to structure the replacement award such that overall it is on an equivalent basis to broadly replicate that foregone, using appropriate performance terms. If granted, any replacement buy-out award would not exceed the maximum set out in the rules of the 2017 Performance Share Plan (350% of base salary). If the executive director's prior employer pays any portion of the remuneration that was anticipated to be forfeited, the replacement awards shall be reduced by an equivalent amount.
Other	The Remuneration Committee may agree that the company will meet certain mobility costs and relocation costs including temporary living and transportation expenses, in line with the company's prevailing mobility policy for senior executives as described in the policy table on page 107.

Service contracts and policy on payment for loss of office

The following table summarises relevant key provisions of executive directors' service contracts and the treatment of payments on termination of employment. The full contracts of service of the executive directors (as well as the terms and conditions of appointment of the non-executive directors) are available for inspection at the registered office of the company during normal business hours as well as prior to and during the forthcoming AGM.

In exceptional circumstances, the Remuneration Committee may authorise, where it considers it to be in the best interests of the company and shareholders, entering into contractual arrangements with a departing executive director, for example a settlement, confidentiality, restrictive covenant or other arrangement, pursuant to which sums not set out in the following table may become payable. Full disclosure of the payments will be made in accordance with the remuneration reporting requirements.

The table on the following page describes the contractual conditions pertaining to the contracts for Liam Condon and Stephen Oxley and for any future executive director.

Summary of key provisions of executive directors' service contracts and treatment of payments on termination

	Liam Condon	Stephen Oxley
Date of service agreement	10th November 2021	1st December 2020
Date of appointment as director	1st March 2022	1st April 2021
Employing company	Johnson Matthey Plc	
Contract duration	No fixed term.	
Notice period	No more than 12 months' notice	
Post-termination restrictions	The contracts of employment contain the following restrictions on the director for the following periods from the date of termination of employment: • non-compete – six months • non-dealing and non-solicitation of client/customers – 12 months • non-solicitation of suppliers and non-interference with supply chain – 12 months • non-solicitation of employees – 12 months.	
Summary termination – payment in lieu of notice (PILON)	The company may, in its absolute discretion, terminate the employment of the director with immediate effect by giving written notice together with payment of a sum equivalent to the director's base salary and the value of his contractual benefits as at the date such notice is given, in respect of the director's notice period, less any period of notice actually worked. The company may elect to pay the PILON in equal monthly instalments. The director is under a duty to seek alternative employment and to keep the company informed about whether they have been successful. If the director commences alternative employment, the monthly instalments shall be reduced (if appropriate to nil) by the amount of the director's gross earnings from the alternative employment. A PILON paid to a director who is a US taxpayer would be in equal monthly instalments.	
Termination payment – change of control	If, within one year after a change of control, the director's service agreement is terminated by the company (other than in accordance with the summary termination provisions), the company shall pay, as liquidated damages, one year's base salary, together with a sum equivalent to the value of the director's contractual benefits, as at the date of termination, less the period of any notice given by the company to the director.	
Termination – treatment of annual incentive awards	Annual bonus awards are made at the discretion of the Remuneration Committee. Executive directors leaving the company's employment will receive a bonus, pro-rata to service, unless the reason for leaving is resignation or misconduct. Any bonus awarded would continue to be subject to deferral as set out in the Remuneration Policy. In relation to deferred bonus awards which have already been made, shares will be released on the normal vesting date unless one of the following circumstances applies, and subject to the discretion of the Remuneration Committee: • the participant leaves as a result of misconduct; or • the participant, prior to vesting, breaches one of the post-termination restrictions or covenants contained in their employment contract, termination agreement or similar agreement. In which case the deferred awards will lapse on cessation of employment. The Remuneration Committee has the discretion to accelerate vesting of a deferred award if appropriate to do so to reflect the circumstances of the departure. It is intended that this would only be used in the event of a departure due to ill health (or death).	

Summary of key provisions of executive directors' service contracts and treatment of payments on termination (continued)

	Liam Condon	Stephen Oxley
Termination – treatment of long-term incentive awards	Employees, including executive directors, leaving the company's employment will normally lose their long-term incentive awards unless they leave for a specified "good leaver" reason (e.g. death, retirement), in which case their shares will be released on the normal release dates, subject to the performance condition. The Remuneration Committee has discretion to accelerate vesting, in which case the performance condition would be assessed based on available information at the time. In either case, unless the Remuneration Committee determines otherwise, the level of vesting shall be pro-rated to reflect the proportion of the performance period which has elapsed to the date of leaving. In the post-vesting deferral period, only those who leave due to misconduct will lose their shares.	
Redundancy arrangements	Directors are not entitled to any benefit under any redundancy payments arrangement operated by the company.	
Holiday	Upon termination for any reason, directors will be entitled to payment in lieu of accrued but untaken holiday entitlement.	

Chair and Non-Executive Directors

The Chair and each of the non-executive directors have letters of appointment. The letters of appointment do not contain any contractual entitlement to a termination payment and the non-executive directors can be removed in accordance with the company's Articles of Association. Directors are required to retire at each AGM and seek re-election by shareholders.

The details of the service contracts, including notice periods, contained in the letters of appointment in relation to the non-executive directors who served during the year are set out in the table below. Neither the Chair or the non-executive directors has provisions in his or her letter of appointment that relate to a change of control of the company.

Non-Executive Director	Committee appointments	Date of appointment	Expiry of current term	Notice period by the individual	Notice period by the company
Patrick Thomas (Chair)	R N S	1st June 2018	31st May 2024	6 months	6 months
Jane Griffiths	A R N S	1st January 2017	31st December 2025	1 month	1 month
Chris Mottershead	A R N S	27th January 2015	26th January 2024	1 month	1 month
John O'Higgins	A R N S	16th November 2017	15th November 2023	1 month	1 month
Xiaozhi Liu	A R N S	2nd April 2019	1st April 2025	1 month	1 month
Doug Webb	A R N S	2nd September 2019	1st September 2025	1 month	1 month
Rita Forst	A R N S	4th October 2021	3rd October 2024	1 month	1 month

A Audit Committee R Remuneration Committee N Nomination Committee S Social Value Committee

Annual Report on remuneration

This section provides details of how the Directors' Remuneration Policy was implemented during 2022/23 and how we intend to apply it in 2023/24.

About the Remuneration Committee

All the independent non-executive directors sit on the Remuneration Committee, including the group Chair, Patrick Thomas. Details of attendance at committee meetings during the year ended 31st March 2023 are shown on page 75.

The Remuneration Committee's Terms of Reference can be found at matthey.com/REM-terms-of-reference. These include determination of fair remuneration for the Chief Executive Officer, the other executive directors and the group Chair (no director participates in discussions of their own remuneration). In addition, the committee receives recommendations from the Chief Executive Officer on the remuneration of those reporting to him, as well as advice from the Chief HR Officer, who acts as secretary to the committee.

Advisers to the committee

The committee appoints and receives advice from independent remuneration consultants on the latest developments in corporate governance and market trends in pay and incentive arrangements. The committee appointed Korn Ferry as adviser to the Remuneration Committee after a competitive tender process in 2017. The total fees paid to Korn Ferry in respect of its services to the committee during the year were £100,520 plus VAT. The fees paid to Korn Ferry are based on the standard market rates Korn Ferry has for remuneration committee advisory services.

Korn Ferry also provides consultancy services to the company in relation to certain employee and benefit matters to those below the Board. Korn Ferry is a signatory to the Remuneration Consultants Group Code of Conduct.

The committee is satisfied that the advice provided by Korn Ferry was independent and objective and that the provision of additional services did not compromise that independence. The committee is also satisfied that the team who provided that advice does not have any connection to Johnson Matthey that may impair their independence and objectivity.

Herbert Smith Freehills is the committee's legal adviser. There was no requirement during 2022/23 for Herbert Smith Freehills to provide advice to the committee. The committee is aware that Herbert Smith Freehills is one of a number of legal firms that provide legal advice and services to the company on a range of matters.

A statement regarding the use of remuneration consultants for the year ended 31st March 2023 is available at matthey.com/corporate-governance

Statement of shareholder voting

We carefully monitor shareholder voting on our Remuneration Policy and its implementation. We recognise the importance of our shareholders' continued support for our remuneration arrangements.

The next table shows the results of the polls taken on the resolution to approve the Remuneration Policy at the 2020 AGM and Annual Report on Remuneration at the 2022 AGM.

Resolution	Number of votes cast	For	Against	Votes withheld
Remuneration Policy	148,233,329	126,978,681 (85.66%)[1]	21,183,260 (14.29%)[1]	1,552,871
Annual Report on Remuneration	131,879,954	122,460,038 (92.86%)	9,419,916 (7.14%)	1,271,380

1. Percentage of votes cast, excluding votes withheld

The Remuneration Committee believes that the 85.66% vote in favour of the Remuneration Policy at the 2020 AGM and the 92.86% vote in favour of the Annual Report on Remuneration at the 2022 AGM showed strong shareholder support for the group's remuneration arrangements at that time.

Remuneration for the year ended 31st March 2023

Single total figure table of remuneration (audited)

Our Remuneration Policy operated as intended over the year, and the table below sets out the total remuneration and breakdown of the elements each director received in relation to the years ended 31st March 2023 and 31st March 2022. An explanation of how the figures are calculated follows the table.

	Base salary/fees £'000		Benefits £'000		Pension[1] £'000		Total fixed remuneration £'000		Annual incentive £'000		Long-term incentive £'000		Total variable remuneration £'000		Total remuneration £'000	
	2023	2022	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022
Executive directors																
Liam Condon[2]	950	79	280[5]	24	143	12	1,373	115	1,274	–	-	–	1,274	–	2,647	115
Stephen Oxley	582	565	20	15	87	85	689	665	650	607	-	–	650	607	1,339	1,272
Non-executive directors																
Patrick Thomas	376	376	-	–	-	–	376	376	-	–	-	–	-	–	376	376
Jane Griffiths[3]	86	83	-	–	-	–	86	83	-	–	-	–	-	–	86	83
Chris Mottershead	86	86	-	–	-	–	86	86	-	–	-	–	-	–	86	86
John O'Higgins	87	87	-	–	-	–	87	87	-	–	-	–	-	–	87	87
Xiaozhi Liu	68	68	-	–	-	–	68	68	-	–	-	–	-	–	68	68
Doug Webb	89	89	-	–	-	–	89	89	-	–	-	–	-	–	89	89
Rita Forst[4]	67	33	-	–	-	–	67	33	-	–	-	–	-	–	67	33

1. Represents a cash allowance in lieu of a pension
2. Liam Condon was appointed to the Board as Chief Executive Officer on 1st March 2022
3. Jane Griffiths was appointed Chair of the SVC on 1st June 2021. 2022 fee pro-rated accordingly based on 2 and 10 months
4. Rita Forst was appointed to the Board on 4th October 2021
5. Liam Condon is entitled to certain allowances and benefits associated with his international relocation. These include housing (£180k), schooling and other family disturbance allowances (£70k)

Explanation of figures

Base salary/fees	Salary paid during the year to executive directors and fees paid during the year to non-executive directors.
Benefits	All taxable benefits, such as medical and life insurance, service and car allowances, mobility allowances, matching shares under the all-employee share incentive plan and assistance with tax advice and tax compliance services, where appropriate.
Pension	The amounts shown represent the value of any cash supplements paid in lieu of pension membership.
Annual incentives	Annual bonus awarded for the year ended 31st March 2023. The figure includes any amounts deferred and awarded as shares.
Long-term incentives	The 2023 figure represents the value of shares that satisfied performance conditions on 31st March 2023. The 2022 figure represents the value of shares that satisfied performance conditions on 31st March 2022.

Annual bonus for the year ended 31st March 2023 (audited)

Liam Condon and Stephen Oxley were eligible for a maximum annual bonus of 180% of base salary and 150% of base salary, respectively. The target bonus opportunity was set at 50% of maximum and the threshold bonus opportunity was 15% of maximum.

The performance measures and weightings for the annual bonus were as follows:

	Percentage of bonus available		
	Group underlying PBT	Group working capital days[1]	Strategic objectives
Liam Condon	50%	20%	30%
Stephen Oxley	50%	20%	30%

1. Group working capital days is split 50% total working capital (including PGMs) and 50% total working capital days (excluding PGMs).

Performance targets were set by looking at:

- Previous year financial performance.
- Budgets and business plans for 2022/23. These are built from the bottom up and are subject to thorough challenge before being finalised by the board.
- Consensus of industry analysts' forecasts, provided by Vara Research.

The committee also considered the performance range for the group profit measures and concluded that given the decrease in uncertainty in the market at the time the targets were set, the range should return to between 95% and 105% of target performance. The absolute level of profit needing to be achieved was also reset to better reflect the more positive outlook at the beginning of the year. The 2022/23 targets are considered similarly challenging, if not more challenging than those set in 2021/22.

The strategic objectives were set based on well-defined key deliverables that support our strategy relating to science, customers, operations and people.

Bonus outcomes

Based on performance against the targets, total bonuses for the year ended 31st March 2023 were:

	Financial measures outcome (% base salary)	Strategic measures formulaic outcome (% base salary)	Total bonus outcome (% base salary)	Total bonus outcome (% of target)	Total value of bonus[1] (£)
Liam Condon	107.1%	27.0%	134.1%	149.0%	1,273,567
Stephen Oxley	89.2%	22.5%	111.7%	149.0%	650,133

1. 50% of this figure is deferred into conditional shares subject to a three-year vesting period with no other performance conditions. This figure represents the full bonus paid for the year

The detailed breakdown of performance against the financial targets and strategic objectives is set out in the next tables.

Financial measures

Performance measure	Bonus weighting	Unit	Outcome	Target	Threshold	Maximum	Liam Condon: Maximum bonus available (% base salary)	Liam Condon: Outcome (% base salary)	Stephen Oxley: Maximum bonus available (% base salary)	Stephen Oxley: Outcome (% base salary)
Group underlying PBT[2]	50%	£m	£399.9m	£384.6m	£365.3m	£403.8m	90	81	75	67.5
Group Working Capital Days (incl. pgms)[1]	10%	Average days	27.3 days	27.0 days	28.4 days	25.7 days	18	8.1	15	6.7
Group Working Capital Days (excl. pgms)[1]	10%	Average days	39.7 days	48.6 days	51.0 days	46.1 days	18	18	15	15
Total bonus for financial measures							**126**	**107.1**	**105**	**89.2**

1. Group underlying PBT and group working capital days are measured using Johnson Matthey's budgeted foreign exchange rates
2. Outcome includes adjustments for business unit divestments and bonus targets being based on 50% constant and 50% actual metal prices

Strategic objectives

	Objective	Assessment	Formulaic outcome (% of target bonus)	Bonus payable (% of base salary)
Liam Condon	A reduction in our ongoing operating cost as a contribution toward the three-year strategic goal of reducing our cost base by £150m.	A reduction of c. £45m was achieved, which was in excess of the target for the year.	100%	27%
	An improvement in our employment engagement score as a contribution toward our 2030 sustainability target.	Given the energy crisis and extended China lockdown we had to accelerate and broaden the scope of the business transformation, which has been unsettling for employees. As a result, there was no improvement in our engagement score and so this objective was missed.		
	Develop detailed roadmap and action plans to ensure the achievement of our sustainability targets.	Detailed roadmaps for ten sustainability targets were developed and validated by the board during the year. These roadmaps include over 100 identifiable actions in total that will ensure the delivery of our sustainability targets.		
	Win at least two large-scale strategic partnerships in Hydrogen Technologies.	Good progress has been made developing and securing partnerships in Hydrogen Technologies, plus strategic partnerships with Plug Power and Hystar have been announced.		
	Complete succession planning for Group Leadership Team with a focus on internal talent and diversity in the broadest sense, with development plans in place for potential successors.	Internal succession candidates were identified against an agreed success profile. Development actions were identified and development plans were prepared. In addition, progress continues to be made on increasing gender representation of our business leadership teams.		
	Complete investor sentiment study and take steps to attract new investors, with the aim to diversify and strengthen investment base both geographically and from an ESG-point of view.	A high level of investor engagement was had during the year with 30% more meetings with existing and prospective investors, with increasing interest from US investors. ESG has been more embedded into our investor engagement.		
Stephen Oxley	A reduction in our ongoing operating cost as a contribution toward the 3-year strategic goal of reducing our cost base by £150m.	A reduction of c. £45m was achieved, which was in excess of the target for the year.	100%	22.5%
	An improvement in our employment engagement score as a contribution toward our 2030 sustainability target.	Given the energy crisis and extended China lockdown we had to accelerate and broaden the scope of the business transformation, which has been unsettling for employees. As a result, there was no improvement in our engagement score and so this objective was missed.		
	Develop detailed roadmap and action plans to ensure the achievement of our sustainability targets	Detailed roadmaps for ten sustainability targets were developed and validated by the board during the year. These roadmaps include over 100 identifiable actions in total that will ensure the delivery of our sustainability targets.		
	Implement a finance transformation plan including clarity of the specific three-year milestones and cost reductions to be achieved.	Finance transformation is progressing with savings delivered in 2022/23 and identified for 2023/24. Financial controls, assurance and risk management has also been improved.		
	Complete the sale of at least one Value Business and be well progressed in targeting >£300m of cash from disposals by 2025.	Two businesses have been sold, with one other well progressed.		
	Complete investor sentiment study and take steps to attract new investors, with the aim to diversify and strengthen investment base both geographically and from an ESG point of view.	A high level of investor engagement was had during the year with 30% more meetings with existing and prospective investors, with increasing interest from US investors. ESG has been more embedded into our investor engagement.		

Long-term incentives

PSP awards vesting for the three-year performance period ended 31st March 2023 (audited)

The 2020 PSP awards were made in August 2020 and performance was measured over the period 1st April 2020 to 31st March 2023. After the performance period, shares are no longer subject to performance conditions, and where the performance conditions are met, the shares will vest on the fifth anniversary of the award. The awards vest on a straight-line basis between threshold (15% vesting for EPS and 25% vesting for TSR) and maximum (100% vesting). The performance condition for the 2020 award and the actual performance achieved are shown below.

	Weighting	Threshold	Maximum	Actual
Compound annual growth rate in earnings per share	50%	3%	8%	-1%
Relative total shareholder return	50%	Median (22.2%)	Upper Quartile (53.6%)	Below Threshold (6.23%)

Liam Condon and Stephen Oxley did not have 2020 PSP awards.

PSP awards granted in the year ended 31st March 2023 (audited)

The next table provides details of the PSP awards entitled to executive directors in the year ended 31st March 2023.

Executive directors	Award date	Award type	Award size (% of base salary)	Number of shares awarded	Face value[1]	% vesting at threshold[2]	End of performance period	End of holding period
Liam Condon	1st August 2022	Conditional shares	250	115,260	£2,374,990	21%	31st March 2025	1st August 2027
Stephen Oxley	1st August 2022	Conditional shares	175	49,424	£1,018,406	21%	31st March 2025	1st August 2027

1. Face value is calculated using the award share price of 2,060.55 pence, which is the average closing share price over the four-week period starting on 26th May 2022
2. Threshold vesting is 15% for the earnings per share (EPS) measure and 25% for the relative total shareholder return (TSR) measure. The value shown is the average threshold vesting for the award

The performance targets and vesting ranges for the 2022 award are set out below:

40% of performance condition

Compound annual growth rate in earnings per share

Performance	Proportion of shares vesting
<3%	0%
3%	15%
8%	100%
Between 3% and 8%	Straight-line between 15% and 100%

40% of performance condition

Relative total shareholder return

Performance	Proportion of shares vesting
Below median	0%
Median	25%
Upper quartile	100%
Between median and upper quartile	Straight-line between 25% and 100%

20% of performance condition

Sustainability scorecard (targets equally weighted)

Tonnes of GHG avoided using technologies enabled by our products and solutions		**Reduction in scope 1 and 2 GHG emissions**		**Percentage of female representation across management levels**	
Performance	Proportion of shares vesting	Performance	Proportion of shares vesting	Performance	Proportion of shares vesting
< 5.2m tonnes (MT)	0%	Below 12% reduction	0%	Below 31% representation	0%
5.2 MT	25%	12% reduction	25%	31% representation	25%
6.0 MT	100%	14% reduction	100%	32% representation	100%
Between 5.2 MT and 6.0 MT	Straight-line between 25% and 100%	Between 12% and 14% reduction	Straight-line between 25% and 100%	Between 31% and 32% representation	Straight-line between 25% and 100%

In addition to the EPS, TSR and sustainability scorecard performance conditions, the Remuneration Committee considers the performance of ROIC over the performance period to ensure that earnings growth is achieved in a sustainable and efficient manner.

Statement of directors' shareholding (audited)

The table below shows the directors' interests in the shares of the company, together with their unvested scheme interests, effective 31st March 2023.

	Ordinary shares[1]	Subject to ongoing performance conditions[2]	Not subject to further performance conditions[3]
Executive directors			
Liam Condon	31,000	145,075	–
Stephen Oxley	14,991	81,117	56,223[4]
Non-executive directors			
Patrick Thomas	13,194	–	–
Jane Griffiths	5,171	–	–
Chris Mottershead	5,718	–	–
John O'Higgins	1,500	–	–
Xiaozhi Liu	4,000	–	–
Doug Webb	6,500	–	–
Rita Forst	4,000	–	–

1. Includes shares held by the director and / or connected persons, including those in the all-employee share matching plan. Shares in the all-employee share matching plan may be subject to forfeiture in accordance with the rules of the plan
2. Represents unvested PSP shares within three years of the date of award
3. Represents unvested deferred bonus shares that are not subject to service conditions and the buy-out award made to Stephen Oxley on joining JM, which is subject to ongoing service conditions
4. Includes 41,500 shares awarded in year end 31st March 2022 to compensate for the loss of KMPG long-term deferred cash award

Directors' interests as at 25th May 2023 were unchanged from those listed above other than that the Trustees of the all-employee share matching plan have purchased another 130 shares for Stephen Oxley.

Executive directors are expected to achieve a shareholding guideline of 250% of base salary for the Chief Executive Officer and 200% for other executive directors, within a reasonable timeframe. The director's total shareholding for the purposes of comparing it with the minimum shareholding requirement includes shares held beneficially by the director and any connected persons (as recognised by the Remuneration Committee), together with the shares awarded under the Deferred Bonus Plan (DBP), for which there are no further performance or service conditions.

Shares that count towards achieving the post-cessation guideline include the same as those while an executive director. Executive directors are expected to retain at least 50% of the net (after tax) vested shares that are released under the PSP and DBP until the required levels of shareholding are achieved.

Executive director shareholdings as at 31st March 2023 as a percentage of base salary[1] are shown below:

1. Value of shares as a percentage of base salary is calculated using a share value of 2,145.67 pence, which was the average share price prevailing between 1st January 2023 and 31st March 2023
2. Liam Condon was appointed Chief Executive Officer on 1st March 2022 and will build his shareholding over a reasonable timeframe
3. Stephen Oxley was appointed Chief Financial Officer on 1st April 2021 and will build his shareholding over a reasonable timeframe

Pension entitlements (audited)

No director is currently accruing any pension benefit in the group's pension schemes. Both Liam Condon and Stephen Oxley receive an annual cash payment in lieu of pension membership, equal to 15% of base salary. This is in line with pension provision for the wider workforce.

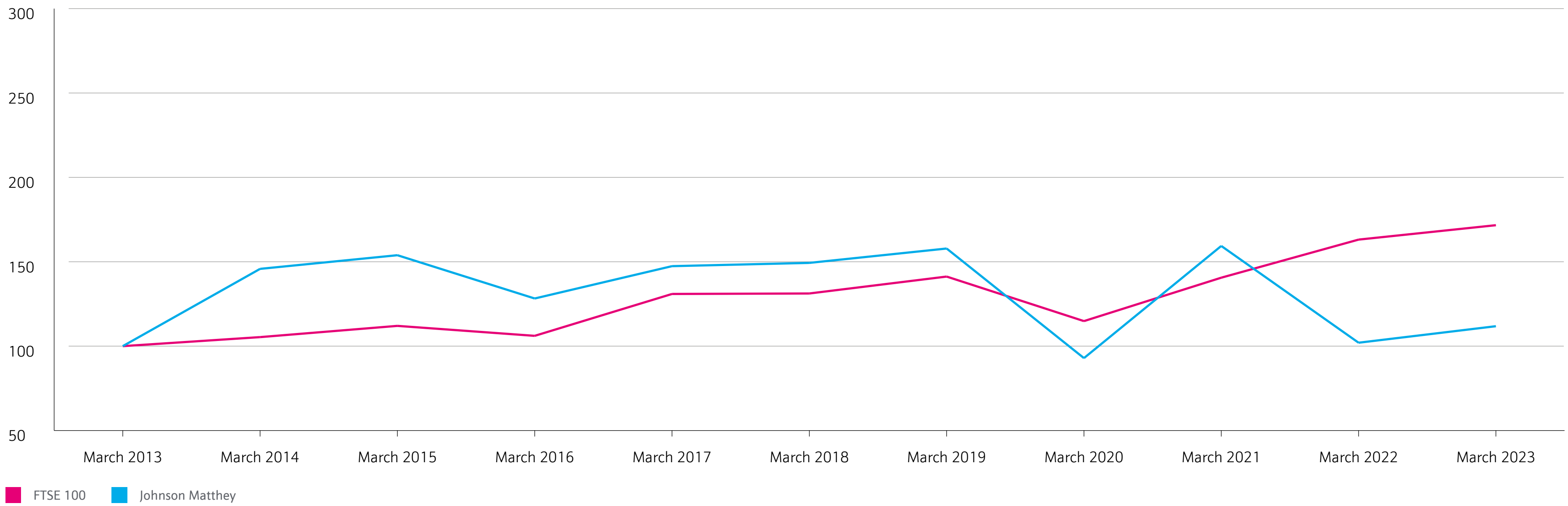
Payments to former Chief Executive (Robert MacLeod)

Robert MacLeod received a total of £325,401 in salary and benefits prior to retirement on 21st July 2022 (comprising of £264,720 basic pay, £54,048 pension and £6,633 benefits).

Performance graph and comparison to Chief Executive Officer's remuneration

Johnson Matthey and FTSE 100 total shareholder return rebased to 100

The following chart illustrates the total cumulative shareholder return of the company for the ten-year period from 1st April 2013 to 31st March 2023 against the FTSE 100 as the most appropriate comparator group when considering our market capitalisation over the period, rebased to 100 at 1st April 2013.



Historical data regarding Chief Executive Officer's remuneration

	2012/13	2013/14[1]	2014/15[2]	2015/16[3]	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22[4]	**2022/23[6]**
Single total figure of remuneration (£000)	3,025	3,855	2,539	1,429	1,971	2,013	2,784	1,462	2,532	1,672	2,647
Annual incentives (% of maximum)	–	71	54	15	40	69	45	26	98	42	75
Long-term incentives (% of award vesting)[5]	100	75	–	33	28	–	67	–	–	–	-

1. Figures before to 2014/15 are in respect of Neil Carson
2. The figures for 2014/15 are in respect of both Robert MacLeod and Neil Carson, who both held the position of Chief Executive Officer in the year. The single total figure of £2,539k comprises £1,594k for Robert MacLeod and £945k for Neil Carson
3. Figures from 2015/16 to 2020/21 are in respect of Robert MacLeod
4. The figures for 2021/22 are in respect of both Robert MacLeod and Liam Condon, who both held the position of Chief Executive Officer in the year. The single total figure of £1,672k comprises £1,557k for Robert MacLeod and £115k for Liam Condon. The value shown for annual incentives relates to Robert MacLeod only because Liam Condon was not eligible to participate in the AIP in 2021/22
5. Vesting of long-term incentive awards whose three-year performance period ended in the financial year shown
6. Figures for 2022/23 are in respect of Liam Condon

Change in directors' remuneration

The table below shows how the remuneration of directors, both executive and non-executive, has changed over the year ended 31st March 2023. This is then compared to employees of Johnson Matthey Plc.

	2023			2022			2021		
	Salary	**Bonus**	**Benefits**	Salary	Bonus	Benefits	Salary	Bonus	Benefits
Executive directors									
Liam Condon[1]	0%	–	–	–	–	–	–	–	–
Stephen Oxley[2]	3%	7%	–	–	–	–	–	–	–
Non-executive directors									
Patrick Thomas	0%	0%	0%	2%	0%	0%	0%	0%	0%
Jane Griffiths	3%[10]	0%	0%	24%[3]	0%	0%	0%	0%	0%
Chris Mottershead	0%	0%	0%	2%	0%	0%	0%	0%	0%
John O'Higgins	0%	0%	0%	10%[4]	0%	0%	27%	0%	0%
Xiaozhi Liu	0%	0%	0%	2%	0%	0%	0%	0%	0%
Doug Webb	0%	0%	0%	10%[5]	0%	0%	31%	0%	0%
Rita Forst[6]	100%[11]	0%	0%	–	–	–	–	–	–
Comparator group									
JM Plc employees	8%[7]	-10%[8]	0%[9]	6%[7]	4%	0%	2%	312%	0%

1. Liam Condon was appointed Chief Executive Officer on 1st March 2022, so no change in compensation can be calculated for 2021 or 2022. No change in bonus can be calculated for 2023 as not eligible in 2022
2. Stephen Oxley was appointed Chief Financial Officer on 1st April 2021, so no change in compensation can be calculated for 2021 or 2022
3. Represents the additional fee received for taking the SVC Chair position on 1st June 2021 and annual fee review
4. Represents the additional fee received for taking the Senior Independent Director role on 23rd July 2020 and annual fee review
5. Represents the additional fee received for taking the Audit Committee Chair role on 23rd July 2020 and annual fee review
6. Rita Forst was appointed to the board on 4th October 2021, so no change in compensation can be calculated for 2021 or 2022
7. Includes promotions and market adjustments
8. The percentage change in bonus was calculated based on the change in bonus accrual taken for Johnson Matthey Plc (JM Plc) employees, excluding the directors, for the 2021/22 and 2022/23 years and for the 2020/21 and 2021/22 years, respectively
9. There has been no change to the benefits policy for JM Plc employees; therefore, a 0% change has been reported
10. Represents the additional fee received for taking the SVC Chair position on 1st June 2021, which was pro-rated in 2022
11. Rita Forst was appointed to the Board on 4th October 2021 and received a pro-rated fee for 6 months in 2022 and full fee based on 12 months in 2023

Relative spend on pay

The table below shows the absolute and relative amounts of distributions to shareholders and the total remuneration for the group for the years ended 31st March 2022 and 31st March 2023.

	Year ended 31st March 2022 £ million	**Year ended 31st March 2023 £ million**	% change
Payments to shareholders – special dividends	–	–	–
Payments to shareholders – ordinary dividends	139	141	1%
Share buyback[1]	155	45	
Total remuneration (all employees)[2]	718	732	2%

1. On 13th May 2022, the company completed its £200 million share buyback programme which commenced on 21st December 2021. During the year the company purchased 2,271,920 shares at a cost of £45 million
2. Figure is for all operations (excluding Health) and excludes termination benefits

Chief Executive Officer to employee pay ratio

The table below shows the ratio of Chief Executive Officer to employee pay for 2020-2023. We have compared the single total figure of remuneration for the Chief Executive Officer to the total pay and benefits of UK employees, on a full-time equivalent basis, who are ranked at the lower quartile, median and upper quartile across all UK employees effective 31st March 2023.

We believe that using total pay and benefits for the year ending 31st March 2023 provides a like-for-like comparison to the Chief Executive Officer pay data.

Chief Executive Officer pay ratio	2020	2021	2022[1]	2023
Method	Total pay and benefits in 2019/20	Total pay and benefits in 2020/21	Total pay and benefits in 2021/22	Total pay and benefits in 2022/23
Chief Executive Officer single figure	£1,462,000	£2,532,000	£1,672,000[2]	£2,646,222
Upper quartile	22:1	35:1	20:1	37:1
Median	28:1	45:1	28:1	49:1
Lower quartile	36:1	57:1	35:1	60:1

1. Chief Executive Officer pay ratio revised to include employee bonuses payable in relation to 2021/22. This changed upper quartile from 36:1 to 20:1, median from 34:1 to 28:1 and lower quartile from 41:1 to 35:1
2. The Chief Executive Officer single figure for 2021/22 is in respect of both Robert MacLeod and Liam Condon, who both held the position of Chief Executive Officer in the year. The single total figure of £1,672,000 comprises £1,557,000 for Robert MacLeod and £115,000 for Liam Condon

Bonus data for UK employees was left out of the 2023 calculation because it was not administratively possible to calculate these bonuses before the publication of this report. However, the calculation will be revised to include these bonuses once available and will be disclosed in the 2024 report. Excluding the 2022/23 bonus payable to the Chief Executive Officer from the calculation would result in the following pay ratios: lower quartile – 29:1, median – 23:1 and upper quartile – 18:1.

The salary and total pay for the individuals identified at the lower quartile, median and upper quartile positions in 2023 are set out below:

2023	Salary[1]	Total pay
Upper quartile individual	£59,278	£72,086
Median individual	£47,149	£54,458
Lower quartile individual	£38,401	£44,108

1. Includes shift allowance

Our principles for pay setting and progression are consistent across the organisation. Underpinning our principles is a need to provide a competitive total reward to enable the attraction and retention of high-calibre individuals and giving the opportunity for individual development and career progression. The pay ratios reflect the difference in role accountabilities that are recognised through our pay structures and the greater variable pay opportunity for more senior positions. The Chief Executive Officer's variable pay opportunity is higher than those employees noted in the table reflecting the weighting towards long-term value creation and alignment with shareholder interests inherent in this role.

The movement in our Chief Executive Officer to employee pay ratio between 2020-2023 is driven by the different bonus outcomes and fixed income for the Chief Executive Officer in each of these years. There have been no other changes to remuneration arrangements for our UK employees that would affect the CEO pay ratio.

We are satisfied that the median pay ratio is consistent with our wider pay, reward and progression policies for employees. All our employees have the opportunity for annual pay increases, career progression and development opportunities.

Implementing the Directors' Remuneration Policy for 2023/24

The table below sets out how the Remuneration Committee intends to apply the Directors' Remuneration Policy for the year ended 31st March 2024.

Salary	The Chief Executive Officer and Chief Financial Officer both received a pay increase of 3.5%. This is below the increase awarded to other UK employees.
Benefits	No change to policy applied in 2023/24.
Pension	All executive directors will have a maximum pension cash supplement of 15%.
Annual incentives	The maximum bonus opportunity for 2023/24 remains unchanged at 180% of salary for the Chief Executive Officer and 150% of salary for the Chief Financial Officer. 2023/24 bonus will be based on underlying profit before tax (50%), working capital (20%) and strategic and transformation objectives (30%). Targets for the Chief Executive Officer and Chief Financial Officer will be based on group performance. The 2023/24 targets are considered similarly challenging, if not more challenging to those set in 2022/23, when accounting for the divestments in the year and uncertain economic outlook. The recalibration of targets has been set taking this into account as well as internal and external planning. To the extent that metal prices move outside a defined corridor the Remuneration Committee will rebase the targets such that they are similarly challenging as when the targets were originally set. The Remuneration Committee considers the forward-looking targets to be commercially sensitive but full retrospective disclosure of the actual targets will be included in next year's Directors' Remuneration report. 50% of any bonus paid will be deferred in shares for three years, and the payment of any bonus is subject to appropriate malus and clawback provisions.
Long-term incentives	The Chief Executive Officer award level is 250% of base salary and the Chief Financial Officer award level is 175% of base salary. These award levels are in line with our remuneration policy. The long-term Performance Share Plan will be based on EPS growth targets (30% of the award), relative TSR performance (40% of the award) and specific and measurable strategic objectives (30% of award). The range of annualised EPS growth targets that the committee intends to set for the 2023/24 awards is 1% per annum growth for threshold (15%) vesting, rising to 7% per annum growth for maximum vesting (100%). Vesting will be on a straight-line basis between 1% and 7%. The committee considered the effect of metal price volatility on potential outcomes and, as a result, earnings will be assessed 50% against actual metal prices and 50% against constant metal prices. The committee believes that this will allow for a more accurate assessment of underlying business performance. The TSR target will be 25% vesting for median performance, increasing on a straight-line basis to 100% vesting for upper quartile performance. The TSR peer group will be the FTSE 31 – 100 (excluding financial services companies). The committee considers that this comparator group remains the most appropriate given our current market capitalisation. The strategic objectives scorecard will consist of four equally weighted metrics. Threshold vesting will be 25%, increasing on a straight-line basis to 100% at maximum. The four metrics are as follows: • Products and services – tonnes of GHG avoided during the period using technologies enabled by our products and solutions, compared to conventional solutions, where threshold vesting will be 8.0 million tonnes GHG avoided and maximum will be 12.0 million tonnes GHG avoided. • Operations – reduction in Scope 1 and 2 GHG emissions (from the 2020 baseline), where threshold vesting will be achieved for a 20% reduction in GHG emissions and maximum vesting for a 25% reduction in GHG emissions. • People – percentage of female representation across our management levels, where threshold vesting will be achieved at 32% female representation at management levels and maximum at 33% female representation at management levels. • Business transformation – establish global business services and deliver a reduction in associated employment costs (from the 2022 baseline). The performance range is commercially sensitive and will be disclosed at such a time when it is no longer considered commercially sensitive. Awards vest in year three and are then subject to a two-year holding period.
Chairman and non-executive director fees	The fees for the Chair and non-executive directors were reviewed during the year and increased in line with the increase awarded to executive directors.

This Remuneration Report was approved by the Board of Directors on 25th May 2023 and signed on its behalf by:

Chris Mottershead
Chair of the Remuneration Committee

Directors' report

Statutory and other information

The Directors' report required under the Companies Act 2006 (2006 Act) comprises the Governance report (pages 73 to127), including the Sustainability report for our disclosure of carbon emissions, which is included in the Strategic report (pages 20 to 44). The management report required under Disclosure Guidance and Transparency Rule 4.1.8R comprises the Strategic report (pages 1 to 72), which includes the risks relating to our business, and the Directors' report.

Index of disclosures referred to elsewhere in the report

Listing Rule 9.8.4R

Details of the disclosures to be made under Listing Rule 9.8.4R are listed below.

There are no other applicable disclosures.

Other disclosures	
Dividend reinvestment plan	A dividend reinvestment plan is available. This allows shareholders to purchase additional shares in Johnson Matthey Plc with their dividend payment. Further information and a mandate can be obtained from our registrar, Equiniti, and on our website: matthey.com
Directors' indemnities and insurance	Johnson Matthey Plc has granted indemnities to each Johnson Matthey Plc director and the directors of the group's subsidiaries in respect of certain liabilities arising against them in the course of their duties. Neither Johnson Matthey Plc or any subsidiary has indemnified any director of the Company or a subsidiary in respect of any liability that they may incur to a third party in relation to a relevant occupational pension scheme. The Company maintains appropriate directors' and officers' liability insurance.
Conflicts of interest	The Board has a policy for identifying and managing directors' conflicts of interest, which extends to cover close family members. The Board annually reviews external appointments to consider any potential or actual conflict of interest. If a conflict of interest is declared, the Board will review the authorisation and terms associated, to ensure that all matters presented to the Board are considered solely with a view to promoting JM's business success. For the year under review, there were no potential or actual conflicts of interest.
External appointments	The Board approves all external appointments in advance of acceptance. If an external appointment arises between meetings, this is considered by the Chair and Chief Executive Officer, with the assistance of the Company Secretary. In approving each additional external appointment, the Board assesses time commitment to ensure that no directors are considered over boarded.

Other disclosures	
Directors' reappointment	Johnson Matthey Plc's Articles of Association (the Articles) provide the rules on director appointments and are consistent with the recommendation contained within the Code. All directors retire and are eligible for re-election at each AGM (except any director appointed after the notice of an AGM meeting is published and before that AGM is held).
Directors' powers	The powers of the directors are determined by the Articles, UK legislation including the 2006 Act, and any directions given by the Company in general meetings. The directors are authorised by the Company's Articles to issue and allot ordinary shares and to make market purchases of its own shares. These powers are referred to shareholders for renewal at each AGM. Further information is set out below under 'Authority to purchase own shares'.
Constitution	
Articles of Association	The Articles may only be amended by a special resolution at a general meeting of the Company. The Articles were adopted on 17th July 2019 and are available on our website: matthey.com/corporate-governance.
Branches	The Company and its subsidiaries have established branches in several different countries in which they operate.
Change of control	As at 31st March 2023 and as at the date of approval of this Annual Report, there were no significant agreements, to which the company or any subsidiary was or is a party to, that take effect, alter or terminate on a change of control of the Company, whether following a takeover bid or otherwise. However, the Company and its subsidiaries were, as at 31st March 2023, and as at the date of approval of this report, party to a number of commercial agreements. These may allow counterparties to alter or terminate the commercial agreements on a change of control of JM following a takeover bid. These are not deemed significant in terms of their potential effect on the group. The group also has a number of loan notes and borrowing facilities that may require prepayment of principal and payment of accrued interest and breakage costs if there is a change of control of JM. The group has entered into a series of financial instruments to hedge its currency, interest rate and metal price exposures, which provide for termination or alteration if a change of control at JM materially weakens the creditworthiness of the group. The executive directors' service contracts each contain a provision to the effect that, if the contract is terminated by the Company within one year after a change of control of the Company, JM will pay an amount equivalent to one year's gross base salary and other contractual benefits, less the period of any notice given by the Company, to the director as liquidated damages. The rules of the Company's employee share schemes set out the consequences of a change of control of the Company on participants' rights under the schemes. Generally, the rights will vest and become exercisable on a change of control, subject to the satisfaction of relevant performance conditions. As at 31st March 2023, and as at the date of approval of this Annual Report, there were no other agreements between the Company, any subsidiaries and directors or employees, providing compensation for loss of office or employment (through resignation, purported redundancy or otherwise) that occurs due to a takeover bid.
Stakeholders and policies	
Suppliers	We recognise the importance of good supplier relationships to our overall success. Further information on our payment practices is on the UK government's reporting portal. *Read more about our Supplier Code of Conduct and our engagement with suppliers during the year on page 40*
Political donations	No political donations or contributions to political parties under the 2006 Act have been made during the year. The group policy is that no political donations be made or political expenditure incurred.
Events occurring after the reporting period	There have been no important events affecting Johnson Matthey Plc or any subsidiary between 31st March 2023 and the date of approval of this annual report, 25th May 2023.

Shareholders and share capital	
AGM	Our 2023 AGM will be held on Thursday 20th July 2023 at 11.00 am at Herbert Smith Freehills, Exchange House, 12 Primrose Street, London EC2A 2EG. We will provide a live webcast and telephone conference so shareholders can also participate virtually and ask questions in real time. Details on how to join are included in the Notice of AGM. In the Notice, we propose separate resolutions on each substantially separate issue. For each resolution, shareholders may direct their proxy to vote either for or against or to withhold their vote. A 'vote withheld' is not legally a vote and will not be counted in the calculation of the proportion of the votes cast. All AGM resolutions are decided with an electronic poll, with the results announced as soon as possible and posted on our website. This poll will show votes for and against, as well as votes withheld.
Authority to purchase own shares	At the 2022 AGM, shareholders authorised Johnson Matthey Plc to make market purchases of up to 18,312,226 ordinary shares of 110 $_{49/53}$ pence each, representing 10% of the then issued share capital of the company (excluding treasury shares). Any shares so purchased by Johnson Matthey may be cancelled or held as treasury shares. This authority will cease at the conclusion of the 2023 AGM, and shareholders will be asked to give a similar authority at the AGM. There were no share allotments during the year.
Rights and obligations attaching to shares	The rights and obligations attaching to the ordinary shares in Johnson Matthey Plc are set out in the Articles. As at 31st March 2023, and as at the date of approval of this Annual Report, there were no restrictions on the transfer of ordinary shares in the Company, no limitations on the holding of securities and no requirements to obtain the approval of the Company, or of other holders of securities in Johnson Matthey Plc, for a transfer of securities – except as referred to below. The directors may, in certain circumstances, refuse to register the transfer of a share in certificated form that is not fully paid up, where the instrument of transfer does not comply with the requirements of the Company's Articles, or if entitled under the Uncertificated Securities Regulations 2001. As at 31st March 2023 and as at the date of approval of this report: • No person held securities in Johnson Matthey Plc carrying any special rights with regard to control of the Company • There were no restrictions on voting rights (including any limitations on voting rights of holders of a given percentage or number of votes or deadlines for exercising voting rights), except that a shareholder can only vote in respect of a share if it is fully paid • There were no arrangements by which, with the Company's cooperation, financial rights carried by shares in the Company are held by a person other than the holder of the shares • There were no agreements known to the Company between holders of securities that may result in restrictions on the transfer of securities or on voting rights.
Nominees, financial assistance and liens	During the year: • No shares in Johnson Matthey Plc were acquired by the Company's nominee, or by a person with financial assistance from the Company, in either case where the Company has a beneficial interest in the shares (and no person acquired shares in the Company in any previous financial year in its capacity as the Company's nominee or with financial assistance from the Company) • The Company did not obtain or hold a lien or other charge over its own shares.
Allotment of securities for cash and placing of equity securities	During the year neither Johnson Matthey Plc or any major subsidiary undertaking of the Company has allotted equity securities for cash. During the year, JM has not participated in any equity securities' placing.
American Depositary Receipt programme	Johnson Matthey has a sponsored Level 1 American Depositary Receipt (ADR) programme, which BNY Mellon administers and for which it acts as Depositary. Each ADR represents two ordinary Johnson Matthey shares. The ADRs trade on the US over-the-counter market under the symbol JMPLY. When dividends are paid to shareholders, the Depositary converts those dividends into US dollars, net of fees and expenses, and distributes the net amount to ADR holders.
Employee share schemes	At 31st March 2023, 3,211 current and former employees were shareholders in Johnson Matthey Plc through the group's employee share schemes. Through these schemes, current and former employees held 2,773,189 ordinary shares or 1.51% of issued share capital, excluding treasury shares. Also as at 31st March 2023, 2,930,062 ordinary shares had been awarded but had not yet vested, under the Company's long-term incentive plans, to 407 current and former employees. Shares acquired by employees through JM's employee share schemes rank equally with the other shares in issue and have no special rights. Voting rights in respect of shares held through the Company's employee share schemes are not exercisable directly by employees. However, employees can direct the trustee of the schemes to exercise voting rights on their behalf. The trustee of the Company's Employee Share Ownership Trust (ESOT) has waived its right to dividends on shares held by the ESOT, which have not yet vested unconditionally to employees.

Shareholders and share capital

Interests in voting rights

The following information has been disclosed to the Company under the FCA's Disclosure Guidance and Transparency Rules in respect of notifiable interests in the voting rights in Johnson Matthey Plc's issued share capital:

As at 31st March 2023:	Nature of holding	Total voting rights[1]	% of total voting rights[2]
Bank of America Corporation	Indirect[3]	17,234,329	9.39
BlackRock, Inc.	Indirect[3]	20,545,316	11.73
Jefferies Financial Group	Direct	10,540,153	5.74
Standard Latitude Master Fund Ltd	Direct	9,655,039	5.23

1. Total voting rights attaching to the issued ordinary share capital of the company (excluding treasury shares) at the time of disclosure to the Company
2. % of total voting rights at the date of disclosure to the Company
3. Indirect holdings include qualifying financial instruments and contract for differences

Other than as stated above, as far as the Company is aware, there is no person with a significant direct or indirect holding of securities in Johnson Matthey Plc. This information was correct at the date of notification. However, since notification of any change is not required until the next notifiable threshold is crossed, these holdings are likely to have changed. Between 31st March 2023 and the date of this report, 24th May 2023, the Company has been notified of changes in the following interests:

	Nature of holding	Total voting rights[1]	% of total voting rights[2]
Bank of America Corporation	Indirect[3]	21,966,209	11.98
BlackRock, Inc.	Indirect[3]	20,516,280	11.16

1. Total voting rights attaching to the issued ordinary share capital of the company (excluding treasury shares) at the time of disclosure to the company
2. % of total voting rights at the date of disclosure to the company
3. Indirect holdings include qualifying financial instruments and contract for differences

Contracts with controlling shareholders

During the year there were no contracts of significance (as defined in the FCA's Listing Rules) between any group undertaking and a controlling shareholder, and no contracts for the provision of services to any group undertaking by a controlling shareholder.

Responsibilities of directors

Statement of directors' responsibilities in respect of the Annual Report and Accounts

The directors are responsible for preparing the Annual Report and Accounts and the financial statements in accordance with applicable law and regulation.

Company law requires the directors to prepare financial statements for each financial year. Under that law, the directors have prepared the group and the parent company financial statements in accordance with UK-adopted international accounting standards.

Under company law, 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 the profit or loss of the group for that period. In preparing the financial statements, the directors are required to:

- select suitable accounting policies and then apply them consistently;
- state whether applicable UK-adopted international accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements;
- make judgements and accounting estimates that are reasonable and prudent; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the group and parent company will continue in business.

The directors are responsible for safeguarding the assets of the group and parent company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The directors are also responsible for keeping adequate accounting records that are sufficient to show and explain the group's and parent company's transactions and disclose with reasonable accuracy at any time the financial position of the group and parent company and enable them to ensure that the financial statements and the Directors' Remuneration Report comply with the Companies Act 2006.

The directors are responsible for the maintenance and integrity of the parent company's website. Legislation in the UK governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Directors' confirmations

The directors consider that the Annual Report and Accounts, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the group's and parent company's position and performance, business model and strategy.

Each of the directors, whose names and functions are listed in the Governance section of the Annual Report and Accounts, confirm that, to the best of their knowledge:

- the group and parent company financial statements, which have been prepared in accordance with UK-adopted international accounting standards, give a true and fair view of the assets, liabilities and financial position of the group and parent company, and of the loss of the group; and
- the Strategic report includes a fair review of the development and performance of the business and the position of the group and parent company, together with a description of the principal risks and uncertainties that it faces.
- In the case of each director in office at the date the directors' report is approved:
- so far as the director is aware, there is no relevant audit information of which the group's and parent company's auditors are unaware; and
- they have taken all the steps that they ought to have taken as a director in order to make themselves aware of any relevant audit information and to establish that the group's and parent company's auditors are aware of that information.

The Directors' report and responsibilities statement was approved by the Board on 25th May 2023 and is signed on its behalf by:

Nick Cooper
General Counsel and Company Secretary

Independent auditors' report to the members of Johnson Matthey Plc

Report on the audit of the financial statements

Opinion

In our opinion:

- Johnson Matthey Plc's group financial statements and company financial statements (the "financial statements") give a true and fair view of the state of the group's and of the company's affairs as at 31 March 2023 and of the group's profit and the group's cash flows for the year then ended;
- the group financial statements have been properly prepared in accordance with UK-adopted international accounting standards as applied in accordance with the provisions of the Companies Act 2006;
- the company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards, including FRS 101 "Reduced Disclosure Framework", and applicable law); and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006.

We have audited the financial statements, included within the Annual Report and Accounts (the "Annual Report"), which comprise: the Consolidated Statement of Financial Position and Parent Company Statement of Financial Position as at 31 March 2023; the Consolidated Income Statement and Consolidated Statement of Total Comprehensive Income, the Consolidated Statement of Cash Flows, the Consolidated Statement of Changes in Equity and Parent Company Statement of Changes in Equity for the year then ended; and the notes to the financial statements, which include a description of the significant accounting policies.

Our opinion is consistent with our reporting to the Audit Committee.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities under ISAs (UK) are further described in the Auditors' responsibilities for the audit of the financial statements section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We remained independent of the group in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, which includes the FRC's Ethical Standard, as applicable to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

To the best of our knowledge and belief, we declare that non-audit services prohibited by the FRC's Ethical Standard were not provided.

Other than those disclosed in note 4, we have provided no non-audit services to the company or its controlled undertakings in the period under audit.

Our audit approach

Overview

Audit scope

- We conducted a full scope audit or specified procedures at 32 business units which together account for 83% of group revenue and 71% of group underlying profit before tax from continuing operations.
- We maintained regular contact with our component teams and evaluated the outcome of their audit work.

Key audit matters

- Refinery metal accounting (group and parent)
- Carrying value of goodwill (group and parent)
- Uncertain tax provisions (group and parent)
- Claims, uncertainties and other provisions (group and parent)

Materiality

- Overall group materiality: £21.1 million (2022: £21.8 million) based on approximately 5% of the three year average profit before tax from continuing operations, adjusted for loss on disposal of businesses, gains and losses on significant legal proceedings, major impairment and restructuring charges.
- Overall company materiality: £60 million (2022: £60 million) based on 1% of total assets. However the materiality is capped at £20 million (2021: £20 million) for the purpose of the audit of the consolidated financial statements, this being the maximum allocation of group materiality to a component.
- Performance materiality: £15.8 million (2022: £16.3 million) (group) and £15 million (2022: £15 million) (company).

The scope of our audit

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the financial statements.

Key audit matters

Key audit matters are those matters that, in the auditors' professional judgement, were of most significance in the 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) identified by the auditors, including 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, and any comments we make on the results of our procedures thereon, 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.

This is not a complete list of all risks identified by our audit.

Claims, uncertainties and other provisions is a new key audit matter this year. Divestment of the Health business and Battery Materials exit, which were key audit matters last year, are no longer included because these represent transactions that have been less complex and required less audit effort from the engagement team in the current year. Otherwise, the key audit matters below are consistent with last year.

Key audit matter	How our audit addressed the key audit matter
Refinery metal accounting (group and parent)	
Refer to the Significant issues considered by the Audit Committee within the Audit Committee Report and note 1 and 36 to the financial statements. As part of its refining activities the group processes a significant amount of metal on behalf of third parties, whereby the group must return pre-agreed recoverable quantities of refined metal to those parties at an agreed date. Any metal in excess of this pre-agreed quantity is retained by the group. As such, the group makes an estimate of how much metal it will recover as part of its refining operations. The majority of metal processed at refineries is owned by customers and is not held on the financial balance sheet of the group. As such, the group performs a metal balance sheet reconciliation to ensure quantities of precious metals held at year-end are appropriately understood, classified as either owned by Johnson Matthey or the customer and reconciled to its financial position. This ensures that only the group-owned inventory is recorded on the balance sheet and that the price allocated to this owned inventory is at the lower of cost and net realisable value. During the refining process there are a series of complex estimates including: (i) Estimation of the level of metal contained in the carrier material entering the refining process, the refined metal that leaves the refining process, and the residual metal in the refining process at year-end; (ii) Estimates of the process losses of precious metals that may be lost during the refining and fabrication process, and the adequacy of these provisions; (iii) Estimates of the metal in the refinery process as informed by refinery stocktakes, and the subsequent sampling and assaying to assess the precious metal content in stocktake samples; and (iv) Estimates of the net realisable value of unhedged metal held at year-end. Each of these estimates impacts different areas of the audit. The refining process and its associated estimates are an area of focus for our audit due to the inherent complexity of the accounting and amount of metal processed are deemed a significant risk due to the inherent complexity of the accounting and amount of metal processed.	We evaluated the design and operation of key controls at the main refining locations over refinery stocktakes and metal assaying procedures. We tested that the metal balance sheet was prepared and reviewed on a monthly basis. We tested the classification of precious metals at year-end on the metal balance sheet, to determine if metal was owned by the group or the customer. Our procedures included sending confirmations to customers, and testing the balance of customer metal that was in the refining process, but not contractually due. We assessed management's policy for recognising stocktake gains and losses arising from stocktakes. We attended physical stock counts at sites where these were performed by management. The purpose was to verify the existence of inventory and adherence to the group's stocktake processes, and the reasonableness of stocktake gains and losses at these sites. We assessed the underlying controls that have been implemented by management, to monitor potential inventory gains or losses through the refining process and stocktake results, to assess the likelihood and quantum of process losses (if any) of metal between the date of the stocktake and the year-end date. We assessed process loss provisions compared to historical metal gain revenue and refinery stocktake results. We tested that all unhedged metal was being held at the lower of cost and net realisable value, on an individual metal by metal methodology, with reference to external metal price data. We considered the adequacy of the group's disclosures about the degree of estimation involved in arriving at the value of metal inventory. Based on the procedures performed, we noted no material issues arising from our work.

Key audit matter	How our audit addressed the key audit matter
Carrying value of goodwill (group and parent) Refer to the Significant issues considered by the Audit Committee within the Audit Committee Report and notes 1, 5, 13, 36 and 38 to the financial statements. The group holds goodwill of £364 million (2022: £366 million) at 31 March 2023. Of this amount, £113 million (2022: £113 million) is held within the parent company. The group has significant goodwill arising from the acquisition of businesses and the carrying value is dependent on the financial performance of the cash generating unit (CGU) to which it relates. The two largest CGUs are Catalyst Technologies and Clean Air Heavy Duty Catalysts which account for £268m (2022: £266m) and £87m (2022: £83m) respectively of goodwill at 31 March 2023. The goodwill held in the parent company relates to the Catalyst Technologies CGU. The impairment assessments prepared by management reflect its best estimates of future cashflows. These estimates contain significant uncertainty and are inherently judgemental in nature, where changes in the key assumptions can result in materially different impairment charges or available headroom. As set out in note 1 management has considered the impacts of climate change in their models. This is therefore an area of focus in our audit procedures. In the year, an impairment charge of £4 million was recorded against goodwill in relation to the Diagnostic Services CGU as the fair value of the proceeds less costs to dispose was lower than the carrying value. Management's assessment of the goodwill in the other CGUs concluded that no impairment was required. Management included disclosures to explain its key judgements and estimates as part of notes 1 and 5.	We obtained management's value in use goodwill impairment models and agreed the forecast cash flows to board-approved budgets, assessed how these budgets are compiled, confirmed data accuracy and understood key related judgements and estimates. We assessed management's historical forecasting accuracy by comparing the prior year forecasts with actual results. This informed our independent sensitivity analysis. We performed work over each material CGU being the Catalyst Technologies and Clean Air Heavy Duty Catalysts CGUs. The nature and extent of work was commensurate with the level of headroom and sensitivity of the CGU to impairment. Our testing was focused on the key assumptions in the board-approved three year forecasts and we corroborated the assumptions to supporting evidence which included both internal and external sources of evidence. In addition, we assessed the appropriateness and impact of the specific growth assumptions applied by management for the period after the year three forecast but before a long term growth rate is applied (typically year ten). Management has included certain key assumptions relating to climate change. These include restricting the useful economic life applied in modelling Heavy Duty Catalysts to 2040 (2022: 2040), and the application of a negative growth rate from 2033 (2022: 2033). Working with our valuation experts we have considered external market outlooks and information on emission legislation to corroborate these assumptions. We engaged our valuations experts to assess the long term growth rate and discount rate for each CGU by comparison with third party information, past performance and relevant risk factors. Our procedures also included considering the overall level of risk in the future cash flow projections. Our procedures included testing the basis for management's business plans and expectations in line with the group's latest strategy and considering the latest industry outlooks used by management. We tested the mathematical integrity of the forecasts and of the value in use model, audited the allocation of central costs to the CGUs and agreed the carrying values in management's impairment models to underlying accounting records. We assessed management's sensitivity analysis and performed our own independent sensitivity analysis which were more severe than management's to assess whether a reasonable downside change in the key assumptions could give rise to a material impairment. We consider the disclosures with respect of goodwill, including the associated sensitivities to be appropriate. Based on the procedures performed, we noted no material issues arising from our work.

Key audit matter	How our audit addressed the key audit matter
Uncertain tax provisions (group and parent) Refer to the Significant issues considered by the Audit Committee and note 1 and 36 to the financial statements. The group operates in a number of international jurisdictions, and as a result there is risk of uncertain tax exposures arising around the group, as well as heightened risk around estimates in determining the tax effect of cross border transactions including transfer pricing arrangements. As at 31 March 2023 the group had provisions for uncertain tax liabilities of £97 million (2022: £103 million). Management's estimate of the range of possible outcomes is an increase in those liabilities by £66 million (2022: £83 million) to a decrease of £55 million (2022: £93 million). Where the precise impact of the tax laws and regulations on taxes payable with respect to profit arising in those jurisdictions is unclear, the group seeks to make reasonable estimates to determine the most likely amount in a range of possible outcomes. There is inherent judgement and estimation uncertainty involved in determining provisions for uncertain tax positions, as described by management in the accounting policies to the financial statements. Our audit focused on the most significant of exposures based on both the provision recorded and maximum possible exposure.	We engaged our tax specialists in support of our audit of tax and obtained an understanding of the group's tax strategy and risks. We recalculated the group's tax provisions and determined whether the treatments adopted were in line with the group's tax policies and had been applied consistently. We evaluated the key underlying assumptions and judgements, including considering the status of tax authority audits and enquiries through examining the latest correspondence and enquiring of management, and where applicable management's advisors. We considered the basis and support in particular for provisions not subject to tax audit, in comparison with our experience of similar situations. We discussed the recognition of specific uncertain tax positions with third-party tax advisors appointed by management to verify the key assumptions, judgements and likely outcome with respect to specific uncertain tax positions recognised. We confirmed the appropriateness of management's application of either a single best estimate, or a weighted average range of outcomes, for each exposure, as driven by the facts and circumstances under IFRIC 23. We evaluated the consistency of management's approach to identifying triggering events to reassess or record a provision for an exposure. We also evaluated the consistency of management's approach to establishing or changing prior provision estimates and validated that changes in provisions established in previous periods reflected a change in facts and circumstances. We consider the disclosures with respect to tax matters to be appropriate. Based on the procedures performed, we noted no material issues arising from our work.

Key audit matter	How our audit addressed the key audit matter
Claims, uncertainties and other provisions (group and parent)	
Refer to the Significant issues considered by the Audit Committee on page 98 and notes 4, 22, 32, 36 and 47 to the financial statements. This risk covers warranty provisions, product liability issues, and other litigious matters across the group. There is inherent judgement and estimation involved in determining when and how much to provide for claims and uncertainties. Due to the complex nature of the products offered by Johnson Matthey, the group at any point in time may be exposed to product liability issues including claims for damages or compensation. The assumptions underpinning these claims and the identification of when such claims arise are inherently judgemental. Careful consideration needs to be given as to how the claim and any potential exposure are estimated and subsequently accounted for. The group is also involved in various legal proceedings, including actual or threatened litigation and regulatory investigations. The number and nature of claims vary from year to year; note 32 discloses the major movements in the year. The two most significant movements included the closure of the contingent liability relating to failures in certain engine systems for which the group supplied a particular coated substrate as a component for that customer's emissions after-treatment systems and the new contingent liability arising following the sale of its Health Business in May 2022. The group discloses such risks as contingent liabilities where it is unable to make a reliable estimate of potential exposures or where it believes a possible outflow is not probable. If the group is unable to defend against such claims, these risks could give rise to a future liability.	For litigation matters, we read the summary of major litigation matters provided by management and held discussions with group and sector level general counsel. For a sample of matters, we obtained and reviewed correspondence with external legal counsel, including any particulars of claim. We have circularised external legal counsel to independently assess legal exposures and the expected outcome for material cases across the group. We reviewed board minutes and made inquiries of management to address the risk of undisclosed claims and uncertainties. We performed audit procedures to identify all third party legal counsel used by management and as appropriate included them in our circularisation. We applied professional scepticism in auditing both the likely outcome and quantification of exposures, including performing audit procedures over claims management determined to be immaterial, and being sceptical of where a constructive obligation existed but management considered a reliable estimate could not be made. As we deem it to be necessary we also instruct third party legal experts to support an independent assessment of possible outcomes of claims. Where material settlements have occurred we have agreed these to settlement agreements between the company and the claimant. We have assessed the level of provisioning and contingent liability disclosures, where relevant, in response to known claims. Based on the procedures performed, we noted no material issues arising from our work.

How we tailored the audit scope

We tailored the scope of our audit to ensure that we performed enough work to be able to give an opinion on the financial statements as a whole, taking into account the structure of the group and the company, the accounting processes and controls, and the industry in which they operate.

The group is structured across five sectors: Clean Air, PGM Services, Catalyst Technologies, Hydrogen Technologies and Value Businesses, as well as the central Corporate unit.

The financial statements are a consolidation of approximately 230 business units. We have identified each individual business unit, or a series of business units where they map to a single legal statutory entity, as a component. These components comprise the group's operating businesses and holding companies across the five sectors and corporate.

Based on our risk and materiality assessments, we determined which components required an audit of their complete financial information having considered the relative significance of each entity to the group, locations with significant inherent risks and the overall coverage obtained over each material line item in the consolidated financial statements.

We identified 23 business units which, in our view, required an audit of their complete financial information, due to size or risk characteristics.

In addition to the business units in full scope, we performed specified procedures or audit of specified financial statement line items at 9 business units covering revenue, trade and other receivables and deferred income, cash, inventory, metal inventory, accruals, fixed assets and depreciation, cost of sales and operating expenses and tested manual journal entries. This ensured that appropriate audit procedures were performed to achieve sufficient coverage over these financial statement line items.

The total 32 in-scope business units are located in numerous countries around the world. We used local teams in these countries to perform the relevant audit procedures. Of these, three business units have been determined to be financially significant based on their contribution to the group. These financially significant component teams are located in the UK and Macedonia.

The group consolidation, financial statement disclosures and corporate functions were audited by the group audit team. This included our work over the consolidation, litigation provisions, centrally recognised tax balances, goodwill, post-retirement benefits, earnings per share and treasury related balances. This scope of work, together with additional procedures performed at the group level, accounted for 83% of group revenue and 71% of group underlying profit before taxation from continuing operations. This provided the evidence we needed for our opinion on the consolidated financial statements taken as a whole. This was before considering the contribution to our audit evidence from performing audit work at the group level, including disaggregated analytical review procedures, which covers certain of the group's smaller and lower risk components that were not directly included in our group audit scope.

The impact of climate risk on our audit

Climate change is expected to present both risks and opportunities for the group. As explained in the Sustainability section of the Strategic Report , the group is mindful of its impact on the environment and is focussed on ways to reduce climate-related impacts as management continues to develop its plans towards a Net Zero pathway by 2040. Management's climate change initiatives and commitments will impact the group in a variety of ways, and while the group has started to quantify some of the impacts that may arise on its net zero pathway, the future financial impacts are clearly uncertain given the medium to long term horizon. Disclosure of the impact of climate change risk based on management's current assessment is incorporated in the Task Force on climate related financial disclosures ('TCFD') section of the Annual Report.

As part of our audit, we made enquiries of management to understand the extent of the potential impact of climate change on the group's business and the financial statements, including reviewing management's climate change risk assessment which was prepared with support from an external expert. We used our knowledge of the group to evaluate the risk assessment performed by management.

We assessed that the key areas in the financial statements which are more likely to be materially impacted by climate change are those areas that are based on future cash flows. As a result, we particularly considered how climate change risks and the impact of climate commitments made by the group would impact the assumptions made in the forecasts prepared by management that are used in the group's impairment analysis (see also key audit matter on Carrying value of goodwill) and for going concern purposes. We challenged how management had considered longer term physical risks such as severe weather related impacts, and shorter-term transitional risks such as the introduction of carbon taxes. Our procedures did not identify any material impact on our audit for the year ended 31 March 2023. We also checked the consistency of the disclosures in the TCFD section of the Annual Report with the relevant financial statement disclosures, including notes 1 and the going concern section of the accounting policies, and with our understanding of the business and knowledge obtained in the audit.

We confirmed with management and the Audit Committee that the estimated financial impacts of climate change will be reassessed prospectively and our expectation is that climate change disclosures will evolve as the understanding of the actual and potential impacts on the group's future operations are established with greater certainty.

Materiality

The scope of our audit was influenced by our application of materiality. We set certain quantitative thresholds for materiality. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures on the individual financial statement line items and disclosures and in evaluating the effect of misstatements, both individually and in aggregate on the financial statements as a whole.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

	Financial statements – group	Financial statements – company
Overall materiality	£21.1 million (2022: £21.8 million).	£60 million (2022: £60 million).
How we determined it	Approximately 5% of the three year average profit before tax from continuing operations, adjusted for loss on disposal of businesses, gains and losses on significant legal proceedings, major impairment and restructuring charges	1% of total assets. However the materiality is capped at £20 million (2021: £20 million) for the purpose of the audit of the consolidated financial statements, this being the maximum allocation of group materiality to a component
Rationale for benchmark applied	Adjusted (underlying) profit before tax from continuing operations is used as the materiality benchmark excluding amortisation of acquired intangibles and share of losses from associates. Management uses this measure as it believes that it reflects the underlying performance of the group and this is how the directors and key management personnel are measured on their performance. We did not adjust profit before tax to add back amortisation of acquired intangibles or share of losses of associates as in our view these are recurring items.	We considered total assets to be an appropriate benchmark for the parent company given that, whilst it does include trading businesses, it is the ultimate holding company, incurs corporate costs and enters into financing on behalf of the group. The materiality level was capped at £20 million given overall group materiality for the purposes of the audit of the consolidated financial statements, this being the maximum allocation of group materiality to a component.

For each component in the scope of our group audit, we allocated a materiality that is less than our overall group materiality. The range of materiality allocated across components was between £1 million and £20 million. Certain components were audited to a local statutory audit materiality that was also less than our overall group materiality.

We use performance materiality to reduce to an appropriately low level the probability that the aggregate of uncorrected and undetected misstatements exceeds overall materiality. Specifically, we use performance materiality in determining the scope of our audit and the nature and extent of our testing of account balances, classes of transactions and disclosures, for example in determining sample sizes. Our performance materiality was 75% (2022: 75%) of overall materiality, amounting to £15.8 million (2022: £16.3 million) for the group financial statements and £15 million (2022: £15 million) for the company financial statements.

In determining the performance materiality, we considered a number of factors – the history of misstatements, risk assessment and aggregation risk and the effectiveness of controls – and concluded that an amount at the upper end of our normal range was appropriate.

We agreed with the Audit Committee that we would report to them misstatements identified during our audit above £1 million (group audit) (2022: £1 million) and £1 million (company audit) (2022: £1 million) as well as misstatements below those amounts that, in our view, warranted reporting for qualitative reasons.

Conclusion relating to going concern

Our evaluation of the directors' assessment of the group's and the company's ability to continue to adopt the going concern basis of accounting included:

- Evaluation of management's base case and downside case scenarios, understanding and evaluating the key assumptions, including assumptions related to inflation and other macro-economic factors;
- Validation that the cash flow forecasts used to support management's impairment, going concern and viability assessments were consistent;
- Assessment of the historical accuracy and reasonableness of management's forecasting;
- Consideration of the group's available financing and debt maturity profile;
- Testing of the mathematical integrity of management's liquidity headroom, covenant compliance, sensitivity and stress testing calculations;
- Assessment of the reasonableness of management's planned or potential mitigating actions; and
- Review of the related disclosures in the Annual Report.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the group's and 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 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.

However, because not all future events or conditions can be predicted, this conclusion is not a guarantee as to the group's and the company's ability to continue as a going concern.

In relation to the directors' reporting on how they have 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.

Reporting on other information

The other information comprises all of the information in the Annual Report other than the financial statements and our auditors' report thereon. The directors are responsible for the other information, which includes reporting based on the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except to the extent otherwise explicitly stated in this report, any form of assurance thereon.

In connection with our audit of the financial statements, 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 audit, or otherwise appears to be materially misstated. If we identify an apparent material inconsistency or material misstatement, we are required to perform procedures to conclude whether there is a material misstatement of the financial statements or a material misstatement of the other information. 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 based on these responsibilities.

With respect to the Strategic report and Directors' Report, we also considered whether the disclosures required by the UK Companies Act 2006 have been included.

Based on our work undertaken in the course of the audit, the Companies Act 2006 requires us also to report certain opinions and matters as described below.

Strategic report and Directors' Report

In our opinion, based on the work undertaken in the course of the audit, the information given in the Strategic report and Directors' Report for the year ended 31 March 2023 is consistent with the financial statements and has been prepared in accordance with applicable legal requirements.

In light of the knowledge and understanding of the group and company and their environment obtained in the course of the audit, we did not identify any material misstatements in the Strategic report and Directors' Report.

Directors' Remuneration

In our opinion, the part of the Annual Report on Remuneration to be audited has been properly prepared in accordance with the Companies Act 2006.

Corporate governance statement

The Listing Rules require us to review the directors' statements in relation to going concern, longer-term viability and that part of the corporate governance statement relating to the company's compliance with the provisions of the UK Corporate Governance Code specified for our review. Our additional responsibilities with respect to the corporate governance statement as other information are described in the Reporting on other information section of this report.

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, and we have nothing material to add or draw attention to in relation to:

- The directors' confirmation that they have carried out a robust assessment of the emerging and principal risks;
- The disclosures in the Annual Report that describe those principal risks, what procedures are in place to identify emerging risks and an explanation of how these are being managed or mitigated;
- The directors' statement in the financial statements about whether they considered it appropriate to adopt the going concern basis of accounting in preparing them, and their identification of any material uncertainties to the group's and company's ability to continue to do so over a period of at least twelve months from the date of approval of the financial statements;
- The directors' explanation as to their assessment of the group's and company's prospects, the period this assessment covers and why the period is appropriate; and
- The directors' statement as to whether they have a reasonable expectation that the company will be able to continue in operation and meet its liabilities as they fall due over the period of its assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

Our review of the directors' statement regarding the longer-term viability of the group and company was substantially less in scope than an audit and only consisted of making inquiries and considering the directors' process supporting their statement; checking that the statement is in alignment with the relevant provisions of the UK Corporate Governance Code; and considering whether the statement is consistent with the financial statements and our knowledge and understanding of the group and company and their environment obtained in the course of the audit.

In addition, 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 that they consider the Annual Report, taken as a whole, is fair, balanced and understandable, and provides the information necessary for the members to assess the group's and company's position, performance, business model and strategy;
- The section of the Annual Report that describes the review of effectiveness of risk management and internal control systems; and
- The section of the Annual Report describing the work of the Audit Committee.

We have nothing to report in respect of our responsibility to report when the directors' statement relating to the company's compliance with the Code does not properly disclose a departure from a relevant provision of the Code specified under the Listing Rules for review by the auditors.

Responsibilities for the financial statements and the audit

Responsibilities of the directors for the financial statements

As explained more fully in the Statement of directors' responsibilities in respect of the Annual Report and Accounts, the directors are responsible for the preparation of the financial statements in accordance with the applicable framework and for being satisfied that they give a true and fair view. The directors are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the group's and the company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the group or the company or to cease operations, or have no realistic alternative but to do so.

Auditors' 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 auditors' 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.

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.

Based on our understanding of the group and industry, we identified that the principal risks of non-compliance with laws and regulations related to international tax regulations, environmental regulations, health and safety regulations (EHS), and anti bribery and corruption laws, and we considered the extent to which non-compliance might have a material effect on the financial statements. We also considered those laws and regulations that have a direct impact on the financial statements such as the Companies Act 2006. We evaluated management's incentives and opportunities for fraudulent manipulation of the financial statements (including the risk of override of controls), and determined that the principal risks were related to posting inappropriate journal entries, management bias in accounting estimates, expected credit losses, timing of recognition of litigation provisions and metal gains and losses. The group engagement team shared this risk assessment with the component auditors so that they could include appropriate audit procedures in response to such risks in their work. Audit procedures performed by the group engagement team and/or component auditors included:

- Discussions with management, internal audit and the group's legal advisors, and the head of ethics and compliance including consideration of known or suspected instances of non-compliance with laws and regulations and fraud;
- Reading the minutes of board meetings and the Ethics Committee, and assessment of "SpeakUp" matters through the ethics reporting line and the results of management's investigation into these matters (including engaging with our own forensics specialists where relevant);
- Reviewing financial statement disclosures to supporting documentation to assess compliance with applicable laws and regulations;
- Challenging management's significant judgements and estimates in particular those relating to the carrying value of goodwill, other intangibles and other assets, post-employment benefits, tax provisions, deferred tax assets, refining processes and stocktakes, climate change, metal accounting and provisions and contingent liabilities;
- Identifying and testing manual journal entries, in particular any journal entries posted with unusual account combinations, and all material consolidation journals;
- Incorporating unpredictable procedures into our audit approach including varying the timing and nature of testing performed; and
- Considering the outcome of key transactions in the year and the assessing the appropriateness of related accounting and disclosure within the financial statements.

There are inherent limitations in the audit procedures described above. We are less likely to become aware of instances of non-compliance with laws and regulations that are not closely related to events and transactions reflected in the financial statements. Also, the risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error, as fraud may involve deliberate concealment by, for example, forgery or intentional misrepresentations, or through collusion.

Our audit testing might include testing complete populations of certain transactions and balances, possibly using data auditing techniques. However, it typically involves selecting a limited number of items for testing, rather than testing complete populations. We will often seek to target particular items for testing based on their size or risk characteristics. In other cases, we will use audit sampling to enable us to draw a conclusion about the population from which the sample is selected.

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 auditors' report.

Use of this report

This report, including the opinions, has been prepared for and only for the company's members as a body in accordance with Chapter 3 of Part 16 of the Companies Act 2006 and for no other purpose. We do not, in giving these opinions, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

Other required reporting

Companies Act 2006 exception reporting

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- we have not obtained all the information and explanations we require for our audit; or
- adequate accounting records have not been kept by the company, or returns adequate for our audit have not been received from branches not visited by us; or
- certain disclosures of directors' remuneration specified by law are not made; or
- the company financial statements and the part of the Annual Report on Remuneration to be audited are not in agreement with the accounting records and returns.

We have no exceptions to report arising from this responsibility.

Appointment

Following the recommendation of the Audit Committee, we were appointed by the members on 18 July 2018 to audit the financial statements for the year ended 31 March 2019 and subsequent financial periods. The period of total uninterrupted engagement is five years, covering the years ended 31 March 2019 to 31 March 2023.

Other matter

In due course, as required by the Financial Conduct Authority Disclosure Guidance and Transparency Rule 4.1.14R, these financial statements will form part of the ESEF-prepared annual financial report filed on the National Storage Mechanism of the Financial Conduct Authority in accordance with the ESEF Regulatory Technical Standard ('ESEF RTS'). This auditors' report provides no assurance over whether the annual financial report will be prepared using the single electronic format specified in the ESEF RTS.

Graham Parsons (Senior Statutory Auditor)
for and on behalf of PricewaterhouseCoopers LLP
Chartered Accountants and Statutory Auditors

London

25 May 2023

Consolidated Income Statement

for the year ended 31st March 2023

	Notes	2023 £m	2022 £m
Revenue	2,3	14,933	16,025
Cost of sales		(13,939)	(14,971)
Gross profit		994	1,054
Distribution costs		(117)	(101)
Administrative expenses		(412)	(400)
Profit on disposal of businesses	27	12	106
Amortisation of acquired intangibles	4	(5)	(6)
Gains and losses on significant legal proceedings	4	(25)	42
Major impairment and restructuring charges	4,6	(41)	(440)
Operating profit	2,4	406	255
Finance costs	8	(110)	(101)
Investment income	8	49	41
Share of losses of associates	15	(1)	–
Profit before tax from continuing operations		344	195
Tax expense	9	(80)	(79)
Profit for the year from continuing operations		264	116
Profit / (loss) after tax from discontinued operations	26	12	(217)
Profit / (loss) for the year		276	(101)

		Pence	pence
Earnings / (loss) per ordinary share			
Basic	10	150.9	(52.6)
Diluted	10	150.2	(52.6)
Earnings per ordinary share from continuing operations			
Basic	10	144.2	60.9
Diluted	10	143.6	60.8

Consolidated Statement of Total Comprehensive Income

for the year ended 31st March 2023

	Notes	2023 £m	2022 £m
Profit / (loss) for the year		276	(101)
Other comprehensive (expense) / income			
Items that will not be reclassified to the income statement in subsequent years			
Remeasurements of post-employment benefit assets and liabilities	24	(149)	177
Fair value losses on equity investments at fair value through other comprehensive income		(12)	(5)
Tax on items that will not be reclassified to the income statement[1]		37	(35)
Total items that will not be reclassified to the income statement		(124)	137
Items that may be reclassified to the income statement			
Exchange differences on translation of foreign operations	25	33	75
Exchange differences on translation of discontinued foreign operations	26, 27	(32)	5
Amounts credited / (charged) to hedging reserve		114	(36)
Fair value losses on net investment hedges		(10)	(2)
Tax on above items taken directly to or transferred from equity[2]		(28)	10
Total items that may be reclassified to the income statement (in subsequent years)		77	52
Other comprehensive (expense) / income for the year		(47)	189
Total comprehensive income for the year		229	88
Total comprehensive income for the year arises from:			
Continuing operations		249	300
Discontinued operations	26	(20)	(212)
		229	88

1. The tax credit / (charge) on other comprehensive income that will not be reclassified to the income statement of £37 million (2022: £(35) million) relates to remeasurements of post-employment benefit assets and liabilities.
2. The tax (charge) / credit on other comprehensive income that may be reclassified to the income statement of £(28) million (2022: £10 million) relates to tax on amounts credited / (charged) to hedging reserve.

Consolidated Statement of Financial Position

as at 31st March 2023

	Notes	2023 £m	2022 £m
Assets			
Non-current assets			
Property, plant and equipment	11	1,332	1,238
Right-of-use assets	12	49	61
Goodwill	13	364	366
Other intangible assets	14	287	267
Investments in joint ventures and associates	15	75	2
Investments at fair value through other comprehensive income	29	49	45
Other receivables	17	113	42
Interest rate swaps		20	12
Other financial assets	18	48	–
Deferred tax assets	23	121	98
Post-employment benefit net assets	24	203	352
Total non-current assets		2,661	2,483
Current assets			
Inventories	16	1,702	1,549
Taxation recoverable		12	18
Trade and other receivables	17	1,882	1,796
Cash and cash equivalents		650	391
Other financial assets	18	47	27
Assets classified as held for sale	26	75	402
Total current assets		4,368	4,183
Total assets		7,029	6,666

The accounts were approved by the Board of Directors on 25th May 2023 and signed on its behalf by:

L Condon
S Oxley Directors

The notes on pages 150 to 221 form an integral part of the accounts.

	Notes	2023 £m	2022 £m
Liabilities			
Current liabilities			
Trade and other payables	19	(2,497)	(2,563)
Lease liabilities	12	(9)	(10)
Taxation liabilities		(105)	(97)
Cash and cash equivalents - bank overdrafts		(13)	(37)
Borrowings and related swaps	20	(155)	(265)
Other financial liabilities	18	(27)	(44)
Provisions	22	(63)	(56)
Liabilities classified as held for sale	26	(25)	(80)
Total current liabilities		(2,894)	(3,152)
Non-current liabilities			
Borrowings and related swaps	20	(1,460)	(899)
Lease liabilities	12	(31)	(40)
Deferred tax liabilities	23	(19)	(18)
Interest rate swaps		(15)	(2)
Employee benefit obligations	24	(41)	(72)
Other financial liabilities	18	–	(12)
Provisions	22	(28)	(28)
Trade and other payables	19	(2)	(2)
Total non-current liabilities		(1,596)	(1,073)
Total liabilities		(4,490)	(4,225)
Net assets		2,539	2,441
Equity			
Share capital	25	215	218
Share premium		148	148
Treasury shares		(19)	(24)
Other reserves	25	118	50
Retained earnings		2,077	2,049
Total equity		2,539	2,441

Consolidated Statement of Cash Flows

for the year ended 31st March 2023

	Notes	2023 £m*	2022 £m*
Cash flows from operating activities			
Profit before tax from continuing operations		344	195
Profit / (loss) before tax from discontinued operations		5	(239)
Adjustments for:			
Share of losses of associates		1	–
Profit on disposal of businesses	27	(23)	(106)
Depreciation		151	151
Amortisation		36	39
Impairment losses		27	632
(Profit) / loss on sale of non-current assets		(6)	2
Share-based payments		7	8
(Increase) / decrease in inventories		(139)	123
(Increase) / decrease in receivables		(102)	588
Decrease in payables		(4)	(783)
Increase in provisions		7	25
Contributions in excess of employee benefit obligations charge		(21)	(2)
Changes in fair value of financial instruments		22	19
Net finance costs		61	60
Income tax paid		(75)	(107)
Net cash inflow from operating activities		**291**	**605**
Cash flows from investing activities			
Interest received		28	32
Purchases of property, plant and equipment		(253)	(358)
Purchases of intangible assets		(63)	(95)
Purchases of investments held at fair value through other comprehensive income		(17)	–
Government grant income received		7	–
Proceeds from sale of non-current assets		8	1
Proceeds from sale of investment in joint ventures		2	–
Net proceeds from sale of businesses		187	160
Net cash outflow from investing activities		**(101)**	**(260)**

	Notes	2023 £m	2022 £m*
Cash flows from financing activities			
Purchase of treasury shares	25	(45)	(155)
Proceeds from borrowings		672	9
Repayment of borrowings		(281)	(140)
Dividends paid to equity shareholders	25	(141)	(139)
Interest paid		(94)	(111)
Principal element of lease payments		(14)	(14)
Net cash inflow / (outflow) from financing activities		**97**	**(550)**
Change in cash and cash equivalents		**287**	**(205)**
Exchange differences on cash and cash equivalents		4	6
Cash and cash equivalents at beginning of year		346	545
Cash and cash equivalents at end of year		**637**	**346**
Cash and deposits		129	254
Money market funds		521	137
Bank overdrafts		(13)	(37)
Bank overdrafts transferred to liabilities classified as held for sale		–	(8)
Cash and cash equivalents		**637**	**346**

* For cash flows of discontinued operations see note 26.

Consolidated Statement of Changes in Equity

for the year ended 31st March 2023

	Share capital £m	Share premium account £m	Treasury shares £m	Other reserves (note 25) £m	Retained earnings £m	Total equity £m
At 1st April 2021	221	148	(29)	–	2,345	2,685
Loss for the year	–	–	–	–	(101)	(101)
Remeasurements of post-employment benefit assets and liabilities	–	–	–	–	177	177
Fair value losses on investments at fair value through other comprehensive income	–	–	–	(5)	–	(5)
Exchange differences on translation of foreign operations	–	–	–	80	–	80
Amounts charged to hedging reserve	–	–	–	(36)	–	(36)
Fair value losses on net investment hedges taken to equity	–	–	–	(2)	–	(2)
Tax on other comprehensive income	–	–	–	10	(35)	(25)
Total comprehensive income	–	–	–	47	41	88
Dividends paid (note 25)	–	–	–	–	(139)	(139)
Purchase of treasury shares (note 25)	(3)	–	–	3	(200)	(200)
Share-based payments	–	–	–	–	15	15
Cost of shares transferred to employees	–	–	5	–	(13)	(8)
At 31st March 2022	218	148	(24)	50	2,049	2,441
Profit for the year	–	–	–	–	276	276
Remeasurements of post-employment benefit assets and liabilities	–	–	–	–	(149)	(149)
Fair value losses on investments at fair value through other comprehensive income	–	–	–	(12)	–	(12)
Exchange differences on translation of foreign operations	–	–	–	1	–	1
Amounts credited to hedging reserve	–	–	–	114	–	114
Fair value losses on net investment hedges taken to equity	–	–	–	(10)	–	(10)
Tax on other comprehensive income	–	–	–	(28)	37	9
Total comprehensive income	–	–	–	65	164	229
Dividends paid (note 25)	–	–	–	–	(141)	(141)
Purchase of treasury shares (note 25)	(3)	–	–	3	(1)	(1)
Share-based payments	–	–	–	–	18	18
Cost of shares transferred to employees	–	–	5	–	(14)	(9)
Tax on share-based payments	–	–	–	–	2	2
At 31st March 2023	215	148	(19)	118	2,077	2,539

Guide to financial statement disclosures

for the year ended 31st March 2023

Notes on the Accounts

for the year ended 31st March 2023

1 Accounting policies

The Company and the Group

Johnson Matthey plc (the 'Company') is a public company limited by shares incorporated under the Companies Act 2006 and domiciled in England in the United Kingdom. The consolidated accounts of the company for the year ended 31st March 2023 consist of the audited consolidation of the accounts of the Company and its subsidiaries (together referred to as the 'Group'), together with the employee share ownership trust and the group's interest in joint ventures and associates.

Basis of accounting and preparation – group

The financial statements of the group have been prepared in accordance with UK-adopted International Accounting Standards and with the requirements of the Companies Act 2006 as applicable to companies reporting under those standards.

The accounts are prepared on the historical cost basis, except for certain assets and liabilities which are measured at fair value as explained below.

The group accounts comprise the accounts of the parent company and its subsidiaries, including the employee share ownership trust, and include the group's interest in joint ventures and associates. Entities the group controls are accounted for as subsidiaries. Entities that are joint ventures or associates are accounted for using the equity method of accounting. Transactions and balances between group companies are eliminated. No profit is recognised on transactions between group companies.

The results of businesses acquired or disposed of in the year are consolidated from or up to the effective date of acquisition or disposal, respectively. The net assets of businesses acquired are recognised in the consolidated accounts at their fair values at the date of acquisition.

Going concern

The directors have reviewed a range of scenario forecasts for the group and have reasonable expectation that there are no material uncertainties that cast doubt about the group's ability to continue operating for at least twelve months from the date of approving these annual accounts.

As at 31st March 2023, the group maintains a strong balance sheet with around £1.6 billion of available cash and undrawn committed facilities. Free cash flow was positive in the year at £74 million. Net debt at 31st March 2023 was £1,023 million at 1.6 times net debt (including post tax pension deficits) to underlying EBITDA which was at the lower end of our target range.

Although impacted by the significant headwinds faced in the current macroeconomic environment such as high inflation, the impacts of Russia's war with Ukraine and uncertainty in outlook for major economies, the group's performance during the period was resilient, both in terms of underlying operating profit and cash flow. For the purposes of assessing going concern, we have revisited our financial projections using the latest forecasts for our base case scenario. The base case scenario was stress tested to a severe-but-plausible downside case which reflects severe recession scenarios.

The severe-but-plausible case for Clean Air modelled scenarios assuming a smaller light duty vehicle market from reduced vehicle production and/or market consumer demand disruption or greater share of zero emission vehicles in market, assumed to result in a 10% drop in sales. For PGMS and Catalyst Technologies, it also assumed a reduction in sales and associated operating profit based on adverse scenarios using external and internal market insights.

Additionally, as part of viability testing, the group considered scenarios including the impact from metal price volatility, higher inflation, delays in capital projects and delivery of cost transformation savings, and slow down of operations in China. Whilst the combined impact would reduce profitability and EBITDA against our latest forecast, our balance sheet remains strong with ample working capital and Net Debt/EBITDA ratios.

The group has a robust funding position comprising a range of long-term debt and a £1 billion five year committed revolving credit facility maturing in March 2027 which was entirely undrawn at 31st March 2023. There was £521 million of cash held in money market funds and £129 million of other cash and bank deposits. Of the existing loans, £151 million of term debt and £4 million of other bank loans mature in the period to June 2024. We assume no refinancing of this debt in our going concern modelling. As a long time, highly rated issuer in the US private placement market and having recently extended its UK Export Financing facility, the group expects to be able to access additional funding in its existing markets if required but the going concern conclusion is not dependant on such access as the company has sufficient financing and liquidity to fund its obligations in the base and severe-but-plausible scenarios. The group also has a number of additional sources of funding available including uncommitted metal lease facilities that support precious metal funding. Whilst we would fully expect to be able to utilise the metal lease facilities, they are excluded from our going concern modelling.

Conclusion

Under all scenarios above, the group has sufficient headroom against committed facilities and key financial covenants are not in breach during the going concern period. To give further assurance on liquidity, we have also undertaken a reverse stress test to identify what additional or alternative scenarios and circumstances would threaten our current financing arrangements. This shows that we have headroom against a further decline in profitability beyond the severe-but-plausible scenario or a significant increase in borrowings. Furthermore, the group has a range of levers which it could utilise to protect headroom including reducing capital expenditure, renegotiating payment terms and reducing future dividend distributions.

The directors are therefore of the opinion that the group has adequate resources to fund its operations for the period of at least twelve months following the date of this announcement these financial statements and there are no material uncertainties relating to going concern so determine that it is appropriate to prepare the accounts on a going concern basis.

1 Accounting policies continued

Significant accounting policies

The group's and parent company's accounting policies have been applied consistently during the current and prior year, other than where new policies have been adopted (see below). The group's and parent company's significant accounting policies are as follows:

Foreign currencies

Foreign currency transactions are recorded in the functional currency of the relevant subsidiary, joint venture, associate or branch at the exchange rate at the date of the transaction. Foreign currency monetary assets and liabilities are retranslated into the relevant functional currency at the exchange rate at the balance sheet date.

Income statements and cash flows of overseas subsidiaries, joint ventures, associates and branches are translated into sterling at the average rates for the year. Balance sheets of overseas subsidiaries, joint ventures, associates and branches, including any fair value adjustments and related goodwill, are translated into sterling at the exchange rates at the balance sheet date.

Exchange differences arising on the translation of the net investment in overseas subsidiaries, joint ventures, associates and branches, less exchange differences arising on related foreign currency financial instruments which hedge the group's net investment in these operations, are taken to other comprehensive income. On disposal of the net investment, the cumulative exchange difference is reclassified from equity to operating profit.

Other exchange differences are recognised in operating profit.

Revenue

Revenue represents income derived from contracts for the provision of goods and services by the parent company and its subsidiaries to customers in exchange for consideration in the ordinary course of the group's activities.

Performance obligations

Upon approval by the parties to a contract, the contract is assessed to identify each promise to transfer either a distinct good or service or a series of distinct goods or services that are substantially the same and have the same pattern of transfer to the customer. Goods and services are distinct and accounted for as separate performance obligations in the contract if the customer can benefit from them either on their own or together with other resources that are readily available to the customer and they are separately identifiable in the contract.

The group typically sells licences to its intellectual property together with other goods and services and, since these licences are not generally distinct in the context of the contract, revenue recognition is considered at the level of the performance obligation of which the licence forms part. Revenue in respect of performance obligations containing bundles of goods and services in which a licence with a sales or usage-based royalty is the predominant item is recognised when sales or usage occur.

Transaction price

At the start of the contract, the total transaction price is estimated as the amount of consideration to which the group expects to be entitled in exchange for transferring the promised goods and services to the customer, excluding sales taxes. Variable consideration, such as trade discounts, is included based on the expected value or most likely amount only to the extent that it is highly probable that there will not be a reversal in the amount of cumulative revenue recognised. The transaction price does not include estimates of consideration resulting from contract modifications until they have been approved by the parties to the contract. The total transaction price is allocated to the performance obligations identified in the contract in proportion to their relative stand-alone selling prices. Many of the group's and parent company's products and services are bespoke in nature and, therefore, stand-alone selling prices are estimated based on cost plus margin or by reference to market data for similar products and services.

Revenue recognition

Revenue is recognised as performance obligations are satisfied as control of the goods and services is transferred to the customer.

For each performance obligation within a contract, the group and parent company determine whether it is satisfied over time or at a point in time. Performance obligations are satisfied over time if one of the following criteria is satisfied:

- the customer simultaneously receives and consumes the benefits provided by the group's and parent company's performance as they perform;
- the group's and parent company's performance creates or enhances an asset that the customer controls as the asset is created or enhanced; or
- the group's and parent company's performance does not create an asset with an alternative use to the group and parent company and they have an enforceable right to payment for performance completed to date.

For more detail of our revenue recognition policy see note 3.

In the event that the group and parent company enter into bill-and-hold transactions at the specific request of customers, revenue is recognised when the goods are ready for transfer to the customer and when the group and parent company are no longer capable of directing those goods to another use.

Revenue includes sales of precious metal to customers and the precious metal content of products sold to customers.

Linked contracts under which the group and parent company sell or buy precious metal and commit to repurchase or sell the metal in the future are accounted for as finance transactions and no revenue is recognised in respect of the sale leg.

No revenue is recognised by the group or parent company in respect of non-monetary exchanges of precious metal on the basis that the counterparties are in the same line of business.

1 Accounting policies continued

Significant accounting policies continued

Consideration payable to customers

Consideration payable to customers in advance of the recognition of revenue in respect of the goods and services to which it relates is capitalised and recognised as a deduction to the revenue recognised upon transfer of the goods and services to the customer.

Costs to fulfil a contract

Contract fulfilment costs in respect of over time contracts are expensed as incurred. Contract fulfilment costs in respect of point in time contracts are accounted for under IAS 2, *Inventories*.

Contract receivables

Contract receivables represent amounts for which the group and parent company have an unconditional right to consideration in respect of unbilled revenue recognised at the balance sheet date.

Contract liabilities

Contract liabilities represent the obligation to transfer goods or services to a customer for which consideration has been received, or consideration is due, from the customer.

Finance costs and investment income

Finance costs that are directly attributable to the construction of an asset that necessarily takes a substantial period of time to get ready for its intended use are capitalised as part of the cost of that asset. Other finance costs and finance income are recognised in the income statement in the year incurred.

Research and development

Research expenditure is charged to the income statement in the year incurred. Development expenditure is charged to the income statement in the year incurred unless it meets the recognition criteria for capitalisation. When the recognition criteria have been met, any further development expenditure is capitalised as an intangible asset.

Property, plant and equipment

Property, plant and equipment is stated at cost less accumulated depreciation and any provisions for impairment. Depreciation is provided at rates calculated to write-off the cost less estimated residual value of each asset over its useful life and is recognised within administrative expenses. Certain buildings and plant and equipment are depreciated using the units of production method as this more closely reflects their expected consumption. All other assets are depreciated using the straight-line method. The useful lives vary according to the class of the asset, but are typically:

- buildings – 30 years; and
- plant and machinery – 4 to 10 years.
- land is not depreciated.

The expected lives of property, plant and equipment tends to be short to medium term, as such the physical risk posed by climate change in the long term is low.

Goodwill and other intangible assets

Goodwill arises on the acquisition of a business when the fair value of the consideration exceeds the fair value attributed to the net assets acquired (including contingent liabilities). It is subject to annual impairment reviews. Acquisition-related costs are charged to the income statement as incurred. The group and parent company have taken advantage of the exemption allowed under IFRS 1 and, therefore, goodwill arising on acquisitions made before 1st April 2004 is included at the carrying amount at that date less any subsequent impairments.

Other intangible assets are stated at cost less accumulated amortisation and any provisions for impairment. Customer contracts are amortised when the relevant income stream occurs. All other intangible assets are amortised by using the straight-line method over the useful lives from the time they are first available for use. Amortisation is recognised within administrative expenses. The estimated useful lives vary according to the specific asset, but are typically:

- customer contracts and relationships – 1 to 15 years;
- capitalised computer software – 3 to 10 years;
- patents, trademarks and licences – 3 to 20 years;
- acquired research and technology – 4 to 10 years; and
- capitalised development currently being amortised – 3 to 8 years.

Intangible assets which are not yet being amortised are subject to annual impairment reviews.

1 Accounting policies continued

Investments in joint ventures and associates

A joint venture is a joint arrangement whereby investees are able to exercise joint control of the arrangement.

Associates are entities over which the group exercises significant influence when it has the power to participate in the financial and operating policy decisions of the entity but it does not have the power to control or jointly control the entity.

Investments in joint ventures and associates are accounted for using the equity method of accounting and are initially recognised at cost. Thereafter the investments are adjusted to recognise the group's share of the post-acquisition profits or losses after tax of the investee in the income statement, and the group's share of movements in other comprehensive income of the investee in other comprehensive income. Dividends received or receivable from associates are recognised as a reduction in the carrying amount of the investment. The carrying value of the investments are reviewed for impairment triggers on a regular basis.

Where the group's share of losses in an equity-accounted investment equals or exceeds its interest in the entity, the group does not recognise further losses unless it has incurred obligations to do so.

Unrealised gains and losses on transactions between the group and its associates are eliminated to the extent of the group's interest in these joint ventures and associates.

Leases

Leases are recognised as a right-of-use asset, together with a corresponding lease liability, at the date at which the leased asset is available for use.

The right-of-use asset is initially measured at cost, which comprises the initial value of the lease liability, lease payments made (net of any incentives received from the lessor) before the commencement of the lease, initial direct costs and restoration costs. The right-of-use asset is depreciated on a straight-line basis over the shorter of the asset's useful life and the lease term in operating profit.

The lease liability is initially measured as the present value of future lease payments discounted using the interest rate implicit in the lease or, where this rate is not determinable, the group's incremental borrowing rate, which is the interest rate the group would have to pay to borrow the amount necessary to obtain an asset of similar value in a similar economic environment with similar terms and conditions. Interest is charged to finance costs at a constant rate of interest on the outstanding lease liability over the lease term.

Payments in respect of short-term leases, low-value leases and precious metal leases are charged to the income statement on a straight-line basis over the lease term in operating profit.

The group leases precious metals to fund temporary peaks in metal requirements provided market conditions allow. These leases are from banks for specified periods (less than 12 months) and the group pays a fee which is expensed on a straight-line basis over the lease term in finance costs. The group holds sufficient precious metal inventories to meet all the obligations under these lease arrangements as they fall due.

Inventories

Precious metal

Inventories of gold, silver and platinum group metals are valued according to the source from which the metal is obtained. Metal which has been purchased and committed to future sales to customers is valued at the price at which it is contractually committed, adjusted for unexpired contango and backwardation. Other precious metal inventories owned by the group, which are unhedged, are valued at the lower of cost and net realisable value using the weighted average cost formula.

Other

Non-precious metal inventories are valued at the lower of cost, including attributable overheads, and net realisable value. Except where costs are specifically identified, the first-in, first-out cost formula is used to value inventories.

Cash and cash equivalents

Cash and deposits comprise cash at bank and in hand and short-term deposits with a maturity date of three months or less from the date of acquisition. Money market funds comprise investments in funds that are subject to an insignificant risk of changes in fair value. The group and parent company routinely use short-term bank overdraft facilities, which are repayable on demand, as an integral part of their cash management policies and, therefore, cash and cash equivalents include cash and deposits, money market funds and bank overdrafts. Offset arrangements across group businesses have been applied to arrive at the net cash and overdraft figures.

At 31st March 2023 cash and cash equivalents includes £15 million (31st March 2022: £111 million) of restricted amounts relating to cash held in Russia. The prior year balance relates to restricted amounts in South Africa.

1 Accounting policies continued

Financial instruments

Investments and other financial assets

The group and parent company classify their financial assets in the following measurement categories:

- those measured at fair value either through other comprehensive income or through profit or loss; and
- those measured at amortised cost.

At initial recognition, the group and parent company measure financial assets at fair value plus, in the case of financial assets not measured at fair value through profit or loss, transaction costs that are directly attributable to their acquisition.

The group and parent company subsequently measure equity investments at fair value and have elected to present fair value gains and losses on equity investments in other comprehensive income. There is, therefore, no subsequent reclassification of cumulative fair value gains and losses to profit or loss following disposal of the investments.

The group and parent company subsequently measure trade and other receivables and contract receivables at amortised cost, with the exception of trade receivables that have been designated as at fair value through other comprehensive income because the group has certain operations with business models to hold trade receivables for collection or sale. All other financial assets, including short-term receivables, are measured at amortised cost less any impairment provision.

For the impairment of trade and contract receivables, the group and parent company apply the simplified approach permitted by *IFRS 9, Financial Instruments*, which requires expected lifetime losses to be recognised from initial recognition.

Derivative financial instruments

The group and parent company use derivative financial instruments, in particular forward currency contracts, currency swaps, interest rate swaps and commodity derivatives to manage the financial risks associated with their underlying business activities and the financing of those activities. The group and parent company do not undertake any speculative trading activity in derivative financial instruments.

Derivative financial instruments are measured at their fair value. Derivative financial instruments may be designated at inception as fair value hedges, cash flow hedges or net investment hedges if appropriate. For currency swaps designated as instruments in cash flow or net investment hedging relationships, the impact from currency basis spreads is included in the hedge relationship and may be a source of ineffectiveness recognised in the income statement.

Derivative financial instruments which are not designated as hedging instruments are classified as at fair value through profit or loss, but are used to manage financial risk. Changes in the fair value of any derivative financial instruments that are not designated as, or are not determined to be, effective hedges are recognised immediately in the income statement. The vast majority of forward precious metal price contracts are entered into and held for the receipt or delivery of precious metal and, therefore, are not recorded at fair value.

Cash flow hedges

Changes in the fair value of derivative financial instruments designated as cash flow hedges are recognised in other comprehensive income to the extent that the hedges are effective. Ineffective portions are recognised in the income statement immediately. If the hedged item results in the recognition of a non-financial asset or liability, the amount previously recognised in other comprehensive income is transferred out of equity and included in the initial carrying amount of the asset or liability. Otherwise, the amount previously recognised in other comprehensive income is transferred to the income statement in the same period that the hedged item is recognised in the income statement. If the hedging instrument expires or is sold, terminated or exercised or the hedge no longer meets the criteria for hedge accounting, amounts previously recognised in other comprehensive income remain in equity until the forecast transaction occurs. If a forecast transaction is no longer expected to occur, the amounts previously recognised in other comprehensive income are transferred to the income statement. If a forward precious metal price contract will be settled net in cash, it is designated and accounted for as a cash flow hedge.

Fair value hedges

Changes in the fair value of derivative financial instruments designated as fair value hedges are recognised in the income statement, together with the related changes in the fair value of the hedged asset or liability. Fair value hedge accounting is discontinued if the hedging instrument expires or is sold, terminated or exercised or the hedge no longer meets the criteria for hedge accounting.

Net investment hedges

For hedges of net investments in foreign operations, the effective portion of the gain or loss on the hedging instrument is recognised in other comprehensive income, while the ineffective portion is recognised in the income statement. Amounts taken to other comprehensive income are reclassified from equity to the income statement when the foreign operations are sold or liquidated.

Financial liabilities

Borrowings are measured at amortised cost. Those borrowings designated as being in fair value hedge relationships are remeasured for the fair value changes in respect of the hedged risk with these changes recognised in the income statement. All other financial liabilities, including short-term payables, are measured at amortised cost.

Precious metal sale and repurchase agreements

The group and parent company undertake linked contracts to sell or buy precious metal and commit to repurchase or sell the metal in the future. An asset representing the metal which the group and parent company have committed to sell or a liability representing the obligation to repurchase the metal are recognised in trade and other receivables or trade and other payables, respectively.

1 Accounting policies continued

Taxation

Current and deferred tax are recognised in the income statement, except when they relate to items recognised directly in equity, in which case the related tax is also recognised in equity.

Current tax is the amount of income tax expected to be paid in respect of taxable profits using the tax rates that have been enacted or substantively enacted at the balance sheet date.

Deferred tax is provided in full, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the balance sheet. It is provided using the tax rates that are expected to apply in the period when the asset or liability is settled, based on tax rates that have been enacted or substantively enacted at the balance sheet date.

Deferred tax assets are recognised to the extent that it is probable that future taxable profits will be available against which the temporary differences can be utilised. No deferred tax asset or liability is recognised in respect of temporary differences associated with investments in subsidiaries and branches where the group is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

Provisions and contingencies

Provisions are recognised when the group has a present obligation as a result of a past event and a reliable estimate can be made of a probable adverse outcome, for example warranties, environmental claims and restructuring. Otherwise, material contingent liabilities are disclosed unless the probability of the transfer of economic benefits is remote. Contingent assets are only disclosed if an inflow of economic benefits is virtually certain.

Share-based payments and treasury shares

The fair value of shares awarded to employees under the performance share plan, restricted share plan, long term incentive plan and deferred bonus plan is calculated by adjusting the share price on the date of allocation for the present value of the expected dividends that will not be received. The resulting cost is charged to the income statement over the relevant performance periods, adjusted to reflect actual and expected levels of vesting where appropriate.

The group and parent company provide finance to the employee share ownership trust (ESOT) to purchase company shares in the open market. Costs of running the ESOT are charged to the income statement. The cost of shares held by the ESOT is deducted in arriving at equity until they vest unconditionally with employees.

Post-employment benefits

The costs of defined contribution plans are charged to the income statement as they fall due.

For defined benefit plans, the group and parent company recognise the net assets or liabilities of the plans in their balance sheets. Assets are measured at their fair value at the balance sheet date. Liabilities are measured at present value using the projected unit credit method and a discount rate reflecting yields on high quality corporate bonds. The changes in plan assets and liabilities, based on actuarial advice, are recognised as follows:

- The current service cost is deducted in arriving at operating profit.
- The net interest cost, based on the discount rate at the beginning of the year, contributions paid in and the present value of the net defined benefit liabilities during the year, is included in finance costs.
- Past service costs and curtailment gains and losses are recognised in operating profit at the earlier of when the plan amendment or curtailment occurs and when any related restructuring costs or termination benefits are recognised.
- Gains or losses arising from settlements are included in operating profit when the settlement occurs.
- Remeasurements, representing returns on plan assets, excluding amounts included in interest, and actuarial gains and losses arising from changes in financial and demographic assumptions, are recognised in other comprehensive income.

Assets held for sale and discontinued operations

Non-current assets and disposal groups are classified as held for sale, if available for sale in its present condition and a sale is considered highly probable within 12 months. They are measured at the lower of their carrying amount and fair value less costs to sell. Assets and liabilities classified as held for sale are presented separately on the Balance Sheet. The assets are not depreciated or amortised while they are classified as held for sale.

An impairment loss is recognised in the Income Statement for any initial or subsequent write-down of the asset or disposal group to fair value less costs to sell. A gain is recognised for any subsequent increases in fair value less costs to sell of an asset or disposal group, but not in excess of any cumulative impairment loss previously recognised. A gain or loss not previously recognised by the date of the sale of the non-current asset (or disposal group) is recognised at the date of de-recognition.

A discontinued operation is a component of the group's business that either has been disposed of, or that is classified as held for sale and represents a separate major line of business or geographical area of operations, is part of a single co-ordinated plan to dispose of a separate major line of business or geographical area of operations or is a subsidiary acquired exclusively with a view to resale.

Classification as a discontinued operation occurs at the earlier of disposal or when the operation meets the criteria to be classified as held for sale. The results of discontinued operations are presented separately in the Income Statement. When an operation is classified as a discontinued operation, the comparative Income Statement and Statement of Total Comprehensive Income is restated as if the operation had been discontinued from the start of the comparative year.

1 Accounting policies continued

Sources of estimation uncertainty

Determining the carrying amounts of certain assets and liabilities at the balance sheet date requires estimation of the effects of uncertain future events. In the event that actual outcomes differ from those estimated, there may be an adjustment to the carrying amounts of those assets and liabilities within the next financial year. Other significant risks of material adjustment are the valuation of the liabilities of the defined benefit pension plans and tax provisions. The group and parent company have considered the refining process and stocktakes, deferred tax assets and climate change and, whilst not deemed to represent a significant risk of material adjustment to the group's and parent company's financial position during the year ending 31st March 2023, represent important accounting estimates.

Goodwill, other intangibles and other assets

The group and parent company have significant intangible assets from both business acquisitions and investments in new products and technologies. Some of those acquisitions and investments are at an early stage of commercial development and, therefore, carry a greater risk that they will not be commercially viable. Goodwill and intangible assets not yet ready for use are not amortised, but are subject to annual impairment reviews. Other intangible assets are amortised from the time they are first ready for use and, together with other assets, are assessed for impairment when there is a triggering event that provides evidence that they are impaired.

The impairment reviews require the use of estimates of future profit and cash generation based on financial budgets and plans approved by management, generally covering a three-year period and then extrapolated using long term growth rates, and the pre-tax discount rates used in discounting projected cash flows, see note 5.

Post-employment benefits

The group's and parent company's defined benefit plans are assessed annually by qualified independent actuaries. The estimate of the liabilities of the plans is based on a number of actuarial assumptions.

There is a range of possible values for each actuarial assumption and the point within that range is estimated to most appropriately reflect the group's and parent company's circumstances. Small changes in these assumptions can have a significant impact on the estimate of the liabilities of the plans. A description of those discount rate and inflation assumptions, together with sensitivity analysis, is set out in note 24 to the group and parent company accounts.

Tax provisions

Tax provisions are determined based on the tax laws and regulations that apply in each of the jurisdictions in which the group operates. Tax provisions are recognised where the impact of those laws and regulations is unclear and it is probable that there will be a tax adjustment representing a future outflow of funds to a tax authority or a consequent adjustment to the carrying value of a tax asset.

Provisions are measured using the best estimate of the most likely amount, being the most likely amount in a range of possible outcomes. The resolution of tax positions taken by the group can take a considerable period of time to conclude and, in some cases, it is difficult to predict the outcome. Group current income tax liabilities at 31st March 2023 of £106 million (2022: £97 million) include tax provisions of £97 million (2022: £103 million) and the estimation of the range of possible outcomes is an increase in those liabilities by £66 million (2022: £83 million) to a decrease of £55 million (2022: £93 million). The estimates made reflect where the group faces routine tax audits or is in ongoing disputes with tax authorities; has identified potential tax exposures relating to transfer pricing; or is contesting the tax deductibility of certain business costs.

Deferred tax assets

Deferred tax assets are recognised to the extent it is probable that future taxable profits will be available, against which the deductible temporary difference can be utilised, based on management's assumptions relating to future taxable profits.

Determination of future taxable profits requires application of judgement and estimates, including: market share, expected changes to selling prices, product profitability, precious metal prices and other direct input costs, based on management's expectations of future changes in the markets using external sources of information where appropriate. The estimates take account of the inherent uncertainties, constraining the expected level of profit as appropriate. Changes in these estimates will affect future profits and therefore the recoverability of the deferred tax assets.

Refining process and stocktakes

The group's and parent company's refining businesses process significant quantities of precious metal and there are uncertainties regarding the actual amount of metal in the refining system at any one time. The group's refining businesses process over four million ounces of platinum group metals per annum with a market value of around £6 billion. The majority of metal processed is owned by customers and the group and parent company must return pre-agreed quantities of refined metal based on assays of starting materials and other contractual arrangements, such as the timing of the return of metal. The group and parent company calculate the profits or losses of their refining operations based on estimates, including the extent to which process losses are expected during refining. The risk of process losses or stock take gains depends on the nature of the starting material being refined, the specific refining processes applied, the efficiency of those processes and the contractual arrangements.

Stocktakes are performed to determine the volume and value of metal within the refining system compared with the calculated estimates, with the variance being a profit or a loss. Stocktakes are, therefore, a key control in the assessment of the accuracy of the profit or loss of refining operations. Whilst refining is a complex, large-scale industrial process, the group and parent company have appropriate processes and controls over the movement of material in their refineries.

1 Accounting policies continued

Sources of estimation uncertainty continued

Climate change

The impact of climate change presented in the group's Strategic Report (see pages 45 to 52) and the stated net zero targets have been considered in preparing the group accounts.

The following considerations were made:

Impact on the going concern period and viability of the group over the next three years. The latest forecasts reflect the continuous investment in sustainable technologies including commercialisation of our products used in green hydrogen production and higher performance fuel cell components for a range of automotive, non-automotive and stationary applications.

The potential impact of climate change on a number of areas within the financial statements has been considered, including:

- The forecasts of cash flows used in impairment assessments for the carrying value of non-current assets including goodwill (see note 5).
- Recoverability of deferred tax assets.
- The expected lives of fixed assets and their exposure to the physical risk posed by climate change.

The expected lives of property, plant and equipment tends to be short to medium term, as such the physical risk posed by climate change in the long term is low.

Assets held for sale

Our estimate for the fair value less costs to sell of the Battery Materials business (£15 million) is based on third party valuations and our agreement with EV Metals Group plc.

Judgements made in applying accounting policies

Metal

The group and parent company use precious metal owned by customers in their production processes. It has been determined that this metal is not controlled by the group or parent company and, therefore, it is not recognised on the balance sheet.

The group and parent company manage precious metal inventories by entering into physically settled forward sales and purchases of metal positions in line with a well-established hedging policy. The own use exemption has been adopted for these transactions and, therefore, the group and parent company do not fair value such physically settled contracts.

The group undertakes linked contracts to sell or buy precious metal and commits to repurchase or sell the metal in the future to manage inventory levels. Accordingly, cash flows in respect of sale and repurchase agreements are shown as cash flows from operating activities in the cash flow statement rather than cash flows from financing activities.

Provisions and contingent liabilities

The group is involved in various disputes and claims which arise from time to time in the course of its business including, for example, in relation to commercial matters, product quality or liability, employee matters and tax audits. The group is also involved from time to time in the course of its business in legal proceedings and actions, engagement with regulatory authorities and in dispute resolution processes. Judgement is required to determine if an outflow of economic resources is probable, or possible but not probable for such events. Where it is probable, a liability is recognised and further judgement is used to determine the amount of the provision. Where it is possible but not probable, further judgement is used to determine if the likelihood is remote, in which case no disclosures are provided; if the likelihood is not remote then a contingent liability is disclosed. Provisions and contingent liabilities are set out in notes 22 and 32, respectively.

In the course of preparing the accounts, no other judgements have been made in the process of applying the group's and parent company's accounting policies, other than those involving estimations, that have had a significant effect on the amounts recognised in the accounts.

Changes in accounting policies

Amendments to accounting standards

The IASB has issued the following amendments, which have been endorsed by the UK Endorsement Board, for annual periods beginning on or after 1st January 2022:

- Annual improvements to IFRS Standards 2018-2020;
- Amendments to IAS 16, *Property, Plant and Equipment: Proceeds before intended use;*
- Amendments to IAS 37, *Onerous Contracts – Cost of Fulfilling a Contract;* and
- Amendments to IFRS 3, *Reference to the Conceptual Framework*.

These changes have not had a material impact on the group. The group has not early adopted any standard, interpretation or amendment that was issued but is not yet effective.

1 Accounting policies continued

Changes in accounting policies continued

Standards effective from 1st April 2023

IFRS 17, *Insurance Contracts*, applies to annual reporting periods beginning on or after 1st January 2023. The new Standard establishes the principles for the recognition, measurement, presentation and disclosure of insurance contracts within the scope of the Standard. The objective of IFRS 17 is to ensure that an entity provides relevant information that faithfully represents those contracts.

The group has performed an assessment to establish where an impact is expected and considers the impact of this new standard to be immaterial.

Non-GAAP measures

The group uses various measures to manage its business which are not defined by generally accepted accounting principles (GAAP). The group's management believes these measures provide valuable additional information to users of the accounts in understanding the group's performance. The group's non-GAAP measures are defined and reconciled to GAAP measures in note 34.

2 Segmental information

Revenue, sales and underlying operating profit by business

As announced in our preliminary full year results in May 2022, we have changed our reporting structure for the year ending 31st March 2023. The new reporting structure provides greater transparency and reflects how we manage our business. Efficient Natural Resources was split into two separate segments (PGM Services and Catalyst Technologies), and Hydrogen Technologies and Value Businesses are now separate operating segments (previously included within Other Markets). Excluding Corporate, the group has five reporting segments, aligned to the needs of our customers and the global challenges we are tackling.

Clean Air – provides catalysts for emission control after-treatment systems used in light and heavy duty vehicles powered by internal combustion engines.

PGM Services – enables the energy transition through providing circular solutions as demand for scarce critical materials increases. Provides a strategic service to the group, supporting the other segments with security of metal supply, and manufactures value add PGM products.

Catalyst Technologies – enables the decarbonisation of chemical and fuel value chains.

Hydrogen Technologies – provides catalyst coated membranes that are a critical component for fuel cells and electrolysers.

Value Businesses – a portfolio of businesses managed to drive shareholder value from activities considered to be non-core to the Group. This includes Battery Systems, Medical Device Components and Diagnostic Services[1]. Refer to note 27 for further information on the disposal of Battery Materials. Advanced Glass Technologies was sold on 31st January 2022 and is included within the prior period balances.

The Group Leadership Team (the chief operating decision maker as defined by IFRS 8, *Operating Segments*) monitors the results of these operating sectors to assess performance and make decisions about the allocation of resources. Each operating sector is represented by a member of the Group Leadership Team. These operating sectors represent the group's reportable segments and their principal activities are described on pages 56 to 59. The performance of the group's operating sectors is assessed on sales and underlying operating profit (see note 34). Sales between segments are made at market prices, taking into account the volumes involved.

Health was sold during the financial year and its results are therefore presented within discontinued operations. Information about this discontinued segment is provided in note 26.

1. The Group agreed to sell its Diagnostic Services business in May 2023 (see note 26).

2 Segmental information continued

Revenue, sales and underlying operating profit by business continued

Year ended 31st March 2023

	Clean Air £m	PGM Services £m	Catalyst Technologies £m	Hydrogen Technologies £m	Value Businesses £m	Corporate £m	Eliminations £m	Total from continuing operations £m
Revenue from external customers	6,273	7,360	673	62	565	–	–	14,933
Inter-segment revenue	–	3,227	14	–	–	–	(3,241)	–
Revenue	6,273	10,587	687	62	565	–	(3,241)	14,933
External sales	2,644	485	547	55	470	–	–	4,201
Inter-segment sales	–	85	13	–	–	–	(98)	–
Sales[1]	2,644	570	560	55	470	–	(98)	4,201
Underlying operating profit / (loss)[1]	230	257	51	(45)	40	(68)	–	465

Year ended 31st March 2022*

	Clean Air £m	PGM Services (restated) £m	Catalyst Technologies (restated) £m	Hydrogen Technologies (restated) £m	Value Businesses (restated) £m	Corporate £m	Eliminations £m	Total from continuing operations £m
Revenue from external customers	7,085	7,880	581	30	449	–	–	16,025
Inter-segment revenue	4	4,549	6	–	1	–	(4,560)	–
Revenue	7,089	12,429	587	30	450	–	(4,560)	16,025
External sales	2,455	497	448	25	353	–	–	3,778
Inter-segment sales	2	90	6	–	1	–	(99)	–
Sales[1]	2,457	587	454	25	354	–	(99)	3,778
Underlying operating profit / (loss)[1]	302	308	50	(33)	12	(86)	–	553

1. Sales and underlying operating profit are non-GAAP measures (see note 34). Sales excludes the sale of precious metals. Underlying operating profit excludes profit or loss on disposal of businesses, gain or loss on significant legal proceedings, together with associated legal costs, amortisation of acquired intangibles and major impairment and restructuring charges.

* The comparative period is restated to reflect the group's updated reporting segments. The overall group total is as previously reported.

2 Segmental information continued

Reconciliation from underlying operating profit to operating profit by sector

Year ended 31st March 2023

	Clean Air £m	PGM Services £m	Catalyst Technologies £m	Hydrogen Technologies £m	Value Businesses £m	Corporate £m	Total from continuing operations £m
Underlying operating profit / (loss)[1]	230	257	51	(45)	40	(68)	465
Profit on disposal of businesses (note 27)	–	–	–	–	12	–	12
Amortisation of acquired intangibles	(1)	–	(4)	–	–	–	(5)
Loss on significant legal proceedings	(25)	–	–	–	–	–	(25)
Major impairment and restructuring charges (note 6)	(13)	–	(4)	(1)	(14)	(9)	(41)
Operating profit / (loss)	191	257	43	(46)	38	(77)	406

Year ended 31st March 2022*

	Clean Air £m	PGM Services (restated) £m	Catalyst Technologies (restated) £m	Hydrogen Technologies (restated) £m	Value Businesses (restated) £m	Corporate £m	Total from continuing operations £m
Underlying operating profit / (loss)[1]	302	308	50	(33)	12	(86)	553
Profit on disposal of businesses	–	–	–	–	106	–	106
Amortisation of acquired intangibles	(2)	–	(4)	–	–	–	(6)
Gains and losses on significant legal proceedings	–	–	36	–	6	–	42
Major impairment and restructuring charges	(27)	(1)	(4)	–	(400)	(8)	(440)
Operating profit / (loss)	273	307	78	(33)	(276)	(94)	255

1. Underlying operating profit is a non-GAAP measure (see note 34). Underlying operating profit excludes profit or loss on disposal of businesses, gain or loss on significant legal proceedings, together with associated legal costs, amortisation of acquired intangibles and major impairment and restructuring charges.

* The comparative period is restated to reflect the group's updated reporting segments. The overall group total is as previously reported.

2 Segmental information continued

Other segmental information

Year ended 31st March 2023

	Clean Air £m	PGM Services £m	Catalyst Technologies £m	Hydrogen Technologies £m	Value Businesses £m	Corporate £m	Total £m
Segmental net assets	1,784	(2)	680	114	175	515	3,266
Net debt (note 34)							(1,023)
Post-employment benefit net assets and liabilities							162
Deferred tax net assets							102
Provisions and non-current other payables							(93)
Investments in joint ventures and associates (note 15)							75
Net assets held for sale (note 26)							50
Net assets							2,539
Property, plant and equipment	70	73	28	44	13	14	242
Intangible assets	11	6	14	2	–	28	61
Capital expenditure	81	79	42	46	13	42	303
Depreciation	74	24	26	4	10	13	151
Amortisation	2	2	5	–	–	27	36
Impairment losses and (reversals) (notes 5 and 6)	(4)	2	–	–	12	3	13
Total	72	28	31	4	22	43	200

2 Segmental information continued

Other segmental information continued

Year ended 31st March 2022*

	Clean Air £m	PGM Services (restated) £m	Catalyst Technologies (restated) £m	Hydrogen Technologies (restated) £m	Value Businesses (restated) £m	Corporate £m	Total £m
Segmental net assets	2,108	(702)	743	51	169	330	2,699
Net debt							(856)
Post-employment benefit net assets and liabilities							280
Deferred tax net assets							80
Provisions and non-current other payables							(86)
Investments in joint ventures and associates (note 15)							2
Net assets held for sale							322
Net assets							2,441
Property, plant and equipment	71	69	20	11	169	17	357
Intangible assets	1	2	7	–	26	53	89
Capital expenditure	72	71	27	11	195	70	446
Depreciation	63	21	26	2	13	13	138
Amortisation	2	2	5	–	1	29	39
Impairment losses (notes 5 and 6)	26	1	6	–	363	8	404
Total	91	24	37	2	377	50	581

* The comparative period is restated to reflect the group's updated reporting segments. The overall group total is as previously reported.

Refer to note 3 for further required disclosures per IFRS 8, *Operating Segments*.

3 Revenue

Products and services

The group's principal products and services by operating sector and sub-sector are disclosed in the table below, together with information regarding performance obligations and revenue recognition. Revenue is recognised by the group as contractual performance obligations to customers are completed.

Sub-sector	Primary industry	Principal products and services	Performance obligations	Revenue recognition
Clean Air				
Light Duty Catalysts	Automotive	Catalysts for cars and other light duty vehicles	Point in time	On despatch or delivery
Heavy Duty Catalysts	Automotive	Catalysts for trucks, buses and non-road equipment	Point in time	On despatch or delivery
PGM Services				
Platinum Group Metal Services	Various	Platinum Group Metal refining and recycling services	Over time	Based on output
		Platinum Group Metal trading	Point in time	On receipt of payment
		Other precious metal products	Point in time	On despatch or delivery
		Platinum Group Metal chemical, industrial products and catalysts	Point in time	On despatch or delivery
Catalyst Technologies				
Catalyst Technologies	Chemicals / oil and gas	Speciality catalysts and additives	Point in time	On despatch or delivery
		Process technology licences	Over time	Based on costs incurred or straight-line over the licence term[1]
		Engineering design services	Over time	Based on costs incurred
Hydrogen Technologies				
Fuel Cells technologies	Various	Fuel cell catalyst coated membrane	Point in time	On despatch or delivery
Electrolysis technology	Various	Electrolyser catalyst coated membrane	Point in time	On despatch or delivery
Value Businesses				
Other Markets (excluding Diagnostic Services)	Various	Precious metal pastes and enamels, battery systems and products found in devices used in medical procedures	Point in time	On despatch or delivery
Diagnostic Services	Oil and gas	Detection, diagnostic and measurement solutions	Over time	Based on costs incurred

1. Revenue recognition depends on whether the licence is distinct in the context of the contract.

Metal revenue: Metal revenue relates to the sales of precious metals to customers, either in pure form or contained within a product. Metal revenue arises in each of the reportable segments in the Group. Metal revenue is affected by fluctuations in the market prices of precious metals and, in many cases, the value of precious metals is passed directly on to customers. Given the high value of these metals this makes up a significant proportion of revenue.

3 Revenue continued

Revenue judgements

Over time revenue

Over time revenue recognition predominantly occurs in Catalyst Technologies and PGM Services (Refining Services), see criteria for over time recognition as defined by the group's accounting policies in note 1.

Refining Services

The majority of the metal processed by the group and parent company's refining businesses is owned by customers and, therefore, revenue is recognised over time on the basis that the group and parent company are providing a service to enhance an asset controlled by the customer. The customer controls the metal throughout the refining process, the key indicators being legal ownership, metal price risk and that the customer has the right to claim the equivalent metal at all stages of processing.

The performance obligation contained in all refining contracts is a service arrangement to refine customer metal to a specified quality and volume by a certain date. For a contract that has multiple metals, the refinement of each metal is a separate performance obligation. We receive the contracted cash fee which is set with reference to market price at the start of the contract. Upon delivery of the refined metal to the customer, the percentage of the refined metal that we may retain at settlement is considered to be a non-cash consideration and is recognised as part of revenue at fair value.

Revenue from refining services is recognised using an output method by estimating the progress of the metal in the refining process. Once the customer metal is in the refining process it is commingled with metal from other customers and it is not separately identifiable. Because we have a consistent volume of metal flowing through the refinery process, we estimate that all of the metal in the refinery is on average 50% of the way through the process. We therefore recognise up to 50% of the revenue (cash service fee and non-cash consideration) for our services when metal enters the refining process. Since refining each type of metal is a separate performance obligation, once we have returned the metal to the customer, we recognise the remaining 50% of revenue for that particular metal while other metal may still be due to the same customer.

Where refinery stocktakes indicate that metal recoveries have been lower than anticipated and/or allowed for in process loss provisioning, refined metal gain revenue is reduced accordingly. Where refinery stocktakes indicate that metal recoveries have been higher than anticipated, any incremental refining metal gain revenue is only recognised once it is highly probable that a reversal in the amount of cumulative revenue recognised will not occur and the metal has been sold.

3 Revenue continued

Revenue from external customers by principal products and services

Year ended 31st March 2023

	Continuing operations					
	Clean Air £m	PGM Services £m	Catalyst Technologies £m	Hydrogen Technologies £m	Value Businesses £m	Total £m
Metal	3,629	6,875	126	7	95	10,732
Heavy Duty Catalysts	970	–	–	–	–	970
Light Duty Catalysts	1,674	–	–	–	–	1,674
Catalyst Technologies	–	–	547	–	–	547
Platinum Group Metal Services	–	485	–	–	–	485
Fuel Cells	–	–	–	55	–	55
Battery Systems	–	–	–	–	284	284
Diagnostic Services	–	–	–	–	71	71
Medical Device Components	–	–	–	–	93	93
Other	–	–	–	–	22	22
Revenue	6,273	7,360	673	62	565	14,933

Year ended 31st March 2022*

	Continuing operations					
	Clean Air £m	PGM Services (restated) £m	Catalyst Technologies (restated) £m	Hydrogen Technologies (restated) £m	Value Businesses (restated) £m	Total £m
Metal	4,630	7,383	133	5	96	12,247
Heavy Duty Catalysts	849	–	–	–	–	849
Light Duty Catalysts	1,578	–	–	–	–	1,578
Catalyst Technologies	–	–	448	–	–	448
Platinum Group Metal Services	–	497	–	–	–	497
Fuel Cells	–	–	–	25	–	25
Battery Materials	–	–	–	–	12	12
Battery Systems	–	–	–	–	151	151
Advanced Glass Technologies	–	–	–	–	62	62
Diagnostic Services	–	–	–	–	54	54
Medical Device Components	–	–	–	–	74	74
Other	28	–	–	–	–	28
Revenue	7,085	7,880	581	30	449	16,025

* The comparative period is restated to reflect the group's updated reporting segments. The overall group total is as previously reported.

3 Revenue continued

Revenue from external customers by point in time and over time performance obligations

Year ended 31st March 2023

	Continuing operations					
	Clean Air £m	PGM Services £m	Catalyst Technologies £m	Hydrogen Technologies £m	Value Businesses £m	Total £m
Revenue recognised at a point in time	6,273	7,096	555	62	534	14,520
Revenue recognised over time	–	264	118	–	31	413
Revenue	6,273	7,360	673	62	565	14,933

Year ended 31st March 2022*

	Continuing operations					
	Clean Air £m	PGM Services (restated) £m	Catalyst Technologies (restated) £m	Hydrogen Technologies (restated) £m	Value Businesses (restated) £m	Total £m
Revenue recognised at a point in time	7,085	7,596	491	30	423	15,625
Revenue recognised over time	–	284	90	–	26	400
Revenue	7,085	7,880	581	30	449	16,025

* The comparative period is restated to reflect the group's updated reporting segments. The overall group total is as previously reported.

3 Revenue continued

Geographical analysis of revenue from external customers and non-current assets

The group's country of domicile is the UK. Revenue from external customers based on the customer's location and non-current assets based on the location of the assets are disclosed below.

	Revenue from external customers		Non-current assets	
	2023 £m	2022 £m	**2023 £m**	2022 £m
UK	**3,630**	2,845	**852**	733
Germany	**1,256**	1,600	**239**	244
Rest of Europe	**1,875**	2,001	**326**	292
USA	**2,779**	2,756	**451**	280
Rest of North America	**612**	597	**34**	40
China (including Hong Kong)	**1,649**	2,326	**201**	221
Rest of Asia	**2,287**	2,517	**147**	145
Rest of World	**845**	1,383	**18**	21
			2,268	1,976
Investments at fair value through other comprehensive income			**49**	45
Interest rate swaps			**20**	12
Deferred tax assets			**121**	98
Post-employment benefit net assets			**203**	352
Total	**14,933**	16,025	**2,661**	2,483

Major customers

The group received £1.6 billion of revenue from one external customer in the Clean Air sector which represents more than 10% of the group's revenue from external customers during the year ended 31st March 2023 (2022: £1.7 billion of revenue from one external customer in the Clean Air sector).

Unsatisfied performance obligations

At 31st March 2023, for contracts that had an original expected duration of more than one year, the group had unsatisfied performance obligations of £967 million (2022: £1,039 million), representing contractually committed revenue to be recognised at a future date. Of this amount, £394 million (2022: £244 million) is expected to be recognised within one year and £573 million (2022: £795 million) is expected to be recognised after one year.

Payment terms

The group and parent company supply goods and services on payment terms that are consistent with those standard across the industry and it does not have any customer contracts with a material financing component. Where revenue is recognised over time, payment terms are generally consistent with the timeframe over which revenue is recognised.

4 Operating profit

Operating profit from continuing operations is arrived at after charging / (crediting):

	2023 £m	2022 £m
Total research and development expenditure	213	201
Less: Development expenditure capitalised	–	(22)
Research and development expenditure charged to the income statement	213	179
Less: External funding received from governments	(19)	(18)
Net research and development expenditure charged to the income statement	194	161
Inventories recognised as an expense	12,962	14,121
Write-down of inventories recognised as an expense	39	26
Reversal of write-down of inventories from increases in net realisable value	(19)	(16)
Net gains on foreign exchange	(11)	(2)
Net losses on foreign currency forwards at fair value through profit or loss	19	6
Past service credit	(20)	(11)
Depreciation of:		
Property, plant and equipment	137	125
Right-of-use assets	14	13
Depreciation	151	138
Amortisation of:		
Internally generated intangible assets	1	1
Acquired intangibles	5	6
Other intangible assets	30	32
Amortisation	36	39
Gains and losses on significant legal proceedings	25	(42)
Profit on disposal of businesses (note 27)	(12)	(106)
Impairment losses included in administrative expenses	3	3
Impairment losses (note 5)	3	3
Impairment losses and reversals included in major impairment and restructuring charges	10	401
Restructuring charges included in major impairment and restructuring charges	31	39
Major impairment and restructuring charges (note 6)	41	440

Gains and losses on significant legal proceedings

During the year, the group paid £25 million in respect of a settlement with a customer on mutually acceptable terms with no admission of fault relating to failures in certain engine systems for which the group supplied a particular coated substrate as a component for that customer's emissions after-treatment systems.

4 Operating profit continued

Gains and losses on significant legal proceedings continued

During the prior year, the group recognised a gain of £44 million in relation to damages and interest from a company found to have unlawfully copied one of our technology designs. An additional gain of £6 million was recognised following conclusion of legal proceedings associated to investments in Battery Materials, this was partially offset by a £8 million charge for environmental and other costs.

Gains and losses on significant legal proceedings are reported as non-underlying, see note 34.

	2023 £m	2022 £m
Fees payable to the company's auditor and its associates for:		
The audit of these accounts	2.2	2.1
The audit of the accounts of the company's subsidiaries	2.4	2.4
The audit of prior period accounts	0.2	0.2
Total audit fees	4.8	4.7
Audit-related assurance services	0.4	0.4
Total non-audit fees	0.4	0.4
Total fees payable to the company's auditor and its associates	5.2	5.1

No audit fees were paid to other auditors (2022: £nil).

Audit-related assurance services predominantly comprise of reviews of interim financial information.

5 Impairment losses

During the year ended 31st March 2023, as part of our review for impairment triggers an impairment loss has been recognised in the group income statement within underlying operating profit. These losses are stated below:

	2023 £m	2022 £m
Other intangible assets	–	1
Property, plant and equipment	3	2
Total impairment losses included in administrative expenses	**3**	**3**

Total impairment losses incurred for the year of £13 million is comprised of net major impairment losses of £10 million (see note 6) and £3 million of impairment losses included within administrative expenses.

Goodwill

Impairment testing

The group and parent company test goodwill annually for impairment or more frequently if there are indications that goodwill might be impaired. The recoverable amounts of the cash-generating units (CGUs) are determined using value in use calculations which generally use cash flow projections based on financial budgets and plans covering a three-year period approved by management. The budgets and plans are based on a number of assumptions, including market share, impact of carbon pricing, expected changes to selling prices, product profitability, precious metal prices and other direct input costs, based on past experience and management's expectations of future changes in the markets using external sources of information where appropriate. We also considered the physical risk of climate change – including the effect of extreme weather events at sample strategic sites, based on internal and external analysis.

Significant CGUs

Goodwill arising on the acquisition of businesses is allocated, at acquisition, to the CGUs that are expected to benefit from that business combination. These CGUs represent the smallest identifiable groups of assets that generate cash inflows that are largely independent of the cash inflows from other groups of assets. Goodwill allocated to the significant CGUs is as follows:

	Group	
	2023 £m	2022 £m
Clean Air		
• Heavy Duty Catalysts	87	83
Catalyst Technologies	268	265
Value Businesses		
• Other[1,2]	9	18
Total carrying amount at 31st March (note 13)	**364**	**366**

1. Other is comprised of CGUs with goodwill balances individually less than £5 million.
2. Diagnostic Services goodwill has been impaired by £4 million. Refer to note 6 for further information.

5 Impairment losses continued

Key assumptions used in value in use

Unallocated corporate costs are split between CGUs based on their share of contribution. The three-year cash flows are extrapolated using the long term average growth rates for the relevant products, industries and countries in which the CGUs operate.

The expected economic life of the Heavy Duty Catalysts has been restricted to 2040 reflecting internal climate change targets and impact of legislation changes. In the medium term, growth will come from tightening emissions legislation driving demand for more sophisticated catalyst systems. Beyond the medium term, the world will increasingly use alternatives to the internal combustion engine which is reflected in the long-term decline rate used in our modelling.

Pre-tax discount rates, derived from the group's post-tax weighted average cost of capital of 8.0% (2022: 7.7%), adjusted for the risks applicable to each CGU are used to discount these projected risk-adjusted cash flows.

The key assumptions are:

	Discount rate		Long term growth rate	
	2023	2022	**2023**	2022
Clean Air				
• Heavy Duty Catalysts	**12.1%**	11.6%	**−10.5%**	−15.1%
Catalyst Technologies	**10.8%**	10.2%	**3.0%**	3.0%

Different long term growth rates are used for the Clean Air - Heavy Duty Catalysts CGU because of expected macroeconomic trends in the industry in which the business operates. The growth rate for years four to ten is expected to be 2.2% (2022: 2.7%). After that, growth is expected to decline and, therefore, the long term growth rate above is used for year eleven onwards.

Sensitivity analysis

The headroom for the significant CGUs, calculated as the difference between net assets including allocated goodwill at 31st March 2023 and the value in use calculations, is shown below. The table also shows, for each significant CGU, the headroom assuming a 1% decrease in the growth rate assumption and a 1% increase in the discount rate assumption used in the value in use calculations.

	Headroom as at 31st March 2023 £m	Headroom assuming a 1% decrease in the growth rate £m	Headroom assuming a 1% increase in the discount rate £m
Clean Air			
• Heavy Duty Catalysts	383	349	329
Catalyst Technologies	662	482	471

A reduction in the Heavy Duty Catalysts CGU's expected economic life by one year reduces headroom by approximately £13 million from £383 million. We don't expect an impairment in the near term in Clean Air despite the declining long-term assumptions.

A reduction in operating margin of 1% in the Catalyst Technologies CGU in each of the future years, with no mitigating actions taken, reduces headroom by approximately £90 million from £662 million.

6 Major impairment and restructuring charges

The below amounts are excluded from the underlying operating profit of the group for continuing operations.

	2023 £m	2022 £m
Property, plant and equipment	17	238
Right-of-use assets	–	4
Goodwill	4	45
Other intangible assets	3	78
Inventories	(8)	17
Trade and other receivables	(6)	19
Impairment losses and reversals	10	401
Restructuring charges	31	39
Total major impairment and restructuring charges	41	440

Major impairment and restructuring charges are shown separately on the face of the income statement and excluded from underlying operating profit (see note 34).

Major impairments

The group's net impairment charge of £10 million includes further impairment charges to plants and related production assets in Clean Air as the sector continues to consolidate its existing capacity into new, more efficient plants in order to create a simplified and agile structure. Further impairment charges were also recognised in relation to parts of the Battery Materials business reflecting elements of the contract to sell the business to EV Metals Group.

On 3rd May 2023 the group announced the sale of its Diagnostic Services business to Sullivan Street Partners. The business is presented as held for sale (refer to note 26) at fair value less estimated costs to sell. This has resulted in an impairment to goodwill of £4 million (see note 5).

The major impairments charge also includes impairment reversals for previously impaired Clean Air equipment that has been re-purposed, and Russia related inventories and receivables that have subsequently been recovered in cash. Although this cash is reported as restricted (see note 1), there are no impairment indicators.

Major restructuring

The group's transformation programme was launched in May 2022 and was designed to drive increased competitiveness, improved execution capability and create financial headroom to facilitate further investment in high growth areas. Restructuring charges of £17 million have been recognised of which the majority is redundancy and implementation costs. The remaining charge is related to Clean Air's ongoing plant consolidation initiatives.

7 Employee information

Employee numbers

	2023	2022*
Clean Air	5,668	5,846
PGM Services	1,839	1,791
Catalyst Technologies	1,623	1,530
Hydrogen Technologies	418	335
Value Businesses	1,363	1,836
Corporate[1]	1,590	1,259
Monthly average number of employees	**12,501**	**12,597**

1. The Corporate segment includes global functions serving our business units including procurement, HR, IT and shared service centres.

* Restated to reflect classification of the Health segment as discontinued operations (see note 26).

	2023 £m	2022 £m
Wages and salaries	604	583
Social security costs	70	60
Post-employment costs (note 24)	40	62
Share-based payments (note 30)	18	13
Termination benefits	1	3
Employee benefits expense from continuing operations	**733**	**721**

8 Investment income and financing costs

	2023 £m	2022 £m
Net loss on remeasurement of foreign currency swaps held at fair value through profit or loss	(20)	(19)
Interest payable on financial liabilities held at amortised cost and interest on related swaps	(55)	(45)
Interest payable on other liabilities[1]	(33)	(35)
Interest payable on lease liabilities	(2)	(2)
Total finance costs	**(110)**	**(101)**
Net gain on remeasurement of foreign currency swaps held at fair value through profit or loss	9	6
Interest receivable on financial assets held at amortised cost	11	2
Interest receivable on other assets[1]	21	31
Interest on post-employment benefits	8	2
Total investment income	**49**	**41**
Net finance costs from continuing operations	**(61)**	**(60)**

1. Interest payable and receivable on other liabilities and assets mainly comprises interest on precious metal leases and the amortisation of contango and backwardation on precious metal inventory and sale and repurchase agreements.

9 Tax expense

	2023 £m	2022 £m
Current tax		
Corporation tax on profit for the year	95	55
Adjustment for prior years	1	(5)
Total current tax	**96**	**50**
Deferred tax		
Origination and reversal of temporary differences	(37)	(1)
Adjustment for prior years	14	8
Total deferred tax (note 23)	**(23)**	**7**
Tax expense	**73**	**57**

The tax expense can be reconciled to profit before tax in the income statement as follows:

	2023 £m	2022 £m
Profit before tax from continuing operations	344	195
Profit / (Loss) before tax from discontinued operations	5	(239)
Profit / (loss) before tax	**349**	**(44)**
Tax expense / (credit) at UK corporation tax rate of 19% (2022: 19%)	66	(8)
Effects of:		
Overseas tax rates	5	13
Expenses not deductible for tax purposes	5	9
Losses and other temporary differences not recognised	8	1
Impairment and restructuring charges	–	70
Recognition or utilisation of previously unrecognised tax assets	(7)	(1)
Adjustment for prior years	15	3
Patent box / Innovation box	(7)	(10)
Other tax incentives	(3)	(5)
Tax rate adjustments	(1)	(1)
Disposal of businesses	(13)	(28)
Irrecoverable withholding tax	10	9
Other	(5)	5
Tax expense	**73**	**57**
Tax expense from continuing operations	80	79
Tax credit from discontinued operations	(7)	(22)
Tax expense	**73**	**57**

In the March 2021 Budget the UK Government announced that legislation will be introduced in Finance Bill 2021 to increase the main rate of UK corporation tax from 19% to 25%, effective 1st April 2023. The legislation increasing the tax rate to 25% was substantially enacted on 24th May 2021. Deferred tax balances at 31st March 2023 have been measured using the enacted tax rate of 25%.

Adjustments for prior years includes current and deferred tax adjustments in respect of the UK, US, Japan and Germany, as well as adjustments in respect of provisions for uncertain tax positions.

Other tax incentives includes research and development tax incentives in the US and China and other tax incentives in Poland.

Other movements mainly includes movements in respect of provisions for uncertain tax positions and non-taxable income.

10 Earnings / (loss) per ordinary share

Earnings / (loss) per ordinary share have been calculated by dividing loss or profit for the year by the weighted average number of shares in issue during the year.

	2023 pence	2022 pence
Earnings / (loss) per share		
Basic	150.9	(52.6)
Diluted	150.2	(52.6)
Basic from continuing operations	144.2	60.9
Diluted from continuing operations	143.6	60.8

See note 26 for the earnings per ordinary share from discontinued operations.

	2023	2022
Earnings / (loss) (£ million)		
Basic and diluted earnings / (loss)	276	(101)
Weighted average number of shares in issue		
Basic	183,012,301	191,568,756
Dilution for long-term incentive plans	851,432	585,024
Diluted	**183,863,733**	**192,153,780**

Presented earnings / (loss) per ordinary share have been calculated using unrounded numbers.

11 Property, plant and equipment

Group

	Land and buildings £m	Leasehold improvements £m	Plant and machinery £m	Assets in the course of construction £m	Total £m
Cost					
At 1st April 2021	667	31	2,310	377	3,385
Additions	1	1	38	339	379
Transferred to assets classified as held for sale	(107)	(5)	(392)	(282)	(786)
Transfers from assets in the course of construction	11	1	120	(132)	–
Disposals	(1)	–	(25)	(1)	(27)
Disposal of businesses	(13)	(1)	(44)	(1)	(59)
Exchange adjustments	12	–	48	4	64
At 31st March 2022	570	27	2,055	304	2,956
Additions	1	–	24	217	242
Transferred to assets classified as held for sale (note 26)	–	(1)	(41)	–	(42)
Transfers from assets in the course of construction	22	2	128	(152)	–
Disposals	(1)	(1)	(33)	(13)	(48)
Disposal of businesses (note 27)	–	–	(10)	–	(10)
Exchange adjustments	7	1	28	4	40
At 31st March 2023	599	28	2,151	360	3,138

	Land and buildings £m	Leasehold improvements £m	Plant and machinery £m	Assets in the course of construction £m	Total £m
Accumulated depreciation and impairment					
At 1st April 2021	321	17	1,606	17	1,961
Charge for the year	18	2	117	–	137
Impairment losses (notes 5, 6 and 26)	21	–	64	210	295
Transferred to assets classified as held for sale	(91)	(4)	(335)	(210)	(640)
Disposals	(1)	–	(23)	–	(24)
Disposal of businesses	(8)	(2)	(38)	–	(48)
Exchange adjustments	5	1	33	(2)	37
At 31st March 2022	265	14	1,424	15	1,718
Charge for the year	17	1	119	–	137
Impairment losses (notes 5, 6 and 26)	–	–	8	4	12
Transferred to assets classified as held for sale (note 26)	–	(1)	(31)	–	(32)
Disposals	(1)	–	(33)	(11)	(45)
Disposal of businesses (note 27)	–	–	(8)	–	(8)
Exchange adjustments	3	1	20	–	24
At 31st March 2023	284	15	1,499	8	1,806
Carrying amount at 31st March 2023	315	13	652	352	1,332
Carrying amount at 31st March 2022	305	13	631	289	1,238
Carrying amount at 1st April 2021	346	14	704	360	1,424

Finance costs capitalised were £2 million (2022: £5 million) and the capitalisation rate used to determine the amount of finance costs eligible for capitalisation was 4.0% (2022: 4.2%).

During the year, the group recognised impairments of £12 million. The impairment charge is comprised of £3 million included in administrative expenses, see note 5, and a net £9 million charge included in non-underlying expenses.

During the prior year, the group recognised impairments of £295 million. The impairment charge is comprised of £2 million included in administrative expenses, see note 5, and £238 million included in non-underlying expenses, see note 6. A further £55 million of impairment charges were incurred in relation to the Health segment.

12 Leases

Leasing activities

The group leases some of their property, plant and equipment which are used by the group company in their operations.

Right-of-use assets

Group

	Land and buildings £m	Plant and machinery £m	Total £m
At 1st April 2022	57	4	61
New leases, remeasurements and modifications	9	4	13
Depreciation charge for the year	(11)	(3)	(14)
Transferred to held for sale (note 26)	(9)	–	(9)
Exchange adjustments	(2)	–	(2)
At 31st March 2023	**44**	**5**	**49**

Lease liabilities

	Group 2023 £m	Group 2022 £m
Current	9	10
Non-current	31	40
Total liabilities	**40**	**50**

	Group 2023 £m	Group 2022 £m
Interest expense	2	2

The weighted average incremental borrowing rate applied to the group's lease liabilities was 4.4% (2022: 4.1%).

A maturity analysis of lease liabilities is disclosed in note 28.

Other

	Group 2023 £m	Group 2022 £m
Total cash outflow for leases	16	16

The expense relating to low-value and short-term leases is immaterial.

13 Goodwill

	Group £m
Cost	
At 1st April 2021	572
Disposal of business	(2)
Exchange adjustments	3
At 31st March 2022	573
Disposal of businesses (note 27)	(148)
Exchange adjustments	6
At 31st March 2023	431
Impairment	
At 1st April 2021	18
Impairment losses	189
At 31st March 2022	207
Disposal of businesses (note 27)	(144)
Impairment losses (notes 5, 26)	4
At 31st March 2023	67
Carrying amount at 31st March 2023	**364**
Carrying amount at 31st March 2022	366
Carrying amount at 1st April 2021	554

During the current year, the Diagnostic Services goodwill was fully impaired by £4 million to reflect the fair value less costs to sell of the business upon reclassification to assets held for sale, see note 6. The Health business was disposed during the current year, see note 27.

During the prior year, the Health segment was fully impaired by £144 million upon reclassification to assets held for sale. The Diagnostic Services goodwill was impaired by £45 million.

14 Other intangible assets

Group

	Customer contracts and relationships £m	Computer software £m	Patents, trademarks and licences £m	Acquired research and technology £m	Development expenditure £m	Total £m
Cost						
At 1st April 2021	133	367	65	42	226	833
Additions	–	66	1	–	33	100
Transferred to assets classified as held for sale	–	(15)	(20)	(5)	(127)	(167)
Disposal of businesses	(1)	(2)	–	–	–	(3)
Exchange adjustments	–	3	1	–	3	7
At 31st March 2022	132	419	47	37	135	770
Additions	–	59	2	–	–	61
Transferred to assets classified as held for sale (note 26)	(1)	(1)	–	(1)	–	(3)
Disposals	(2)	(2)	(7)	–	–	(11)
Disposal of businesses (note 27)	(13)	–	–	–	–	(13)
Exchange adjustments	–	–	1	1	–	2
At 31st March 2023	116	475	43	37	135	806
Accumulated amortisation and impairment						
At 1st April 2021	108	144	46	41	135	474
Charge for the year	4	31	1	2	1	39
Impairment losses (notes 5, 6 and 26)	–	15	12	–	75	102
Transferred to assets classified as held for sale	–	(13)	(18)	(5)	(79)	(115)
Reclassification	–	–	2	(2)	–	–
Disposal of businesses	(1)	(2)	–	–	–	(3)
Exchange adjustments	1	3	1	–	1	6
At 31st March 2022	112	178	44	36	133	503
Charge for the year	4	31	–	1	–	36
Impairment losses (notes 5, 6 and 26)	–	3	–	–	–	3
Transferred to assets classified as held for sale (note 26)	(1)	(1)	–	(1)	–	(3)
Disposals	(2)	(2)	(6)	–	–	(10)
Disposal of businesses (note 27)	(13)	–	–	–	–	(13)
Exchange adjustments	1	–	1	1	–	3
At 31st March 2023	101	209	39	37	133	519
Carrying amount at 31st March 2023	15	266	4	–	2	287
Carrying amount at 31st March 2022	20	241	3	1	2	267
Carrying amount at 1st April 2021	25	223	19	1	91	359

During the year, the group recognised impairments of £3 million, see note 6.

During the prior year, the group recognised impairments of £102 million. The impairment charge is comprised of £1 million included in administrative expenses, see note 5, and £78 million included in non-underlying expenses, see note 6. A further £23 million of impairment charges were incurred in relation to the Health segment.

15 Investments in joint ventures and associates

	2023 £m	2022 £m
Investments in joint ventures	–	2
Investments in associates	75	–
Investments in joint ventures and associates	**75**	**2**

The movements in the year were:

	Joint ventures £m	Associates £m	Total £m
At 1st April 2021 and 31st March 2022	2	–	2
Additions	–	75	75
Disposals	(2)	–	(2)
Group's share of loss for the year	–	(1)	(1)
Exchange adjustments	–	1	1
At 31st March 2023	**–**	**75**	**75**

During the year the group sold its 51% interest in the ordinary share capital of Quingdao Johnson Matthey Hero Catalyst Company Limited for consideration of £2 million. This resulted in £nil profit on disposal.

As part of the disposal of our Health business (see note 27), we received £75 million in the form of shares which constitutes an approximately 30% equity interest in the re-branded business (Veranova). The group has determined that it has significant influence and therefore has equity accounted this stake as an investment in associate.

The group has disclosed a contingent liability relating to this associate, see note 32. Financial information for Veranova for the year to 31st March 2023 is provided below, note Veranova's financial year end is 31st December. The information disclosed reflects the amounts presented in the financial statements of Veranova and not the group's share of those amounts.

	2023 £m
Summarised balance sheet	
Non-current assets	159
Cash and cash equivalents	12
Other current assets	203
Current assets	215
Current liabilities	(71)
Non-current liabilities	(14)
Net assets	289
Summarised statement of comprehensive income	
Revenue	189
Depreciation and amortisation	(19)
Income tax expense	(2)
Loss for the year and total comprehensive expense	(4)

16 Inventories

	Group 2023 £m	2022 £m
Raw materials and consumables	359	331
Work in progress	1,047	932
Finished goods and goods for resale	296	286
Inventories	**1,702**	**1,549**

Work in progress includes £754 million (31st March 2022: £656 million) of precious metal which is committed to future sales to customers and valued at the price at which it is contractually committed.

17 Trade and other receivables

	Group 2023 £m	2022 £m
Current		
Trade receivables	1,304	1,393
Contract receivables	70	88
Prepayments	83	75
Value added tax and other sales tax receivable	142	89
Advance payments to customers	10	10
Amounts receivable under precious metal sale and repurchase agreements[1]	222	114
Other receivables	51	27
Trade and other receivables	**1,882**	**1,796**
Non-current		
Value added tax and other sales tax receivable	3	3
Advance payments to customers	53	39
Other receivables	57	–
Other receivables	**113**	**42**

1. The fair value of the precious metal contracted to be sold by the group under sale and repurchase agreements is £215 million (2022: £108 million).

The group enters into factoring type arrangements in a small number of countries as part of normal business due to longer than standard payment terms, we seek to collect payments in the month following sale. As at 31st March 2023, the level of these arrangements was approximately £250 million (31st March 2022: approximately £250 million).

Trade receivables and contract receivables are net of expected credit losses (see note 28).

18 Other financial assets and liabilities

	Group 2023 £m	2022 £m
Current assets		
Forward foreign exchange contracts designated as cash flow hedges	11	5
Forward precious metal price contracts designated as cash flow hedges	30	–
Forward foreign exchange contracts and currency swaps at fair value through profit or loss	6	22
Other financial assets	**47**	**27**
Non-current assets		
Forward precious metal price contracts designated as cash flow hedges	48	–
Other financial assets	**48**	**–**
Current liabilities		
Forward foreign exchange contracts designated as cash flow hedges	(13)	(9)
Forward precious metal price contracts designated as cash flow hedges	–	(20)
Forward foreign exchange contracts and currency swaps at fair value through profit or loss	(14)	(15)
Other financial liabilities	**(27)**	**(44)**
Non-current liabilities		
Forward precious metal price contracts designated as cash flow hedges	–	(12)
Other financial liabilities	**–**	**(12)**

19 Trade and other payables

	Group 2023 £m	2022 £m
Current		
Trade payables	831	753
Contract liabilities	181	273
Accruals	338	439
Amounts payable under precious metal sale and repurchase agreements[1]	838	793
Other payables	309	305
Trade and other payables	**2,497**	**2,563**
Non-current		
Other payables	2	2
Trade and other payables	**2**	**2**

1. The fair value of the precious metal contracted to be repurchased by the group under sale and repurchase agreements is £802 million (2022: £782 million).

The amount of the contract liabilities balance at 31st March 2022 which was recognised in revenue during the year ended 31st March 2023 for the group company was £70 million (2022: £113 million).

20 Borrowings and related swaps

	Group 2023 £m	Group 2022 £m
Non-current		
Bank and other loans		
2.99% $165 million Bonds 2023	–	(125)
2.44% €20 million Bonds 2023	–	(17)
3.57% £65 million Bonds 2024	(65)	(65)
3.565% $50 million KfW loan 2024	(40)	(38)
3.14% $130 million Bonds 2025	(105)	(99)
1.40% €77 million Bonds 2025	(61)	(64)
2.54% £45 million Bonds 2025	(45)	(45)
3.79% $130 million Bonds 2025	(105)	(99)
3.97% $120 million Bonds 2027	(97)	(90)
SONIA + 1.25% UKEF EDG £ Facility 2028	(248)	–
EURIBOR + 1.20% UKEF EDG € Facility 2028	(157)	–
3.39% $180 million Bonds 2028	(144)	(137)
1.81% €90 million Bonds 2028	(69)	(74)
2.77% £35 million Bonds 2029	(35)	–
3.00% $50 million Bonds 2029	(40)	–
4.10% $30 million Bonds 2030	(24)	(23)
2.92% €25 million Bonds 2030	(22)	(21)
1.90% €225 million Bonds 2032	(198)	–
Cross currency interest rate swaps designated as net investment hedges	(5)	(2)
Borrowings and related swaps	(1,460)	(899)
Current		
€166 million EIB loan 2022	–	(140)
3.26% $150 million Bonds 2022	–	(115)
2.99% $165 million Bonds 2023	(133)	–
2.44% €20 million Bonds 2023	(18)	–
Other bank loans	(4)	(10)
Borrowings and related swaps	(155)	(265)

The 1.40% €77 million Bonds 2025 and the 1.81% €90 million Bonds 2028 have been swapped into floating rate euros. $100 million of the 3.14% $130 million Bonds 2025 have been swapped into sterling at 2.83% and the 3.00% $50 million Bonds 2029 have been swapped into euros at 1.71%.

All borrowings bear interest at fixed rates with the exception of the UKEF EDG EUR and GBP facilities which bear interest at 6 Months EURIBOR plus 1.20% and SONIA plus 1.25% and bank overdrafts, which bear interest at commercial floating rates.

During the year, the group drew down on the UKEF EDG financing secured in the financial year to 31st March 2022. The margins on these new facilities are impacted by the group's ability to meet targets around the reduction in its scope 1 and 2 emissions.

21 Movements in assets and liabilities arising from financing activities

			Non-cash movements				
	2022* £m	Cash (inflow) / outflow £m	Transfers £m	Transfers to held for sale £m	Foreign exchange movements £m	Fair value and other movements £m	2023 £m
Non-current assets							
Interest rate swaps*	12	(1)	–	–	–	9	20
Non-current liabilities							
Borrowings and related swaps	(899)	(672)	149	–	(36)	(2)	(1,460)
Interest rates swaps	(2)	1	–	–	–	(14)	(15)
Lease liabilities	(40)	–	11	9	–	(11)	(31)
Current liabilities							
Borrowings and related swaps	(265)	281	(149)	–	(21)	(1)	(155)
Lease liabilities	(10)	14	(11)	1	–	(3)	(9)
Net movements in assets and liabilities arising from financing activities	–	(377)	–	10	(57)	(22)	
Dividends paid to equity shareholders	–	141					
Interest paid	–	94					
Purchase of treasury shares	–	45					
Net cash inflow from financing activities	–	(97)					

			Non-cash movements				
	2021 £m	Cash outflow £m	Transfers £m	Transfers to held for sale £m	Foreign exchange movements £m	Fair value and other movements £m	2022 £m*
Non-current assets							
Interest rate swaps*	20	–	(8)	–	–	–	12
Non-current liabilities							
Borrowings and related swaps	(1,252)	114	254	–	(26)	11	(899)
Interest rates swaps	–	–	8	–	–	(10)	(2)
Lease liabilities	(51)	–	15	7	–	(11)	(40)
Current liabilities							
Borrowings and related swaps	(26)	17	(254)	–	(5)	3	(265)
Lease liabilities	(11)	14	(15)	2	–	–	(10)
Net movements in assets and liabilities arising from financing activities	–	145	–	9	(31)	(7)	
Dividends paid to equity shareholders	–	139					
Interest paid	–	111					
Purchase of treasury shares	–	155					
Net cash outflow from financing activities	–	550					

* The prior year comparatives for interest rate swaps within non-current assets have been re-presented to group the balances together and simplify the balance sheet. The financial statement captions impacted are Interest rate swaps within Non-current assets which was previously £11 million (now £12 million) and Interest rate swaps within Current assets which was previously £1 million (now £nil). This re-presentation is not considered material.

22 Provisions

Group

	Restructuring provisions £m	Warranty and technology provisions £m	Other provisions £m	Total £m
At 1st April 2021	42	8	12	62
Charge for the year	18	–	26	44
Utilised	(15)	(1)	(1)	(17)
Released	–	(2)	–	(2)
Transferred to liabilities classified as held for sale	(3)	–	–	(3)
At 31st March 2022	42	5	37	84
Charge for the year	25	10	8	43
Utilised	(28)	(1)	(1)	(30)
Released	(1)	(2)	(3)	(6)
At 31st March 2023	**38**	**12**	**41**	**91**

	2023 £m	2022 £m
Current	63	56
Non-current	28	28
Total provisions	**91**	**84**

Restructuring

The restructuring provisions are part of the group's efficiency initiatives (see note 6).

Warranty and technology

The warranty and technology provisions represent management's best estimate of the group's liability under warranties granted and remedial work required under technology licences based on past experience in Clean Air, Catalyst Technologies and Value Businesses. Warranties generally cover a period of up to three years.

Other

The other provisions include environmental and legal provisions arising across the group. Amounts provided reflect management's best estimate of the expenditure required to settle the obligations at the balance sheet date.

23 Deferred tax

Group

	Property, plant and equipment £m	Post-employment benefits £m	Provisions £m	Inventories £m	Intangibles £m	Other £m	Total deferred tax (assets) / liabilities £m
At 1st April 2021	1	27	(48)	(94)	2	–	(112)
(Credit) / charge to the income statement	(39)	23	7	44	(3)	(25)	7
Tax on items taken directly to or transferred from equity	–	35	–	–	–	(8)	27
Exchange adjustments	1	–	(3)	1	(1)	–	(2)
At 31st March 2022	(37)	85	(44)	(49)	(2)	(33)	(80)
(Credit) / charge to the income statement (note 9)	(7)	7	(15)	22	(8)	(22)	(23)
Disposal of businesses (note 27)	5	–	4	1	(7)	7	10
Transferred to assets classified as held for sale (note 26)	3	–	–	–	–	–	3
Tax on items taken directly to or transferred from equity	–	(37)	–	–	–	26	(11)
Exchange adjustments	(1)	–	–	–	–	–	(1)
At 31st March 2023	**(37)**	**55**	**(55)**	**(26)**	**(17)**	**(22)**	**(102)**

	2023 £m	2022 £m
Deferred tax assets	(121)	(98)
Deferred tax liabilities	19	18
Net amount	(102)	(80)

23 Deferred tax continued

Deferred tax has not been recognised in respect of tax losses of £85 million (2022: £135 million) and other temporary differences of £23 million (2022: £24 million). Of the total tax losses, £30 million (2022: £41 million) is expected to expire within 5 years, £30 million within 5 to 10 years (2022: £12 million), £nil after 10 years (2022: £38 million) and £25 million carry no expiry (2022: £43 million). These deferred tax assets have not been recognised on the basis that their future economic benefit is not probable.

In addition, the group's overseas subsidiaries have net unremitted earnings of £933 million (2022: £820 million), resulting in temporary differences of £563 million (2022: £585 million). No deferred tax has been provided in respect of these differences since the timing of the reversals can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

The recognition of deferred tax assets has been determined by the recoverability of those assets against future tax liabilities as determined by budgets and plans that are showing profits in relevant businesses. The majority of the deferred tax assets and liabilities noted above are anticipated to be realised after more than 12 months.

24 Post-employment benefits

Group

Background

Pension plans

The group operates a number of post-employment retirement and medical benefit plans around the world. The retirement plans in the UK, US and other countries include both defined contribution and defined benefit plans.

For defined contribution plans, retirement benefits are determined by the value of funds arising from contributions paid in respect of each employee and the investment returns on those contributions prior to retirement.

For defined benefit plans, which include final salary, career average and other types of plans with committed pension payments, the retirement benefits are based on factors, such as the employee's pensionable salary and length of service. The majority of the group's final salary and career average defined benefit retirement plans are closed to new entrants but remain open to ongoing accrual for current members.

Regulatory framework and governance

The UK pension plan, the Johnson Matthey Employees' Pension Scheme (JMEPS), is a registered arrangement established under trust law and, as such, is subject to UK pension, tax and trust legislation. It is managed by a corporate trustee, JMEPS Trustees Limited. The trustee board includes representatives appointed by both the parent company and employees and includes an independent chairman.

Although the parent company bears the financial cost of the plan, the trustee directors are responsible for the overall management and governance of JMEPS, including compliance with all applicable legislation and regulations. The trustee directors are required by law to act in the interests of all relevant beneficiaries and: to set certain policies; to manage the day-to-day administration of the benefits; and to set the plan's investment strategy following consultation with the parent company.

UK pensions are regulated by the Pensions Regulator whose statutory objectives and regulatory powers are described on its website: www.thepensionsregulator.gov.uk

The JMEPS Trustee Board considers how climate risk is integrated within investment processes when appointing, monitoring and withdrawing from investment managers using the investment consultant's Environmental, Social and Governance (ESG) ratings. The ESG ratings include consideration of climate risk management policies. On a periodic basis, JMEPS will review the ESG ratings assigned to the underlying investments based on the investment consultant's ESG research.

The US pension plans are qualified pension arrangements and are subject to the requirements of the Employee Retirement Income Security Act, the Pension Protection Act 2006 and the Department of Labor and Internal Revenue. The plans are managed by a pension committee which acts as the fiduciary and, as such, is ultimately responsible for: the management of the plans' investments; compliance with all applicable legislation and regulations; and overseeing the general management of the plans.

Other trustee or fiduciary arrangements that have similar responsibilities and obligations are in place for the group's other funded defined benefit pension plans outside of the UK and US.

Benefits

The UK defined benefit pension plan is segregated into two sections – a legacy section which provides final salary and career average pension benefits and a cash balance section.

The legacy section provides benefits to members in the form of a set level of pension payable for life based on the member's length of service and final pensionable salary at retirement or averaged over their career with the company. The majority of the benefits attract inflation-related increases both before and after retirement. The final salary element of the legacy section was closed to future accrual of benefits from 1st April 2010 and the career average element of the legacy section was closed to new entrants on 1st October 2012, but remains open to future accrual for existing members.

The cash balance section provides benefits to members at the point of retirement in the form of a cash lump sum. The benefits attract inflation-related increases before retirement but, following the payment of the retirement lump sum benefit, the plan has no obligation to pay any further benefits to the member. All new employees join the cash balance section of the plan.

24 Post-employment benefits continued

Group continued

The group operates two defined benefit pension plans in the US. The hourly pension plan is for unionised employees and provides a fixed retirement benefit for life based upon years of service. The salaried pension plan provides retirement benefits for life based on the member's length of service and final pensionable salary (averaged over the last five years). The salaried plan benefits attract inflation-related increases before leaving but are non-increasing thereafter. On retirement, members in either plan have the option to take the cash value of their benefit instead of a lifetime annuity in which case the plan has no obligation to pay any further benefits to the member.

The US salaried pension plan was closed to new entrants on 1st September 2013, and the US hourly pension plan was closed to new entrants on 1st January 2019. The hourly pension plan remains open to future accrual for existing members but the salaried pension plan will be closed to future accrual from 1st July 2023 with plan participants transferring to a defined contribution plan. All new US employees now join a defined contribution plan.

Other post-employment benefits

The group's principal post-employment medical plans are in the UK and US, and are unfunded arrangements that have been closed to new entrants for over ten years.

Maturity profile

The estimated weighted average durations of the defined benefit obligations of the main plans as at 31st March 2023 are:

	Weighted average duration Years
Pensions:	
UK	**16**
US	**10**
Post-retirement medical benefits:	
UK	**9**
US	**9**

Funding

Introduction

The group's principal defined benefit retirement plans are funded through separate fiduciary or trustee administered funds that are independent of the sponsoring company. The contributions paid to these arrangements are jointly agreed by the sponsoring company and the relevant trustee or fiduciary body after each funding valuation and in consultation with independent qualified actuaries. The plans' assets, together with the agreed funding contributions, should be sufficient to meet the plans' future pension obligations.

UK valuations

UK legislation requires that pension plans are funded prudently and that, when undertaking a funding valuation (every three years), assets are taken at their market value and liabilities are determined based on a set of prudent assumptions set by the trustee following consultation with their appointed actuary. The assumptions used for funding valuations may, therefore, differ to the actuarial assumptions used for IAS 19, *Employee Benefits*, accounting purposes.

In January 2013, a special purpose vehicle (SPV), Johnson Matthey (Scotland) Limited Partnership, was set up to provide deficit reduction contributions and greater security to the trustee. The group invested £50 million in a bond portfolio which is beneficially held by the SPV. The income generated by the SPV is used to make annual distributions of £3.5 million to JMEPS for a period of up to 25 years. These annual distributions are only payable if the legacy section of JMEPS continues to be in deficit, on a funding basis. This bond portfolio is held as a non-current investment at fair value through other comprehensive income and the group's liability to pay the income to the plan is not a plan asset under IAS 19 although it is for actuarial funding valuation purposes. The SPV is exempt from the requirement to prepare audited annual accounts as it is included on a consolidated basis in these accounts.

A funding valuation of JMEPS was carried out as at 1st April 2021 and showed that there was a deficit of £9 million in the legacy section of the plan, or a surplus of £24 million after taking account of the future additional deficit contributions from the SPV. The valuation also showed a deficit in the cash balance section of the plan of £1 million. The next triennial actuarial valuation of JMEPS will be carried out as at 1st April 2024 with the results known later in the year.

In accordance with the governing documentation of JMEPS, any future plan surplus would be returned to the parent company by way of a refund assuming gradual settlement of the liabilities over the lifetime of the plan. As such, there are no adjustments required in respect of IFRIC 14, IAS 19 – *The Limit on a Defined Benefit Asset, Minimum Funding Requirements and their Interaction*.

US valuations

The last annual review of the US defined benefit pension plans was carried out by a qualified actuary as at 1st July 2021 and showed that there was a surplus of $10 million on the projected funding basis.

The assumptions used for funding valuations may differ to the actuarial assumptions used for IAS 19 accounting purposes.

Other valuations

Similar funding valuations are undertaken on the group's other defined benefit pension plans outside of the UK and US in accordance with prevailing local legislation.

24 Post-employment benefits continued

Group continued

Risk management

The group is exposed to a number of risks relating to its post-retirement pension plans, the most significant of which are:

Risk	Mitigation
Market (investment) risk	
Asset returns may not move in line with the liabilities and may be subject to volatility.	The group's various plans have highly diversified investment portfolios, investing in a wide range of assets that provide reasonable assurance that no single security or type of security could have a material adverse impact on the plan. A de-risking strategy is in place to reduce volatility in the plans as a result of the mismatch between the assets and liabilities. As the funding level of the plans improve and hit pre-agreed triggers, plan investments are switched from return-seeking assets to liability-matching assets. The plans implement partial currency hedging on their overseas assets to mitigate currency risk.
Interest (discount) rate risk	
Liabilities are sensitive to movements in bond yields (interest rates), with lower interest rates leading to an increase in the valuation of liabilities, albeit the impact on the plan's funding level will be partially offset by an increase in the value of its bond holdings.	The group's defined benefit plans hold a high proportion of their assets in government or corporate bonds, which provide a natural hedge against falling interest rates. In the UK, this interest rate hedge is extended by the use of interest rate swaps, such that the plan is 100% hedged on the plan's funding basis. The swaps are held with several banks to reduce counterparty risk.
Inflation risk	
Liabilities are sensitive to movements in inflation, with higher inflation leading to an increase in the valuation of liabilities.	Where plan benefits provide inflation-related increases, the plan holds some inflation-linked assets which provide a natural hedge against higher than expected inflation increases. In the UK, this inflation hedge is extended by the use of inflation swaps, such that the plan is 100% hedged on the plan's funding basis. The swaps are held with several banks to reduce counterparty risk.
Longevity risk	
The majority of the group's defined benefit plans provide benefits for the life of the member, so the liabilities are sensitive to life expectancy, with increases in life expectancy leading to an increase in the valuation of liabilities.	The group has closed most of its defined benefit pension plans to new entrants, replacing them with either a cash balance plan or defined contribution plans, both of which are unaffected by life expectancy. For the plans where a benefit for life continues to be payable, prudent mortality assumptions are used that appropriately allow for a future improvement in life expectancy. These assumptions are reviewed on a regular basis.
Liquidity risk	
The pension plan may have insufficient access to cash to meet its short-term cash and collateral obligations, such that adverse scenarios could force the sale of a less-liquid assets at depressed prices.	The group's defined benefit plans hold sufficient liquid assets to meet its cashflow obligations and the collateral requirements of its inflation and interest rate hedging. This reduces the risk of being a forced seller of less-liquid assets.

24 Post-employment benefits continued

Group continued

Contributions

During the year, total contributions to the group's post-employment defined benefit plans were £40 million (2022: £43 million). It is estimated that the group will contribute approximately £36 million to the post-employment defined benefit plans during the year ending 31st March 2024.

IAS 19 accounting

Principal actuarial assumptions

Qualified independent actuaries have updated the IAS 19 valuations of the group's major defined benefit plans to 31st March 2023. The assumptions used are chosen from a range of possible actuarial assumptions which, due to the long-term nature of the plans, may not necessarily be borne out in practice.

Financial assumptions

	2023 UK plan %	2023 US plans %	2023 Other plans %	2022 UK plan %	2022 US plans %	2022 Other plans %
First year's rate of increase in salaries	4.40	4.50	3.97	3.85	3.00	2.20
Ultimate rate of increase in salaries	3.40	4.50	2.20	3.85	3.00	2.20
Rate of increase in pensions in payment	2.90	–	2.80	3.20	–	2.11
Discount rate	4.80	4.90	4.40	2.80	3.70	2.13
Inflation	–	2.50	3.90	–	2.20	2.15
• UK Retail Prices Index (RPI)	3.10	–	–	3.60	–	–
• UK Consumer Prices Index (CPI)	2.65	–	–	3.10	–	–
Current medical benefits cost trend rate	12.50	–	–	5.40	–	–
Ultimate medical benefits cost trend rate	5.40	–	–	5.40	–	–

Demographic assumptions

The mortality assumptions are based on country-specific mortality tables and, where appropriate, include an allowance for future improvements in life expectancy. In addition, where credible data exists, actual plan experience is taken into account. The group's most substantial pension liabilities are in the UK and the US where, using the mortality tables adopted, the expected lifetime of average members currently at age 65 and average members at age 65 in 25 years' time (i.e. members who are currently aged 40 years) is respectively:

	Currently age 65		Age 65 in 25 years	
	UK plan	US plans	UK plan	US plans
Male	88	86	89	88
Female	90	88	92	89

24 Post-employment benefits continued

Group continued

Financial information

Plan assets

Movements in the fair value of plan assets during the year were:

	UK pension - legacy section £m	UK pension - cash balance section £m	UK post-retirement medical benefits £m	US pensions £m	US post-retirement medical benefits £m	Other £m	Total £m
At 1st April 2021	2,142	128	–	320	–	56	2,646
Administrative expenses	(2)	–	–	(1)	–	–	(3)
Interest income	44	3	–	10	–	1	58
Return on plan assets excluding interest	27	(2)	–	(15)	–	(1)	9
Employee contributions	3	7	–	1	1	–	12
Company contributions	9	22	–	9	1	1	42
Benefits paid	(63)	(2)	–	(27)	(2)	(3)	(97)
Disposal of business	–	–	–	–	–	(46)	(46)
Exchange adjustments	–	–	–	13	–	–	13
At 31st March 2022	2,160	156	–	310	–	8	2,634
Administrative expenses	(4)	–	–	(1)	–	–	(5)
Interest income	65	6	–	12	–	–	83
Return on plan assets excluding interest	(698)	(29)	–	(57)	–	(1)	(785)
Employee contributions	3	7	–	–	–	–	10
Company contributions	8	21	1	7	1	2	40
Benefits paid	(62)	(2)	(1)	(42)	(1)	(1)	(109)
Exchange adjustments	–	–	–	21	–	–	21
At 31st March 2023	1,472	159	–	250	–	8	1,889

24 Post-employment benefits continued

Group continued

Financial information continued

Plan assets continued

The fair values of plan assets are analysed as follows:

	2023				2022			
	UK pension-legacy section £m	UK pension - cash balance section £m	US pensions £m	Other £m	UK pension-legacy section £m	UK pension - cash balance section £m	US pensions £m	Other £m
Quoted corporate bonds	382	56	191	–	924	93	227	5
Inflation and interest rate swaps	5	1	–	–	3	–	–	–
Quoted government bonds	563	41	42	1	452	–	61	–
Cash and cash equivalents	46	5	2	–	289	6	4	1
Quoted equity	212	56	15	1	340	57	18	1
Unquoted equity	51	–	–	–	74	–	–	–
Property	58	–	–	–	73	–	–	–
Insurance policies	–	–	–	6	–	–	–	1
Other	155	–	–	–	5	–	–	–
Plan assets	1,472	159	250	8	2,160	156	310	8

The UK plan's unquoted equities are assets within a pooled infrastructure fund where the underlying assets are a broad range of private infrastructure investments, diversified by geographic region, infrastructure sector, underlying asset type and development stage. These infrastructure assets are valued using widely recognised valuation techniques which use market data and discounted cash flows. The same valuation approach is used to determine the value of the swaps and insurance policies.

The UK plan's property represents an investment in the Blackrock UK Property Fund, which is a unitised fund where the underlying assets are taken at market value. The valuation of the fund is independently audited by KPMG on an annual basis.

The defined benefit pension plans do not invest directly in Johnson Matthey Plc shares and no property or other assets owned by the pension plans are used by the group.

24 Post-employment benefits continued

Group continued

Financial information continued

Defined benefit obligation

Movements in the defined benefit obligation during the year were:

	UK pension-legacy section £m	UK pension - cash balance section £m	UK post-retirement medical benefits £m	US pensions £m	US post-retirement medical benefits £m	Other £m	Total £m
At 1st April 2021	(1,956)	(134)	(8)	(340)	(31)	(83)	(2,552)
Current service cost	(8)	(26)	–	(9)	(1)	(1)	(45)
Past service credit	–	–	–	–	11	–	11
Interest cost	(40)	(4)	–	(10)	(1)	(1)	(56)
Employee contributions	(3)	(7)	–	(1)	(1)	–	(12)
Remeasurements due to changes in:							
Financial assumptions	196	11	–	35	2	2	246
Demographic assumptions	–	–	(1)	1	6	(1)	5
Experience adjustments	(61)	(16)	–	–	–	–	(77)
Benefits paid	63	2	–	27	2	3	97
Disposal of business	–	–	–	–	–	46	46
Exchange adjustments	–	–	–	(15)	–	–	(15)
At 31st March 2022	(1,809)	(174)	(9)	(312)	(13)	(35)	(2,352)
Current service cost	(4)	(21)	–	(5)	–	(1)	(31)
Past service (cost) / credit	(2)	–	–	22	–	–	20
Interest cost	(56)	(5)	–	(12)	(1)	(1)	(75)
Employee contributions	(3)	(7)	–	–	–	–	(10)
Remeasurements due to changes in:							
Financial assumptions	577	77	1	52	1	7	715
Demographic assumptions	2	–	–	–	–	–	2
Experience adjustments	(70)	(4)	–	(9)	2	–	(81)
Benefits paid	62	2	1	42	1	1	109
Disposal of business	–	–	–	–	–	3	3
Exchange adjustments	–	–	–	(22)	–	(3)	(25)
At 31st March 2023	**(1,303)**	**(132)**	**(7)**	**(244)**	**(10)**	**(29)**	**(1,725)**

24 Post-employment benefits continued

Reimbursement rights

A government subsidy is receivable under the US Medicare legislation as the US post-retirement medical benefits plan is actuarially equivalent to the Medicare Prescription Drug Act and there is an insurance policy taken out to reinsure the pension commitments of one of the small pension plans which does not meet the definition of a qualifying insurance policy. These are accounted for as reimbursement rights and are shown on the balance sheet in post-employment benefit net assets.

Movements in the reimbursement rights during the year were:

	US post-retirement medical benefits £m	Other £m	Total £m
At 1st April 2021	6	–	6
Return on assets excluding interest	(6)	–	(6)
Exchange adjustments	–	1	1
At 31st March 2022 and 31st March 2023	**–**	**1**	**1**

Net post-employment benefit assets and liabilities

The net post-employment benefit assets and liabilities are:

	UK pension-legacy section £m	UK pension - cash balance section £m	UK post-retirement medical benefits £m	US pensions £m	US post-retirement medical benefits £m	Other £m	Total £m
At 31st March 2023							
Defined benefit obligation	(1,303)	(132)	(7)	(244)	(10)	(29)	(1,725)
Fair value of plan assets	1,472	159	–	250	–	8	1,889
Reimbursement rights	–	–	–	–	–	1	1
Net post-employment benefit assets and liabilities	**169**	**27**	**(7)**	**6**	**(10)**	**(20)**	**165**
At 31st March 2022							
Defined benefit obligation	(1,809)	(174)	(9)	(312)	(13)	(35)	(2,352)
Fair value of plan assets	2,160	156	–	310	–	8	2,634
Reimbursement rights	–	–	–	–	–	1	1
Net post-employment benefit assets and liabilities	351	(18)	(9)	(2)	(13)	(26)	283

24 Post-employment benefits continued

Group continued

Financial information continued

Net post-employment benefit assets and liabilities continued

These are included in the balance sheet as follows:

	2023 Post-employment benefit net assets £m	2023 Employee benefit net obligations £m	2023 Total £m	2022 Post-employment benefit net assets £m	2022 Employee benefit net obligations £m	2022 Total £m
UK pension - legacy section	169	–	169	351	–	351
UK pension - cash balance section	27	–	27	–	(18)	(18)
UK post-retirement medical benefits	–	(7)	(7)	–	(9)	(9)
US pensions	6	–	6	–	(2)	(2)
US post-retirement medical benefits	–	(10)	(10)	–	(13)	(13)
Other	1	(21)	(20)	1	(27)	(26)
Total post-employment plans	**203**	**(38)**	**165**	**352**	**(69)**	**283**
Other long-term employee benefits		(3)			(3)	
Total long-term employee benefit obligations		**(41)**			**(72)**	

Income statement

Amounts recognised in the income statement for long term employment benefits were:

	2023 £m	2022 £m
Administrative expenses	(5)	(3)
Current service cost	(31)	(45)
Past service credit	20	11
Defined benefit post-employment costs charged to operating profit	**(16)**	**(37)**
Defined contribution plans' expense	(24)	(24)
Other long term employee benefits	–	(1)
Charge to operating profit	**(40)**	**(62)**
Interest on post-employment benefits charged to finance income	8	2
Charge to profit before tax	**(32)**	**(60)**

24 Post-employment benefits continued

Group continued

Financial information continued

Statement of total comprehensive income

Amounts recognised in the statement of total comprehensive income for long term employment benefits were:

	2023 £m	2022 £m
Return on plan assets excluding interest	(785)	9
Remeasurements due to changes in:		
Financial assumptions	715	246
Experience adjustments	(81)	(77)
Demographic assumptions	2	5
Reimbursement rights - return on assets excluding interest	–	(6)
Remeasurements of post-employment benefit assets and liabilities	(149)	177

Sensitivity analysis

The calculations of the defined benefit obligations are sensitive to the assumptions used. The following summarises the estimated impact on the group's main plans of a change in the assumption while holding all other assumptions constant. This sensitivity analysis may not be representative of the actual change as it is unlikely that the change in assumptions would occur in isolation of one another.

Financial assumptions

A 0.1% change in the discount rate and inflation assumptions would (increase) / decrease the UK and US pension plans' defined benefit obligations at 31st March 2023 as follows:

	0.1% increase		0.1% decrease	
	UK plan £m	US plans £m	UK plan £m	US plans £m
Effect of discount rate	22	2	(20)	(2)
Effect of inflation	(19)	–	21	–

Demographic assumptions

A one-year increase in life expectancy would increase the UK and US pension plans' defined benefit obligation by £36 million and £5 million, respectively.

25 Share capital and other reserves

Share capital

	Number	£m
Issued and fully paid ordinary shares		
At 1st April 2021	198,940,606	221
Share buyback	(3,078,841)	(3)
At 31st March 2022	195,861,765	218
Share buyback	(2,271,920)	(3)
At 31st March 2023	193,589,845	215

25 Share capital and other reserves

Share capital continued

Details of outstanding allocations under the company's long term incentive plans and awards under the deferred bonus which have yet to mature are disclosed in note 30.

On 13th May 2022, the company completed its £200 million share buyback programme which commenced on 21st December 2021. During the year the company purchased 2,271,920 shares at a cost of £45 million. This £45 million was recognised within trade and other payables as at 31st March 2022. The total number of treasury shares held was 10,136,428 (2022: 10,467,585) at a total cost of £186 million (2022: £192 million).

The group and parent company's employee share ownership trust (ESOT) also buys shares on the open market and holds them in trust for employees participating in the group's executive long term incentive plans. At 31st March 2023, the ESOT held 570,053 shares (2022: 737,566 shares) which had not yet vested unconditionally to employees. Computershare Trustees (CI) Limited, as trustee for the ESOT, has waived its dividend entitlement.

Dividends

	2023 £m	2022 £m
2020/21 final ordinary dividend paid – 50.00 pence per share	–	96
2021/22 interim ordinary dividend paid – 22.00 pence per share	–	43
2021/22 final ordinary dividend paid – 55.00 pence per share	100	–
2022/23 interim ordinary dividend paid –22.00 pence per share	41	–
Total dividends	141	139

A final dividend of 55.0 pence per ordinary share has been proposed by the board which will be paid on 1st August 2023 to shareholders on the register at the close of business on 8th June 2023, subject to shareholders' approval. The estimated amount to be paid is £101 million and has not been recognised in these accounts.

The board is responsible for the group's capital management including the approval of dividends. This includes an assessment of both the level of reserves legally available for distribution and consideration as to whether Johnson Matthey Plc would be solvent and maintain sufficient liquidity following any proposed distribution. The board has assessed the level of distributable profits as at 31st March 2023 and is satisfied that they are sufficient to support the proposed dividend.

Other reserves

Capital redemption reserve, The capital redemption reserve represents the cumulative nominal value of the company's ordinary shares repurchased and subsequently cancelled.

Foreign currency translation reserve, The foreign currency translation reserve comprises all foreign currency differences arising from the translation of the financial statements of foreign operations.

Fair value through other comprehensive income reserve, The fair value through other comprehensive income reserve represents the equity movements on financial assets held within this category.

Hedging reserve, The hedging reserve comprises the effective portion of the cumulative net change in the fair value of cash flow hedging instruments.

The Foreign currency translation reserve includes £12 million (2023: £3 million) in relation to continuing hedge relationships and £3 million (2022: £3 million) in relation to discontinued hedge relationships. All cash flow hedge reserves balances relate to continuing hedge relationships.

25 Share capital and other reserves continued

Group

	Capital redemption reserve £m	Foreign currency translation reserve £m	Fair value through other comprehensive income reserve £m	Hedging reserve: Forward currency contracts £m	Hedging reserve: Cross currency contracts £m	Hedging reserve: Forward metal contracts £m	Total other reserves £m
At 1st April 2021	7	(11)	5	7	–	(8)	–
Cash flow hedges – (losses) / gains taken to equity	–	–	–	(14)	3	(31)	(42)
Cash flow hedges – transferred to revenue (income statement)	–	–	–	2	–	–	2
Cash flow hedges – transferred to foreign exchange (income statement)	–	–	–	–	(3)	–	(3)
Cash flow hedges – transferred to inventory (balance sheet)	–	–	–	–	–	7	7
Fair value losses on net investment hedges taken to equity	–	(2)	–	–	–	–	(2)
Fair value losses on investments at fair value through other comprehensive income	–	–	(5)	–	–	–	(5)
Exchange differences on translation of foreign operations taken to equity	–	80	–	–	–	–	80
Cancelled ordinary shares from share buyback	3	–	–	–	–	–	3
Tax on above items taken directly to or transferred from equity	–	2	–	–	–	8	10
At 31st March 2022	10	69	–	(5)	–	(24)	50
Cash flow hedges – (losses) / gains taken to equity	–	–	–	(10)	9	72	71
Cash flow hedges – transferred to revenue (income statement)	–	–	–	6	–	38	44
Cash flow hedges – transferred to cost of sales (income statement)	–	–	–	6	–	–	6
Cash flow hedges – transferred to foreign exchange (income statement)	–	–	–	–	(7)	–	(7)
Fair value losses on net investment hedges taken to equity	–	(10)	–	–	–	–	(10)
Fair value losses on investments at fair value through other comprehensive income	–	–	(12)	–	–	–	(12)
Exchange differences on translation of foreign operations taken to equity	–	1	–	–	–	–	1
Cancelled ordinary shares from share buyback	3	–	–	–	–	–	3
Tax on above items taken directly to or transferred from equity	–	–	–	(1)	(1)	(26)	(28)
At 31st March 2023	13	60	(12)	(4)	1	60	118

Capital

The group's policy for managing capital is to maintain an efficient balance sheet to ensure that the group always has sufficient resources to be able to invest in future growth. The group uses Return on Invested Capital to provide a measure of its efficiency in allocating the capital under its control to profitable investments (see note 34). Capital employed is defined as total equity, excluding post tax pension net assets, plus net debt. During the year, the group complied with all externally imposed capital requirements to which it is subject.

26 Discontinued operations and assets and liabilities classified as held for sale

The group strategically drives for efficiency and disciplined capital allocation to enhance returns, as such we continue to actively manage our portfolio. In line with this strategy and to focus on our core businesses, during the period we completed the sale of our Health, Battery Materials UK, Battery Materials Canada and Piezo Products businesses. Refer to note 27 for further information on these disposals.

The Health segment is classified as a discontinued operation and presented separately in the consolidated income statement. The Health segment was classified as held for sale and a discontinued operation for the year to 31st March 2022.

Financial information relating to the Health discontinued operations for the period to disposal date (1st June 2022) is set out below. The 30% equity interest in the business is equity accounted as an investment in associate, see note 15.

	2023 £m	2022 £m
Revenue	35	164
Expenses	(41)	(161)
Underlying operating (loss) / profit from discontinued operations	(6)	3
Major impairment and restructuring costs from discontinued operations	–	(242)
Loss before tax from discontinued operations	(6)	(239)
Tax credit	2	22
Loss after tax from discontinued operations	(4)	(217)
Profit on disposal of discontinued operations after tax (see note 27)*	16	–
Profit / (loss) from discontinued operations	12	(217)
Exchange differences on translation of discontinued operations	(32)	5
Other comprehensive (expense) / income from discontinued operations	(32)	5
Total comprehensive expense from discontinued operations	(20)	(212)
Net cash inflow from operating activities	13	33
Net cash outflow from investing activities	(5)	(30)
Net cash outflow from financing activities	–	(6)
Net increase / (decrease) in cash generated by the discontinued operations	8	(3)

	pence	pence
Earnings / (loss) per ordinary share from discontinued operations		
Basic earnings / (loss) per ordinary share from discontinued operations	6.7	(113.5)
Diluted earnings / (loss) per ordinary share from discontinued operations	6.6	(113.5)

* The profit on disposal of discontinued operations after tax includes a tax credit of £5 million.

The group decided to sell its Battery Materials Germany and Poland business. As at 31st March 2023, the fair value of the proceeds less costs to sell for the Battery Materials business was estimated to be £15 million. The business is classified as a disposal group held for sale.

Additionally, in May 2023 the group agreed to sell its Diagnostic Services business. As at 31st March 2023, the proceeds less costs to sell for the Diagnostic Services business was estimated to be £37 million and so an impairment of £4 million against goodwill has been recognised, see note 5. The business is classified as a disposal group held for sale.

The major classes of assets and liabilities comprising the businesses classified as held for sale as at 31st March are:

	2023			
	Diagnostic Services £m	Battery Materials £m	Total £m	2022 £m
Non-current assets				
Property, plant and equipment	10	17	27	146
Right-of-use-assets	9	–	9	2
Other intangible assets	–	1	1	52
Deferred tax assets	3	–	3	–
Current assets				
Inventories	5	–	5	138
Taxation recoverable	–	–	–	1
Trade and other receivables	30	–	30	63
Assets classified as held for sale	57	18	75	402
Current liabilities				
Trade and other payables	(11)	(3)	(14)	(60)
Lease liabilities	(1)	–	(1)	(2)
Taxation liabilities	(1)	–	(1)	–
Cash and cash equivalents – bank overdrafts	–	–	–	(8)
Provisions	–	–	–	(2)
Non-current				
Lease liabilities	(9)	–	(9)	(7)
Provisions	–	–	–	(1)
Liabilities classified as held for sale	(22)	(3)	(25)	(80)
Net assets of disposal group	35	15	50	322

The prior year held for sale balances relate to Health and Battery Materials.

27 Disposals

Health (discontinued operation)

On 1st June 2022, the group completed the sale of its Health business for a gross consideration of £325 million. This gross consideration is comprised of £150 million cash, a £50 million vendor loan note (which we have recorded as an other receivable), £75 million in the form of shares which constitutes a 30% equity interest in the business (which we have equity accounted for as an investment in associate) and £50 million in contingent consideration (which we have recognised at a fair value of £nil). After adjusting for working capital and an additional £3 million cash receipt due to cash in business upon disposal, the net consideration was £272 million. The business was disclosed as a disposal group held for sale as at 31st March 2022.

Battery Materials

On 26th May 2022, the group completed the sale of its Battery Materials UK business for a cash consideration of £20 million. The business was disclosed as a disposal group held for sale as at 31st March 2022.

On 1st November 2022, the group completed the sale of its Battery Materials Canada business for a cash consideration of £12 million. The business was disclosed as a disposal group held for sale as at 30th September 2022.

Piezo Products

On 31st January 2023, the group completed the sale of its Piezo Products business for a cash consideration of £18 million. The business was disclosed as a disposal group held for sale as at 30th September 2022.

		Continuing operations			
	Health (discontinued) £m	Battery Materials UK £m	Battery Materials Canada £m	Piezo Products £m	Total £m
Proceeds					
Cash consideration	153	20	12	18	50
Cash and cash equivalents disposed	(5)	–	–	(2)	(2)
Net cash consideration	148	20	12	16	48
Disposal costs paid	(1)	(1)	(1)	(1)	(3)
Net cash inflow	147	19	11	15	45
Assets and liabilities disposed					
Non-current assets					
Property, plant and equipment	105	14	1	2	17
Right-of-use assets	1	–	–	–	–
Goodwill	–	–	–	4	4
Other intangible assets	42	10	–	–	10
Deferred tax assets	13	–	–	–	–
Current assets					
Inventories	142	–	1	5	6
Trade and other receivables	60	–	7	1	8
Cash and cash equivalents	5	–	–	2	2
Current liabilities					
Trade and other payables	(71)	–	(1)	(1)	(2)
Lease liabilities	(1)	(5)	–	–	(5)
Provisions	(1)	–	–	–	–
Non-current liabilities					
Lease liabilities	(2)	–	–	–	–
Pension liabilities	–	–	–	(4)	(4)
Provisions	(1)	–	–	–	–
Net assets disposed	292	19	8	9	36

27 Disposals continued

	Health (discontinued) £m	Continuing operations Battery Materials UK £m	Battery Materials Canada £m	Piezo Products £m	Total £m
Cash consideration	153	20	12	18	50
Non-cash consideration	119	–	–	–	–
Less: carrying amount of net assets sold	(292)	(19)	(8)	(9)	(36)
Less: disposal costs	(1)	(1)	(1)	(1)	(3)
Cumulative currency translation loss/(gain) recycled from other comprehensive income	32	–	(2)	3	1
Profit recognised in the income statement	11	–	1	11	12

28 Financial risk management

The group's activities expose it to a variety of financial risks, including credit risk, market risk and liquidity risk. Market risk includes foreign currency risk, interest rate risk and price risk. The financial risks are managed by the group, under policies approved by the board. The financial risk management is carried out by a centralised group treasury function. Group treasury's role is to optimise the group's liquidity, mitigate financial risks and provide treasury services to the group's operating businesses. The group uses derivative financial instruments, including forward currency contracts, interest rate swaps and currency swaps, to manage the financial risks associated with its underlying business activities and the financing of those activities. Some derivative financial instruments used to manage financial risk are not designated as hedges and, therefore, are classified as at fair value through profit or loss. The group does not undertake any speculative trading activity in financial instruments.

Credit risk

Within certain businesses, the group derives a significant proportion of its revenue from sales to major customers. Sales to individual customers are large if the value of precious metals is included in the price. The failure of any such company to honour its debts could materially impact the group's results. The group derives significant benefit from trading with its customers and manages the risk at many levels. Each sector has a credit committee that regularly monitors its exposure. The Audit Committee receives a report every six months that details all significant credit limits, amounts due and overdue within the group, and the relevant actions being taken. At 31st March 2023, trade receivables for the group amounted to £1,304 million (2022: £1,393 million), excluding £14 million classified as held for sale, of which £1,077 million (2022: £1,167 million) are in Clean Air which mainly supplies car and truck manufacturers and component suppliers in the automotive industry. Although Clean Air has a wide range of customers, the concentrated nature of this industry means that amounts owed by individual customers can be large and, in the event that one of those customers experiences financial difficulty, there could be a material adverse impact on the group. Other parts of the group tend to sell to a larger number of customers and amounts owed tend to be lower. At 31st March 2023, no single outstanding balance exceeded 2% (2022: 2%) of revenue.

The credit profiles of the group's customers are obtained from credit rating agencies where possible and are closely monitored. The scope of these reviews includes amounts overdue and credit limits. The group's exposure to credit risk is influenced mainly by the individual characteristics of each customer. However, risk associated with the industry and country in which customers operate may also influence the credit risk. The credit quality of customers is assessed against the appropriate credit ratings, financial strength, trading experience and market position to define credit limits. Controls and risk mitigants include daily monitoring of exposures, investing in counterparties with investment grade ratings, restricting the amount that can be invested with one counterparty and credit-rating mitigation techniques. Generally, payments are made promptly in the automotive industry and in the other markets in which the group operates.

A provision matrix is used to calculate lifetime expected credit losses using historical loss rates based on days past due and a broad range of forward-looking information, including country and market growth forecasts. This year, expected credit losses on unimpaired trade and contract receivables remained at £16 million (2022: £16 million) despite the lower trade receivables balance, reflecting a slightly heightened risk profile due to the volatile macroeconomic environment.

Trade receivables are specifically impaired when the amount is in dispute, customers are in financial difficulty or for other reasons which imply there is doubt over the recoverability of the debt. They are written off when there is no reasonable expectation of recovery, based on an estimate of the financial position of the counterparty.

Movements in the allowance for credit losses on trade and contract receivables are as follows:

	Group 2023 £m	2022 £m
At beginning of year	37	30
Charge for year	5	18
Utilised	(1)	(1)
Released	(11)	(10)
At end of year	30	37

The group's maximum exposure to default on trade and contract receivables is £1,429 million (2022: £1,575 million), of which £25 million is classified as held for sale.

The group's financial assets included in other receivables are all current and not impaired.

28 Financial risk management continued

Credit risk continued

The credit risk on cash and deposits and derivative financial instruments is limited because the counterparties with significant balances are banks with strong credit ratings. The exposure to individual banks is monitored frequently against internally-defined limits, together with each bank's credit rating and credit default swap prices. At 31st March 2023, the maximum net exposure with a single bank for cash and deposits was £37 million (2022: £101 million), whilst the largest mark to market exposure for derivative financial instruments to a single bank was £11 million (2022: £7 million). The group also uses money market funds to invest surplus cash thereby further diversifying credit risk and, at 31st March 2023, the group's exposure to these funds was £521 million (2022: £137 million). The amounts on deposit at the year end represent the group's maximum exposure to credit risk on cash and deposits. Expected credit losses on cash and cash equivalents are immaterial.

Foreign currency risk

The group operates globally with a significant amount of its profit earned outside the UK. The main impact of movements in exchange rates on the group's results arises on translation of overseas subsidiaries' profits into sterling. The largest exposure is to the euro and a 5% (5.8 cent (2022: 5.9 cent)) movement in the average exchange rate for the euro against sterling would have had a £11 million (2022: £9 million) impact on underlying operating profit. The group is also exposed to the US dollar and a 5% (6.0 cent (2022: 6.8 cent)) movement in the average exchange rate for the US dollar against sterling would have had a £10 million (2022: £10 million) impact on underlying operating profit. This exposure is part of the group's economic risk of operating globally which is essential to remain competitive in the markets in which it operates.

The group matches foreign currency assets and liabilities (where these differ to the functional currency of the relevant subsidiary) to avoid the risk of a material impact on the income statement resulting from movements in exchange rates. The group does, however, have foreign exchange exposure on movements through equity related to cash flow and net investment hedges. A 10% depreciation or appreciation in the US dollar and euro exchange rates against sterling would increase / (decrease) other reserves as follows:

	10% depreciation		10% appreciation	
	2023 £m	2022 £m	**2023 £m**	2022 £m
Cash flow hedges	**5**	5	**(8)**	(7)
Net investment hedges	**5**	20	**(8)**	(25)

For the net investment hedges, these movements would be fully offset in reserves by an opposite movement on the retranslation of the net assets of the overseas subsidiaries.

Investments in foreign operations

To protect the group's sterling balance sheet and reduce cash flow risk, the group has financed most of its investment in the US and Europe by borrowing US dollars and euros, respectively. Although much of this funding is obtained by directly borrowing the relevant currency, a part is achieved through currency swaps which can be more efficient and reduce costs.

The group has designated US dollar and euro loans and a cross currency swap as hedges of net investments in foreign operations as they hedge changes in the value of the subsidiaries' net assets against movements in exchange rates. The change in the value of the net investment hedges from movements in foreign currency exchange rates is recognised in equity and is offset by an equal and opposite movement in the carrying value of the net assets of the subsidiaries. All critical terms of the hedging instruments and hedged items matched during the year and, therefore, hedge ineffectiveness was immaterial. The hedge ratio is 1:1.

Year ended 31st March 2023

	US dollar and euro loans[1] £m	**Cross currency swap[2] £m**	**Total £m**
Carrying value of hedging instruments at 31st March 2023	**(164)**	**(5)**	**(169)**
Change in carrying value of hedging instruments recognised in equity during the year	**(8)**	**(2)**	**(10)**
Change in fair value of hedged items during the year used to determine hedge effectiveness	**8**	**2**	**10**

1. The designated hedging instruments are $75 million of the 3.97% $120 million Bonds 2027, €17 million of the 2.44% €20 million Bonds 2023, €90 million of the 1.81% €90 million Bonds 2028 and €10 million of the 2.92% €25 million Bonds 2030.
2. The designated hedging instrument are a cross currency swap expiring in 2025 whereby the group pays 2.609% fixed on €77 million and receives 2.83% fixed on £65 million and a cross current swap expiring in 2029 whereby the group pays 1.712% fixed on €46 million and receives 2.6723% fixed on £38 million.

Year ended 31st March 2022

	US dollar and euro loans[1] £m	Cross currency swap[2] £m	Total £m
Carrying value of hedging instruments at 31st March 2022	(156)	(2)	(158)
Change in carrying value of hedging instruments recognised in equity during the year	(3)	1	(2)
Change in fair value of hedged items during the year used to determine hedge effectiveness	3	(1)	2

28 Financial risk management continued

Foreign currency risk continued

Forecast receipts and payments in foreign currencies

The group uses forward foreign exchange contracts to hedge foreign exchange exposures arising on forecast receipts and payments in foreign currencies. These are designated and accounted for as cash flow hedges. The group's policy is to hedge between 50% and 80% of forecast receipts and payments in foreign currencies over the next 12 months.

For hedges of forecast receipts and payments in foreign currencies, the critical terms of the hedging instruments match exactly with the terms of the hedged items and, therefore, the group performs a qualitative assessment of effectiveness. Ineffectiveness may arise if the timing of the forecast transaction changes from what was originally estimated or if there are changes in the credit risk of the group or the derivative counterparty. Hedge ineffectiveness was immaterial during the year. The hedge ratio is 1:1.

Year ended 31st March 2023

	Sterling / US dollar £m	Sterling / euro £m	Other £m	Total £m
Carrying value of hedging instruments at 31st March 2023				
• assets	4	1	6	11
• liabilities	(8)	(1)	(4)	(13)
Change in carrying value of hedging instruments recognised in equity during the year	(10)	1	–	(9)
Change in fair value of hedged items during the year used to determine hedge effectiveness	10	(1)	–	9
Notional amount[1]	348	42	16	–

1. The notional amount is the sterling equivalent of the net currency amount purchased or sold.

Year ended 31st March 2022

	Sterling / US dollar £m	Sterling / euro £m	Other £m	Total £m
Carrying value of hedging instruments at 31st March 2022				
• assets	–	–	5	5
• liabilities	(5)	–	(4)	(9)
Change in carrying value of hedging instruments recognised in equity during the year	(8)	16	(3)	5
Change in fair value of hedged items during the year used to determine hedge effectiveness	8	(16)	3	(5)
Notional amount[1]	209	53	11	–

1. The notional amount is the sterling equivalent of the net currency amount purchased or sold.

The weighted average exchange rates on sterling / US dollar and sterling / euro forward foreign exchange contracts are 1.26 and 0.88 (2022: 1.35 and 0.85), respectively. The hedged, highly probable forecast transactions denominated in foreign currencies are expected to occur over the next 12 months.

Foreign currency borrowings

The group has designated two US dollar fixed interest rate to sterling fixed interest rate cross currency swaps as cash flow hedges. This swap hedges the movement in the cash flows on $100 million of the 3.14% $130 million bonds 2025 attributable to changes in the US dollar / sterling exchange rate while the second swap hedges the movement in the cash flows on the 3.00% $50 million bonds 2029 attributable to changes in the US dollar / sterling exchange rate. The currency swaps have similar critical terms as the hedged items, such as reference rate, reset dates, payment dates, maturity and notional amounts. As all critical terms matched during the year, hedge ineffectiveness was immaterial. The hedge ratio is 1:1. The interest element of the swaps is recognised in the income statement each year.

	Cross currency swap 2023 £m	Cross currency swap 2022 £m
Carrying value of hedging instruments at 31st March[1]	20	11
Change in carrying value of hedging instruments recognised in equity during the year	9	3
Change in fair value of hedged items during the year used to determine hedge effectiveness	(9)	(3)

1. The designated hedging instruments are two cross currency swaps, one expiring in 2025 whereby the group pays 2.83% fixed on £65 million and receives 3.14% fixed on $100 million and one expiring in 2029 whereby the group pays 2.67% fixed on £38 million and receives 3.00% fixed on $50 million.

28 Financial risk management continued

Interest rate risk

The group's interest rate risk arises from fixed rate borrowings (fair value risk) and floating rate borrowings (cash flow risk) as well as cash deposits and short term investments. Its policy is to optimise interest cost and reduce volatility in reported earnings and equity. The group manages its risk by reviewing the profile of debt regularly and by selectively using interest rate swaps to maintain borrowings at competitive rates. At 31st March 2023, 67% (2022: 66%) of the group's borrowings and related swaps was at fixed rates with an average interest rate of 3.1% (2022: 3.5%). The remaining debt is floating rate. Based on the group's borrowings and related swaps at floating rates, after taking into account the effect of the swaps, a 1% change in all interest rates during the current year would have a £5 million impact on the group's profit before tax (2022: £4 million).

The group has designated three (2022: four) fixed rate to floating interest rate swaps as fair value hedges as they hedge the changes in fair value of bonds attributable to changes in interest rates. All hedging instruments have maturities in line with the repayment dates of the hedged bonds and the cash flows of the instruments are consistent. All critical terms of the hedging instruments and hedged items matched during the year and, therefore, hedge ineffectiveness was immaterial.

	2023 £m	2022 £m
Carrying value of hedging instruments at 31st March[1]	**(15)**	**(1)**
Amortised cost	(147)	(256)
Fair value adjustment	17	3
Carrying value of hedged items at 31st March[1]	**(130)**	**(253)**
Change in carrying value of hedging instruments recognised in profit or loss during the year	(14)	(13)
Change in fair value of hedged items during the year used to determine hedge effectiveness	14	13

1. The hedged items in the current year are the 1.40% €77 million Bonds 2025 and 1.81% €90 million Bonds 2028. In the prior year there was also the 3.26% $150 million Bonds 2022, Interest rate swaps have been contracted with aligned notional amounts and maturities to the bonds with the effect that the group pays an average floating rate of six-month LIBOR plus 0.64% on the US dollar bonds and six-month EURIBOR plus 0.94% on the euro bonds.

Price risk

Fluctuations in precious metal prices have an impact on the group's financial results. Our policy for all manufacturing businesses is to limit this exposure by hedging against future price changes where such hedging can be done at acceptable cost. The group enters into forward precious metal price contracts for the receipt or delivery of precious metal. The group does not take material price exposures on metal trading. A proportion of the group's precious metal inventories are unhedged due to the ongoing risk over security of supply.

Liquidity risk

The group's funding strategy includes maintaining appropriate levels of working capital, undrawn committed facilities and access to the capital markets. We regularly review liquidity levels and sources of cash, and we maintain access to committed credit facilities and debt capital markets. At 31st March 2023, the group had borrowings under committed bank facilities of £nil (2022: £nil). The group also has a number of uncommitted facilities and overdraft lines at its disposal.

The group has a £1 billion revolving credit facility with a maturity date of March 2027 which includes Environmental, Social and Governance KPIs which provides the group with a nominal interest saving or cost depending on our performance.

In June 2022 the group drew down on its first three sustainability-linked private placements (€225 million £35 million and $50 million). The notes have interest rates linked with Johnson Matthey's Key Performance Indicator for the reduction of its Scope 1 and 2 greenhouse gas emissions and are among the first sustainability-linked financing in the market from a UK corporate issuer.

During the financial year the group also drew down in full and extended the maturity date of its £407 million sustainable financing agreement through UK Export Finance (UKEF). These facilities now have maturity dates in March 2028.

	2023 £m	2022 £m
Expiring in more than one year	1,000	1,403
Undrawn committed bank facilities	1,000	1,403

28 Financial risk management continued

Liquidity risk continued

The maturity analyses for financial liabilities showing the remaining contractual undiscounted cash flows, including future interest payments, at current year exchange rates and assuming floating interest rates remain at the latest fixing rates, are:

At 31st March 2023

	Within 1 year £m	1 to 2 years £m	2 to 5 years £m	After 5 years £m	Total £m
Bank overdrafts	13	–	–	–	13
Bank and other loans – principal	155	104	809	542	1,610
Bank and other loans – interest payments	52	49	112	24	237
Lease liabilities - principal	9	9	12	10	40
Lease liabilities - principal - classified as held for sale	1	1	2	6	10
Lease liabilities - interest payments	2	1	3	8	14
Financial liabilities in trade and other payables	2,316	2	–	–	2,318
Financial liabilities in trade and other payables classified as held for sale	14	–	–	–	14
Total non-derivative financial liabilities	**2,562**	**166**	**938**	**590**	**4,256**
Forward foreign exchange contracts – payments	322	27	5	–	354
Forward foreign exchange contracts – receipts	(310)	(25)	(5)	–	(340)
Currency swaps – payments	1,026	–	–	–	1,026
Currency swaps – receipts	(1,012)	–	–	–	(1,012)
Cross currency interest rate swaps - payments	5	5	139	81	230
Cross currency interest rate swaps - receipts	(7)	(7)	(154)	(81)	(249)
Interest rate swaps – payments	5	5	78	81	169
Interest rate swaps – receipts	(2)	(2)	(73)	(80)	(157)
Total derivative financial liabilities	**27**	**3**	**(10)**	**1**	**21**

At 31st March 2022

	Within 1 year £m	1 to 2 years £m	2 to 5 years £m	After 5 years £m	Total £m
Bank overdrafts	37	–	–	–	37
Bank overdrafts classified as held for sale	8	–	–	–	8
Bank and other loans – principal	264	142	412	348	1,166
Bank and other loans – interest payments	29	25	47	13	114
Lease liabilities - principal	10	8	13	19	50
Lease liabilities - principal - classified as held for sale	2	2	1	4	9
Lease liabilities - interest payments	2	2	3	9	16
Financial liabilities in trade and other payables	2,290	2	–	–	2,292
Financial liabilities in trade and other payables classified as held for sale	23	–	–	–	23
Total non-derivative financial liabilities	**2,665**	**181**	**476**	**393**	**3,715**
Forward foreign exchange contracts – payments	473	45	26	–	544
Forward foreign exchange contracts – receipts	(466)	(43)	(25)	–	(534)
Currency swaps – payments	2,050	–	–	–	2,050
Currency swaps – receipts	(2,053)	–	–	–	(2,053)
Cross currency interest rate swaps - payments	2	65	–	–	67
Cross currency interest rate swaps - receipts	(2)	(65)	–	–	(67)
Interest rate swaps – payments	1	1	67	77	146
Interest rate swaps – receipts	(2)	(2)	(71)	(79)	(154)
Total derivative financial liabilities	**3**	**1**	**(3)**	**(2)**	**(1)**

28 Financial risk management continued

Offsetting financial assets and liabilities

The group offsets financial assets and liabilities when it currently has a legally enforceable right to offset the recognised amounts and it intends to either settle on a net basis or realise the asset and settle the liability simultaneously. The following financial assets and liabilities are subject to offsetting or enforceable master netting arrangements:

At 31st March 2023

	Gross financial assets / (liabilities) £m	Amounts set off £m	Net amounts in balance sheet £m	Amounts not set off[1] £m	Net £m
Non-current interest rate swaps	20	–	20	(5)	15
Other financial assets – current	47	–	47	(11)	36
Other financial liabilities – current	(27)	–	(27)	11	(16)
Non-current borrowings and related swaps	(1,460)	–	(1,460)	5	(1,455)

At 31st March 2022

	Gross financial assets / (liabilities) £m	Amounts set off £m	Net amounts in balance sheet £m	Amounts not set off[1] £m	Net £m
Non-current interest rate swaps	11	–	11	(3)	8
Cash and cash equivalents	392	(1)	391	–	391
Other financial assets – current	27	–	27	(24)	3
Cash and cash equivalents – bank overdrafts	(38)	1	(37)	–	(37)
Other financial liabilities – current	(44)	–	(44)	24	(20)
Non-current borrowings and related swaps	(899)	–	(899)	3	(896)

1. Agreements with derivative counterparties are based on an ISDA Master Agreement. Under these arrangements, whilst the group does not have a legally enforceable right of set off, where certain credit events occur, such as default, the net position receivable from or payable to a single counterparty in the same currency would be taken as owing and all the relevant arrangements terminated.

29 Fair values

Fair value hierarchy

Fair values are measured using a hierarchy where the inputs are:

- Level 1 – quoted prices in active markets for identical assets or liabilities.
- Level 2 – not level 1 but are observable for that asset or liability either directly or indirectly.
- Level 3 – not based on observable market data (unobservable).

Fair value of financial instruments

Certain of the group's financial instruments are held at fair value. The fair value of a financial instrument is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the balance sheet date.

The fair value of forward foreign exchange contracts, interest rate swaps, forward precious metal price contracts and currency swaps is estimated by discounting the future contractual cash flows using forward exchange rates, interest rates and prices at the balance sheet date.

The fair value of trade and other receivables measured at fair value is the face value of the receivable less the estimated costs of converting the receivable into cash.

The fair value of money market funds is calculated by multiplying the net asset value per share by the investment held at the balance sheet date.

There were no transfers of any financial instrument between the levels of the fair value hierarchy during the current or prior years.

29 Fair values continued

	2023 £m	2022 £m	Fair value hierarchy Level	Note
Financial instruments measured at fair value				
Non-current				
Investments at fair value through other comprehensive income[1]	49	45	1	–
Interest rate swaps – assets	20	12	2	–
Other financial assets[2]	48	–	2	18
Interest rate swaps – liabilities	(15)	(2)	2	–
Borrowings and related swaps	(5)	(2)	2	20
Other financial liabilities[2]	–	(12)	2	18
Current				
Trade receivables[3]	329	492	2	17
Other receivables[4]	21	44	2	17
Cash and cash equivalents - money market funds	521	137	2	–
Other financial assets[2]	47	27	2	18
Other financial liabilities[2]	(27)	(44)	2	18
Financial instruments not measured at fair value				
Non-current				
Borrowings and related swaps	(1,455)	(897)	–	20
Lease liabilities	(31)	(40)	–	12
Trade and other receivables	57	–	–	17
Other payables	(2)	(2)	–	19
Current				
Amounts receivable under precious metal sale and repurchase agreements	222	114	–	17
Amounts payable under precious metal sale and repurchase agreements	(838)	(793)	–	19
Cash and cash equivalents - cash and deposits	129	254	–	–
Cash and cash equivalents - bank overdrafts	(13)	(37)	–	–
Borrowings and related swaps	(155)	(265)	–	20
Lease liabilities	(9)	(10)	–	12
Trade and other receivables	1,075	972	-	17
Trade and other payables	(1,478)	(1,497)	-	19

1. Investments at fair value through other comprehensive income are quoted bonds purchased to fund pension deficits (£36 million) and investments held at fair value through other comprehensive income (£13 million).
2. Includes forward foreign exchange contracts, forward precious metal price contracts and currency swaps.
3. Trade receivables held in a part of the group with a business model to hold trade receivables for collection or sale. The remainder of the group operates a hold to collect business model and receives the face value, plus relevant interest, of its trade receivables from the counterparty without otherwise exchanging or disposing of such instruments.
4. Other receivables with cash flows that do not represent solely the payment of principal and interest.

The fair value of financial instruments, excluding accrued interest, is approximately equal to book value except for:

	2023 Carrying amount £m	Fair value £m	2022 Carrying amount £m	Fair value £m
US Dollar Bonds 2023, 2025, 2027, 2028, 2029 and 2030	(648)	(618)	(688)	(662)
Euro Bonds 2023, 2025, 2028, 2030 and 2032	(368)	(340)	(176)	(179)
Sterling Bonds 2024, 2025 and 2029	(145)	(137)	(110)	(107)
KfW US Dollar Loan 2024	(40)	(39)	(38)	(36)

The fair values are calculated using level 2 inputs by discounting future cash flows to net present values using appropriate market interest rates prevailing at the year end.

30 Share-based payments

The total expense recognised during the year in respect of equity-settled share-based payments was £18 million (2022: £15 million). The expense recognised in respect of equity-settled share-based payments for continuing operations was £18 million (2022: £13 million), and £nil (2022: £2 million) for discontinued operations.

The group currently operates various share-based payment schemes; a Performance share plan (PSP), a Restricted share plan (RSP), a Long-term incentive plan (LTIP), a Deferred bonus scheme and a Share Incentive Plan (SIP). Further details of the directors' remuneration under share-based payment plans are given in the Remuneration Report.

PSP

From 2017, shares are awarded to certain of the group's executive directors and senior managers under the PSP based on a percentage of salary and are subject to performance targets over a three-year period. The performance targets are based on underlying EPS growth, and Total Shareholder Return.

Awards to the executive directors are also subject to a deferred release whereby a third is released on the third anniversary of the award date and the remaining vested shares are released in equal instalments on the fourth and fifth anniversaries of the award date. The Remuneration Committee is entitled to claw back the awards to the executive directors in cases of misstatement or misconduct.

RSP

From 2017, shares are awarded to certain of the group's executive directors and senior managers under the RSP based on a percentage of salary. Awards under the RSP are not subject to performance targets. The shares are subject only to the condition that the employee remains employed by the group on the vesting date (three years after the award date).

LTIP

Prior to 2017, shares were awarded to approximately 1,300 of the group's executive directors, senior managers and middle managers under the LTIP based on a percentage of salary and were subject to performance targets over a three-year period.

Awards to the executive directors are subject to a deferred release whereby a third is released on the third anniversary of the award date and the remaining vested shares are released in equal instalments on the fourth and fifth anniversaries of the award date. The Remuneration Committee is entitled to claw back the awards to the executive directors in cases of misstatement or misconduct.

All outstanding awards on this scheme were released in August 2021.

Deferred bonus

A proportion of the bonus payable to executive directors and senior managers is awarded as shares and deferred for three years. The Remuneration Committee is entitled to claw back the deferred element in cases of misstatement or misconduct or other relevant reason as determined by it.

30 Share-based payments continued

All employee share incentive plan (SIP) – UK and overseas

Under the SIP, all employees with at least one year of service with the group and who are employed by a participating group company are entitled to contribute up to 2.5% of base pay each month, subject to a £125 per month limit. The SIP trustees buy shares (partnership shares) at market value each month with the employees' contributions. For each partnership share purchased, the group purchases two shares (matching shares) which are awarded to the employee.

In the UK SIP, if the employee sells or transfers partnership shares within three years of the date of award, the linked matching shares are forfeited.

In the overseas SIP, partnership shares and matching shares are subject to a three-year holding period and cannot be sold or transferred during that time.

During the year, 311,260 (2022: 287,320) matching shares under the SIP were awarded to employees. These are nil cost awards on which performance conditions are substantially completed at the date of grant and, consequently, the fair value of these awards is based on the market value of the shares at that date. Activity in the year in relation to these share plans is shown below:

	Year ended 31st March 2023				Year ended 31st March 2022			
	PSP	RSP	LTIP	Deferred Bonus	PSP	RSP	LTIP	Deferred Bonus
Outstanding at the start of the year	1,434,911	1,258,698	–	149,136	1,267,198	680,364	23,808	113,084
Awarded during the year	798,488	320,907	–	102,961	588,027	761,954	–	75,964
Forfeited during the year	(243,093)	(130,601)	–	–	(420,314)	(95,172)	–	–
Released during the year	(261,372)	(452,814)	–	(40,787)	–	(88,448)	(23,808)	(39,912)
Outstanding at the end of the year	1,728,934	996,190	–	211,310	1,434,911	1,258,698	–	149,136

	Year ended 31st March 2023				Year ended 31st March 2022				
	PSP	RSP	Exceptional RSP[1]	Deferred Bonus	PSP	Exceptional PSP	RSP	Exceptional RSP	Deferred Bonus
Fair value of shares awarded (pence)	1,916.8	1,916.8	2,059.6	1,849.1	2,767.7	1,652.5	2,767.7	1,839.7	2,703.4
Share price at the date of award (pence)	2,135.0	2,135.0	2,135.0	2,135.0	2,970.2	1,813.5	2,970.2	1,962.5	2,970.2
Dividend rate	3.61%	3.61%	3.61%	3.61%	2.36%	3.86%	2.36%	3.92%	2.36%

1. The group awarded an exceptional RSP scheme on 17th December 2021, and an exceptional PSP scheme on 1st March 2022 all other schemes have grant dates on 1st August each year.

The fair value of shares awarded was calculated using a modified Black Scholes model based on the share price at the date of award adjusted for the present value of the expected dividends that will not be received at an expected dividend rate.

At 31st March 2023, the weighted average remaining contracted life of the awarded PSP shares is 1.4 years (2022: 1.2 years) and 1.0 years (2022: 1.4 years) for the awarded RSP shares.

31 Commitments

	Group		Parent company	
Capital commitments - future capital expenditure contracted but not provided	2023 £m	2022 £m	2023 £m	2022 £m
Property, plant and equipment	106	68	32	23
Other intangible assets	25	21	25	11

At 31st March 2023, precious metal leases were £138 million (31st March 2022: £140 million) at year end prices.

32 Contingent liabilities

The group is involved in various disputes and claims which arise from time to time in the course of its business including, for example, in relation to commercial matters, product quality or liability, employee matters and tax audits[1]. The group is also involved from time to time in the course of its business in legal proceedings and actions, engagement with regulatory authorities and in dispute resolution processes. These are reviewed on a regular basis and, where possible, an estimate is made of the potential financial impact on the group. In appropriate cases a provision is recognised based on advice, best estimates and management judgement. Where it is too early to determine the likely outcome of these matters, no provision is made. Whilst the group cannot predict the outcome of any current or future such matters with any certainty, it currently believes the likelihood of any material liabilities to be low, and that such liabilities, if any, will not have a material adverse effect on its consolidated income, financial position or cash flows.

Following the sale of its Health business in May 2022, the group has been engaged in correspondence with the purchaser of the Health business, Veranova Bidco LP regarding certain warranties in the sale and purchase agreement (the "SPA") dated 16th December 2021. The purchaser has issued a claim against the group entities in connection with: i) certain alleged representations said to have been made during the course of the negotiation of the SPA; and, ii) certain warranties given in the SPA at the time of signing. Having reviewed the claim with its advisers, the group is of the opinion that it has a defensible position in respect of these allegations and if required, it will vigorously defend its position. The outcome of any legal proceedings relating to this matter is not certain, nor is the group able to make a reliable estimate of the possible financial impact at this stage, if any.

1. A previously disclosed contingent liability relating to failures in certain engine systems for which the group supplied a particular coated substrate as a component for that customer's emissions after-treatment systems was settled on mutually acceptable terms with no admission of fault, see note 4.

33 Transactions with related parties

The group has a related party relationship with its associate, its post-employment benefit plans (note 24) and its key management personnel (below). Transactions between the Company and its subsidiaries, which are related parties of the Company, have been eliminated on consolidation and are not disclosed in this note.

During the year the group recharged transition related costs of £8 million (2022: £nil) to related parties. The amounts owed by related parties were £3 million at 31st March 2023 (31st March 2022: £nil).

The key management of the group and parent company consist of the Board of Directors and the members of the Group Leadership Team (GLT). During the year ended 31st March 2023, the GLT had an average of 12 members (2022: 9 members). The only transactions with any key management personnel was compensation charged in the year which was:

	2023 £m	2022 £m
Short term employee benefits	10	7
Share-based payments	1	2
Termination benefits	–	1
Non-executive directors' fees and benefits	1	1
Total compensation of key management personnel	12	11

There were no balances outstanding as at 31st March 2023 (31st March 2022: £nil). Information on directors' remuneration is given in the Remuneration Report.

Guarantees of subsidiaries' liabilities are disclosed in note 47.

34 Non-GAAP measures

The group uses various measures to manage its business which are not defined by generally accepted accounting principles (GAAP). The group's management believes these measures provide valuable additional information to users of the accounts in understanding the group's performance. Certain of these measures are financial Key Performance Indicators which measure progress against our strategy.

All non-GAAP measures are on a continuing operations basis.

Definitions

Measure	Definition	Purpose
Sales[1]	Revenue excluding sales of precious metals to customers and the precious metal content of products sold to customers.	Provides a better measure of the growth of the group as revenue can be heavily distorted by year on year fluctuations in the market prices of precious metals and, in many cases, the value of precious metals is passed directly on to customers.
Underlying operating profit[2]	Operating profit excluding non-underlying items.	Provides a measure of operating profitability that is comparable over time.
Underlying operating profit margin[1, 2]	Underlying operating profit divided by sales.	Provides a measure of how we convert our sales into underlying operating profit and the efficiency of our business.
Underlying profit before tax[2]	Profit before tax excluding non-underlying items.	Provides a measure of profitability that is comparable over time.
Underlying profit for the year[2]	Profit for the year excluding non-underlying items and related tax effects.	Provides a measure of profitability that is comparable over time.
Underlying earnings per share[1, 2]	Underlying profit for the year divided by the weighted average number of shares in issue.	Our principal measure used to assess the overall profitability of the group.
Return on invested capital (ROIC)[1]	Annualised underlying operating profit divided by the 12 month average capital employed (net debt plus equity), excluding average post tax pension net assets.	Provides a measure of the group's efficiency in allocating the capital under its control to profitable investments.
Average working capital days (excluding precious metals)[1]	Monthly average of non-precious metal related inventories, trade and other receivables and trade and other payables (including any classified as held for sale) divided by sales for the last three months multiplied by 90 days.	Provides a measure of efficiency in the business with lower days driving higher returns and a healthier liquidity position for the group.
Free cash flow	Net cash flow from operating activities after net interest paid, net purchases of non-current assets and investments, proceeds from disposal of businesses, dividends received from joint ventures and associates and the principal element of lease payments.	Provides a measure of the cash the group generates through its operations, less capital expenditure.
Net debt (including post tax pension deficits) to underlying EBITDA	Net debt, including post tax pension deficits and quoted bonds purchased to fund the UK pension (excluded when the UK pension plan is in surplus) divided by underlying EBITDA for the same period.	Provides a measure of the group's ability to repay its debt. The group has a long-term target of net debt (including post tax pension deficits) to underlying EBITDA of between 1.5 and 2.0 times, although in any given year it may fall outside this range depending on future plans.

1. Key Performance Indicator.
2. Underlying profit measures are before profit or loss on disposal of businesses, gain or loss on significant legal proceedings, together with associated legal costs, amortisation of acquired intangibles, major impairment and restructuring charges, share of profits or losses from non-strategic equity investments and, where relevant, related tax effects. These items have been excluded by management as they are not deemed to be relevant to an understanding of the underlying performance of the business.

34 Non-GAAP measures continued

Underlying profit measures exclude the following non-underlying items which are shown separately on the face of the income statement:

- **Profit on disposal of businesses,** The group recognised £12 million profit on the disposal of businesses (2022: £106 million), see note 27.
- **Amortisation of acquired intangibles,** Amortisation and impairment of intangible assets which arose on the acquisition of businesses totalled £5 million (2022: £6 million).
- **Gains and losses on significant legal proceedings,** The group recognised a loss on significant legal proceedings of £25 million (2022: £42 million gain).
- **Major impairment and restructuring charges,** The group recognised £41 million in major impairment and restructuring charges (2022: £440 million), see note 6.
- **Share of losses of associates,** The group recognised £1 million for its share of losses of associates (2022: £nil), see note 15.

Reconciliations to GAAP measures

Sales

	2023 £m	2022 £m
Revenue (note 3)	14,933	16,025
Less: sales of precious metals to customers (note 3)	(10,732)	(12,247)
Sales	4,201	3,778

Underlying profit measures

Year ended 31st March 2023

	Operating profit £m	Profit before tax £m	Tax expense £m	Profit for the year £m
Underlying	465	404	(78)	326
Profit on disposal of businesses	12	12	(1)	11
Amortisation of acquired intangibles	(5)	(5)	1	(4)
Gains and losses on significant legal proceedings	(25)	(25)	5	(20)
Major impairment and restructuring charges	(41)	(41)	(7)	(48)
Share of losses of associates	–	(1)	–	(1)
Reported	406	344	(80)	264

Year ended 31st March 2022

	Operating profit £m	Profit before tax £m	Tax expense £m	Profit for the year £m
Underlying	553	493	(86)	407
Profit on disposal of businesses	106	106	(4)	102
Amortisation of acquired intangibles	(6)	(6)	1	(5)
Gains and losses on significant legal proceedings	42	42	(6)	36
Major impairment and restructuring charges	(440)	(440)	16	(424)
Reported	255	195	(79)	116

34 Non-GAAP measures continued

Underlying earnings per share

	2023	2022
Underlying profit for the year (£ million)	326	407
Weighted average number of shares in issue (number)	183,012,301	191,568,756
Underlying earnings per share (pence)	178.6	213.2

Return on invested capital (ROIC) - unaudited

	2023 £m	2022 £m
Underlying operating profit	465	553
Average net debt	1,267	877
Average equity	2,524	2,467
Average capital employed	3,791	3,344
Less: Average pension net assets	(312)	(221)
Less: Average related deferred taxation	84	48
Average capital employed (excluding post tax pension net assets)	3,563	3,171
ROIC (excluding post tax pension net assets)	13.1%	17.4%
ROIC	12.3%	16.5%

Average working capital days (excluding precious metals) - unaudited

	2023 £m	2022 £m
Inventories	1,702	1,549
Trade and other receivables	1,882	1,796
Trade and other payables	(2,497)	(2,563)
	1,087	782
Working capital balances classified as held for sale	22	–
Total working capital	1,109	782
Less: Precious metal working capital	(622)	(562)
Working capital (excluding precious metals)	487	220
Average working capital days (excluding precious metals)	42	36

Free cash flow from continuing operations

	2023 £m	2022 £m
Net cash inflow from operating activities	291	605
Interest received	28	32
Interest paid	(94)	(111)
Purchases of property, plant and equipment	(253)	(358)
Purchases of intangible assets	(63)	(95)
Purchases of investments held at fair value through other comprehensive income	(17)	–
Government grant income	7	–
Net proceeds from sale of businesses	187	160
Proceeds from sale of non-current assets	8	1
Proceeds from sale of investment in joint ventures	2	–
Principal element of lease payments	(14)	(14)
Less: Free cash (inflow) / outflow from discontinued operations	(8)	1
Free cash flow	74	221

34 Non-GAAP measures continued

Net debt (including post tax pension deficits) to underlying EBITDA

	2023 £m	2022 £m
Cash and deposits	129	254
Money market funds	521	137
Bank overdrafts	(13)	(37)
Bank overdrafts transferred to liabilities classified as held for sale	–	(8)
Cash and cash equivalents	637	346
Less: Cash and cash equivalents - bank overdrafts from discontinued operations	–	8
Cash and cash equivalents from continuing operations	637	354
Interest rate swaps - non-current assets	20	12
Interest rate swaps – non-current liabilities	(15)	(2)
Borrowings and related swaps - current	(155)	(265)
Borrowings and related swaps - non-current	(1,460)	(899)
Lease liabilities - current	(9)	(10)
Lease liabilities - non-current	(31)	(40)
Lease liabilities - current - transferred to liabilities classified as held for sale	(1)	(2)
Lease liabilities - non-current - transferred to liabilities classified as held for sale	(9)	(7)
Less: Lease liabilities relating to discontinued operations	–	3
Net debt	(1,023)	(856)
Increase / (decrease) in cash and cash equivalents	287	(205)
Less: (Increase) / decrease in cash and cash equivalents from discontinued operations	(8)	3
Less: (Increase) / decrease in borrowings	(391)	131
Less: Principal element of lease payments	14	14
Less: Principal element of lease payments from discontinued operations	–	(1)
Increase in net debt resulting from cash flows	(98)	(58)

	2023 £m	2022 £m
New leases, remeasurements and modifications	(13)	(9)
Less: New leases, remeasurements and modifications from discontinued operations	–	3
Exchange differences on net debt	(53)	(24)
Other non-cash movements	(3)	2
Movement in net debt	(167)	(86)
Net debt at beginning of year	(856)	(770)
Net debt at end of year	(1,023)	(856)
Net debt	(1,023)	(856)
Add: Pension deficits	(21)	(29)
Add: Related deferred tax	2	4
Net debt (including post tax pension deficits)	(1,042)	(881)
Underlying operating profit	465	553
Add back: Depreciation and amortisation excluding amortisation of acquired intangibles	182	171
Underlying EBITDA	647	724
Net debt (including post tax pension deficits) to underlying EBITDA	1.6	1.2

	2023 £m	2022 £m
Underlying EBITDA	647	724
Depreciation and amortisation	(187)	(177)
Gains and losses on significant legal proceedings	(25)	42
Major impairment and restructuring charges	(41)	(440)
Profit on disposal of businesses	12	106
Finance costs	(110)	(101)
Investment income	49	41
Share of losses of associates	(1)	–
Income tax expense	(80)	(79)
Profit for the year from continuing operations	264	116

35 Events after the balance sheet date

On 3rd May 2023, the group agreed to sell its Diagnostic Services business to Sullivan Street Partners and Souter Investments.

Parent Company Statement of Financial Position

as at 31st March 2023

	Notes	2023 £m	2022 £m
Assets			
Non-current assets			
Property, plant and equipment	37	350	322
Right-of-use assets		5	7
Goodwill	38	113	113
Other intangible assets	39	247	233
Investments in subsidiaries	40	2,074	1,921
Other receivables	41	1,040	1,598
Interest rate swaps		20	12
Other financial assets	42	48	–
Deferred tax assets		–	2
Post-employment benefit net assets	43	196	351
Total non-current assets		4,093	4,559
Current assets			
Inventories	44	821	566
Taxation recoverable		1	31
Trade and other receivables	41	2,012	1,941
Cash and cash equivalents		540	200
Other financial assets	42	51	27
Assets classified as held for sale		–	17
Total current assets		3,425	2,782
Total assets		7,518	7,341
Liabilities			
Current liabilities			
Trade and other payables	45	(3,747)	(4,258)
Lease liabilities		(2)	(3)
Cash and cash equivalents - bank overdrafts		(3)	(34)
Borrowings and related swaps	46	(151)	(255)
Other financial liabilities	42	(33)	(46)
Provisions	47	(91)	(162)
Liabilities classified as held for sale		–	(5)
Total current liabilities		(4,027)	(4,763)

	Notes	2023 £m	2022 £m
Non-current liabilities			
Borrowings and related swaps	46	(1,460)	(899)
Lease liabilities		(4)	(7)
Deferred tax liabilities		(4)	–
Interest rate swaps		(15)	(2)
Employee benefit obligations	43	(7)	(27)
Other financial liabilities	42	–	(12)
Provisions	47	(12)	(16)
Trade and other payables	45	(489)	(268)
Total non-current liabilities		(1,991)	(1,231)
Total liabilities		(6,018)	(5,994)
Net assets		1,500	1,347
Equity			
Share capital	48	215	218
Share premium		148	148
Treasury shares		(19)	(24)
Other reserves	48	71	(19)
Retained earnings[1]		1,085	1,024
Total equity		1,500	1,347

1. The parent company's profit for the year is £314 million (2022: £334 million).

Parent Company Statement of Changes in Equity

for the year ended 31st March 2023

	Share capital £m	Share premium account £m	Treasury Shares £m	Other reserves (note 48)	Retained earnings £m	Total equity £m
At 1st April 2021	221	148	(29)	4	900	1,244
Profit for the year	–	–	–	–	334	334
Remeasurements of post-employment benefit assets and liabilities	–	–	–	–	156	156
Amounts charged to hedging reserve	–	–	–	(34)	–	(34)
Tax on other comprehensive income / (expense)	–	–	–	8	(30)	(22)
Total comprehensive income	–	–	–	(26)	460	434
Dividends paid (note 48)	–	–	–	–	(139)	(139)
Purchase of treasury shares (note 48)	(3)	–	–	3	(200)	(200)
Share-based payments	–	–	–	–	11	11
Cost of shares transferred to employees	–	–	5	–	(8)	(3)
At 31st March 2022	218	148	(24)	(19)	1,024	1,347
Profit for the year	–	–	–	–	314	314
Remeasurements of post-employment benefit assets and liabilities	–	–	–	–	(143)	(143)
Exchange differences on translation of foreign operations	–	–	–	–	(8)	(8)
Amounts credited to hedging reserve	–	–	–	114	–	114
Tax on other comprehensive (expense) / income	–	–	–	(27)	37	10
Total comprehensive income	–	–	–	87	200	287
Dividends paid (note 48)	–	–	–	–	(141)	(141)
Purchase of treasury shares (note 48)	(3)	–	–	3	(1)	(1)
Share-based payments	–	–	–	–	13	13
Cost of shares transferred to employees	–	–	5	–	(10)	(5)
At 31st March 2023	**215**	**148**	**(19)**	**71**	**1,085**	**1,500**

36 Accounting policies - parent company

Basis of accounting and preparation - parent company

The accounts are prepared on a going concern basis in accordance with Financial Reporting Standard (FRS) 101, Reduced Disclosure Framework, issued in September 2015 and the Companies Act 2006 applicable to companies reporting under FRS 101. The parent company applies the recognition, measurement and disclosure requirements of international accounting standards in conformity with the requirements of the Companies Act 2006, but makes amendments where necessary to comply with the Act and has set out below the FRS 101 disclosure exemptions taken by the parent company:

- the requirements of paragraphs 45(b) and 46 to 52 of IFRS 2, *Share-based Payment*;
- the requirements of IFRS 7, *Financial Instruments*: Disclosures;
- the requirements of paragraphs 91 to 99 of IFRS 13, *Fair Value Measurement*;
- the requirements of the second sentence of paragraph 110 and paragraphs 113(a), 114, 115, 118, 119(a) to (c), 120 to 127 and 129 of IFRS 15, *Revenue from Contracts with Customers*;
- the requirement in paragraph 38 of IAS 1, *Presentation of Financial Statements*, to present comparative information in respect of: paragraph 73(e) of IAS 16, *Property, Plant and Equipment*; and paragraph 118(e) of IAS 38, *Intangible Assets*;
- the requirements of paragraphs 10(d), 38A, 38B, 40A, 40B, 40C, 40D, 111 and 134 to 136 of IAS 1, *Presentation of Financial Statements*;
- the requirements of IAS 7, *Statement of Cash Flows*;
- the requirements of paragraphs 30 and 31 of IAS 8, *Accounting Policies, Changes in Accounting Estimates and Errors*;
- the requirements of paragraph 17 of IAS 24, *Related Party Disclosures*;
- the requirements in IAS 24, *Related Party Disclosures*, to disclose related party transactions entered into between two or more members of a group, provided that any subsidiary which is a party to the transaction is wholly owned by such a member; and
- the requirements of paragraphs 130(f)(ii), 130(f)(iii), 134(d), 134(f) and 135(c) to 135(e) of IAS 36, *Impairment of Assets*.

The accounts are prepared on the historical cost basis, except for certain assets and liabilities which are measured at fair value as explained below.

The parent company has not presented its own income statement, statement of total comprehensive income and related notes as permitted by Section 408(3) of the Companies Act 2006. Profit for the year is disclosed in the parent company statement of financial position and statement of changes in equity.

In the parent statement of financial position, businesses acquired from other group companies are recognised at book value at the date of acquisition. The difference between the consideration paid and the book value of the net assets acquired is reflected in retained earnings.

Significant accounting policies

The group's and parent company's accounting policies have been applied consistently during the current and prior year, other than where new policies have been adopted (see note 1). The group's and parent company's significant accounting policies are consistent (see note 1) with the exception of the following parent company accounting policies:

Investments in subsidiaries

Investments in subsidiaries are stated in the parent company's balance sheet at cost less any provisions for impairment. If a distribution is received from a subsidiary, the investment in that subsidiary is assessed for an indication of impairment.

Provisions and contingencies

Where the parent company enters into financial guarantee contracts to guarantee the indebtedness of other companies within its group, these guarantee contracts are considered to be contingent liabilities until such time as it becomes probable that the company will be required to make a payment under the guarantee.

Sources of estimation uncertainty and judgements made in applying accounting policies

The group's and parent company's sources of estimation uncertainty and judgements made in applying accounting policies are consistent – see note 1 for further information.

37 Property, plant and equipment

	Land and buildings £m	Leasehold improvements £m	Plant and machinery £m	Assets in the course of construction £m	Total £m
Cost					
At 31st March 2022	126	3	658	130	917
Additions	–	–	6	66	72
Transfers from assets in the course of construction	3	–	32	(35)	–
Disposals	–	(1)	(13)	(3)	(17)
Disposals of businesses	–	–	–	(1)	(1)
At 31st March 2023	129	2	683	157	971
Accumulated depreciation and impairment					
At 31st March 2022	84	2	509	–	595
Charge for the year	2	–	31	–	33
Impairment losses	–	–	1	3	4
Disposals	–	–	(7)	(3)	(10)
Disposals of businesses	–	–	–	(1)	(1)
At 31st March 2023	86	2	534	(1)	621
Carrying amount at 31st March 2023	43	–	149	158	350
Carrying amount at 31st March 2022	42	1	149	130	322

Finance costs capitalised were £1 million (2022: £1 million) and the capitalisation rate used to determine the amount of finance costs eligible for capitalisation was 4.0% (2022: 4.2%).

38 Goodwill

	Total £m
Cost	
At 1st April 2021, 31st March 2022 and 31st March 2023	123
Impairment	
At 1st April 2021	8
Impairment losses	2
At 31st March 2022 and 31st March 2023	10
Carrying amount at 31st March 2023	113
Carrying amount at 31st March 2022	113
Carrying amount at 1st April 2021	115

The parent company's goodwill balance of £113 million relates to the Catalyst Technologies cash-generating unit. Refer to note 5 for further information on the impairment testing performed.

39 Other intangible assets

	Computer software £m	Patents, trademarks and licences £m	Acquired research and technology £m	Development expenditure £m	Total £m
Cost					
At 31st March 2022	382	19	5	13	419
Additions	45	2	–	–	47
Disposals	–	(1)	–	–	(1)
At 31st March 2023	427	20	5	13	465
Accumulated amortisation and impairment					
At 31st March 2022	149	16	4	17	186
Charge for the year	29	–	–	–	29
Impairment losses	3	–	–	–	3
At 31st March 2023	181	16	4	17	218
Carrying amount at 31st March 2023	246	4	1	(4)	247
Carrying amount at 31st March 2022	233	3	1	(4)	233

40 Investments in subsidiaries

	Cost of investments in subsidiaries £m	Accumulated impairment £m	Carrying amount £m
At 31st March 2022	2,183	(262)	1,921
Additions	202	–	202
Disposals	(49)	–	(49)
At 31st March 2023	**2,336**	**(262)**	**2,074**

The parent company's subsidiaries are shown in note 49.

41 Trade and other receivables

	2023 £m	2022 £m
Current		
Trade receivables	160	141
Contract receivables	23	16
Amounts receivable from subsidiaries	1,479	1,604
Prepayments	37	26
Value added tax and other sales tax receivable	49	23
Amounts receivable under precious metal sale and repurchase agreements	222	114
Other receivables	42	17
Trade and other receivables	**2,012**	**1,941**
Non-current		
Amounts receivable from subsidiaries	1,015	1,598
Advance payment to customers	25	–
Other receivables	**1,040**	**1,598**

Of the parent company's amounts receivable from subsidiaries, £140 million is impaired (2022: £441 million). The parent company recognised an impairment during the year of £2 million in respect of amounts receivable from the remaining Health business and £1 million in relation to amounts receivable from the Battery Systems business, Future expected credit losses on intercompany receivables are immaterial.

Trade receivables and contract receivables are net of expected credit losses.

42 Other financial assets and liabilities

The parent company non-current other financial assets and non-current other financial liabilities are consistent with the group balances - see note 18.

	2023 £m	2022 £m
Current assets		
Forward foreign exchange contracts designated as cash flow hedges	15	5
Forward precious metal price contracts designated as cash flow hedges	30	–
Forward foreign exchange contracts and currency swaps at fair value through profit or loss	6	22
Other financial assets	**51**	**27**
Current liabilities		
Forward foreign exchange contracts designated as cash flow hedges	(19)	(11)
Forward precious metal price contracts designated as cash flow hedges	–	(20)
Forward foreign exchange contracts and currency swaps at fair value through profit or loss	(14)	(15)
Other financial liabilities	**(33)**	**(46)**

43 Post-employment benefits

The parent company is the sponsoring employer of the group's UK defined benefit pension plan and the UK post-retirement medical benefits plan. There is no contractual agreement or stated policy for charging the net defined benefit cost for the plans to the individual group entities. The parent company recognises the net defined benefit cost for these plans and information is disclosed in note 24.

44 Inventories

	2023 £m	2022 £m
Raw materials and consumables	46	45
Work in progress	729	488
Finished goods and goods for resale	46	33
Inventories	**821**	**566**

45 Trade and other payables

	2023 £m	2022 £m
Current		
Trade payables	236	222
Contract liabilities	53	35
Amounts payable to subsidiaries	2,340	2,869
Accruals	170	220
Amounts payable under precious metal sale and repurchase agreements	813	684
Other payables	135	228
Trade and other payables	**3,747**	**4,258**
Non-current		
Amounts payable to subsidiaries	488	267
Other payables	1	1
Trade and other payables	**489**	**268**

46 Borrowings and related swaps

The parent company's non-current borrowings and related swaps are consistent with the group balances with the exception of the cross currency interest rate swaps of £5 million (2022: £2 million) which are designated as fair value hedges instead of net investment hedges - see note 20.

	2023 £m	2022 £m
Current		
€166 million EIB loan 2022	–	(140)
3.26% $150 million Bonds 2022	–	(115)
2.99% $165 million Bonds 2023	(133)	–
2.44% €20 million Bonds 2023	(18)	–
Borrowings and related swaps	**(151)**	**(255)**

47 Provisions

	Restructuring provisions £m	Other provisions £m	Total £m
At 1st April 2021	33	172	205
Charge for the year	7	3	10
Net sale of metal	–	(28)	(28)
Utilised	(7)	–	(7)
Released	(2)	–	(2)
At 31st March 2022	31	147	178
Charge for the year	17	–	17
Net sale of metal	–	(77)	(77)
Utilised	(15)	–	(15)
At 31st March 2023	**33**	**70**	**103**

	2023 £m	2022 £m
Current	91	162
Non-current	12	16
Total provisions	**103**	**178**

The restructuring provisions are part of the parent company's efficiency initiatives.

The other provisions include provisions to buy metal to cover short positions created by the parent company selling metal to cover price risk on metal owned by subsidiaries. Amounts provided reflect management's best estimate of the expenditure required to settle the obligations at the balance sheet date.

The parent company also guarantees some of its subsidiaries' borrowings and its exposure at 31st March 2023 was £4 million (2022: £4 million).

48 Share capital and other reserves

Share capital and dividends

The group and parent company disclosures relating to share capital, dividends and purchase of treasury shares are the same. Refer to note 25 for further information.

Other reserves

	Capital redemption reserve £m	Fair value through other comprehensive income reserve £m	Hedging reserve: Forward currency contracts £m	Hedging reserve: Cross currency swaps £m	Hedging reserve: Forward metal contracts £m	Total other reserves £m
At 1st April 2021	7	–	5	–	(8)	4
Cash flow hedges – (losses) / gains taken to equity	–	–	(12)	3	(31)	(40)
Cash flow hedges – transferred to revenue (income statement)	–	–	2	–	–	2
Cash flow hedges – transferred to foreign exchange (income statement)	–	–	–	(3)	–	(3)
Cash flow hedges – transferred inventory (balance sheet)	–	–	–	–	7	7
Cancelled ordinary shares from share buyback	3	–	–	–	–	3
Tax on items taken directly to or transferred from equity	–	–	–	–	8	8
At 31st March 2022	10	–	(5)	–	(24)	(19)
Cash flow hedges – (losses) / gains taken to equity	–	–	(9)	9	72	72
Cash flow hedges – transferred to revenue (income statement)	–	–	4	–	38	42
Cash flow hedges – transferred to cost of sales (income statement)	–	–	7	–	–	7
Cash flow hedges — transferred to foreign exchange (income statement)	–	–	–	(7)	–	(7)
Cancelled ordinary shares from share buyback	3	–	–	–	–	3
Tax on items taken directly to or transferred from equity	–	–	–	(1)	(26)	(27)
At 31st March 2023	13	–	(3)	1	60	71

49 Related undertakings

A full list of related undertakings at 31st March 2023 (comprising subsidiaries, joint ventures and associates) is set out below. Those held directly by the parent company are marked with an asterisk (*) and those held jointly by the parent company and a subsidiary are marked with a cross (+). All the companies are wholly owned unless otherwise stated. All the related undertakings are involved in the principal activities of the group. Unless otherwise stated, the share class of each related undertaking comprises ordinary shares only.

Entity	Registered address
+Johnson Matthey Argentina S.A.	Tucumán 1, Piso 4, C1049AAA, Buenos Aires, Argentina
Tracerco Argentina S.A.U.[5]	Edificio Republica, Tucumán 1, Piso 3 Ciudad Autanoma de Buenos Aires, C1049AAA, Buenos Aires, Argentina
Johnson Matthey (Aust.) Ltd	64 Lillee Crescent, Tullamarine VIC 3043, Australia
+Johnson Matthey Holdings Limited	64 Lillee Crescent, Tullamarine VIC 3043, Australia
+Johnson Matthey Belgium	Pegasuslaan 5, 1831 Diegem, Belgium
+Tracerco Europe BV	Zone 3, Doorneveld 115, 1731 Zellik, Brussels, Belgium
The Argent Insurance Co. Limited	Rosebank Centre, 5th Floor, 11 Bermudiana Road, Pembroke HM 08, Bermuda
Johnson Matthey Brasil Ltda	Avenida Macuco, 726, 12th Floor, Edifício International Office, CEP04523-001, Brazil
Tracerco do Brasil - Diagnosticos de Processos Industriais Ltda	Estrada dos Bandeirantes, 1793, Curicica, Jacarepagua, Rio de Janeiro, Brazil
Tracerco Radioactive Diagnostic Services Canada Inc.	8908 60 Avenue NW, Edmonton AB, T6E 6A6, Canada
Johnson Matthey Argillon (Shanghai) Emission Control Technologies Ltd.	Ground Floor, Building 2, No. 298, Rongle East Road, Songjiang Industrial Zone, Shanghai 201613, China
Johnson Matthey Battery Materials (Changzhou) Co., Ltd.	A10 Building, No.2 Xinzhu Road, Xinbei District, Changzhou, China
Johnson Matthey Chemical Process Technologies (Shanghai) Company Limited	Room 1066, Building 1, No 215 Lian He Bei Lu, Fengxian District, Shanghai, China
Johnson Matthey (China) Trade Co., Ltd	1st, 2nd and 3rd Floor, Building 2, No. 598 Dongxing Road, Songjiang Industrial Zone, Shanghai, China
Johnson Matthey Clean Energy Technologies (Beijing) Co., Ltd	Unit 01/14th Floor, Pacific Century Place, 2A Gong Ti Bei Lu, Chaoyang District, Beijing, China Ti Bei Lu, Chaoyang District, Beijing, China
Johnson Matthey (Shanghai) Catalyst Co., Ltd.	586 Dongxing Road, Songjiang Industry Zone, Shanghai, 201613, China
Johnson Matthey (Shanghai) Chemicals Limited	588 and 598 Dongxing Road, Songjiang Industry Zone, Shanghai, 201613, China
Johnson Matthey (Shanghai) Trading Limited	Room 1615B, No. 118 Xinling Road, Shanghai Pilot Free Trade Zone, China
Johnson Matthey (Tianjin) Chemical Co., Ltd.	Room 2007, No. 16, Third Avenue, Tianjin Economic-Technological Development Zone, Tianjin, China
Johnson Matthey (Zhangjiagang) Environmental Protection Technology Co., Ltd	No. 9 Dongxin Road, Jiangsu Yangtze River International Chemical Industrial Park, Jiangsu Province, China
Johnson Matthey (Zhangjiagang) Precious Metal Technology Co., Ltd.	No. 48, the west of Beijing Road, Jingang Town, Yangtze River International Chemical Industrial Park, Jiangsu, China
Johnson Matthey A/S	c/o Lundgrens Advokatpartnerselskab, Tuborg Boulevard 12, 4., 2900 Hellerup, Denmark
*AG Holding Ltd	5th Floor, 25 Farringdon Street, London, EC4A 4AB, England
*Cascade Biochem Limited[1]	5th Floor, 25 Farringdon Street, London, EC4A 4AB, England
Ilumink Limited	5th Floor, 25 Farringdon Street, London, EC4A 4AB, England
*JMEPS Trustees Limited	5th Floor, 25 Farringdon Street, London, EC4A 4AB, England
Johnson Matthey Battery Systems Engineering Limited	5th Floor, 25 Farringdon Street, London, EC4A 4AB, England
*Johnson Matthey Battery Materials Limited	5th Floor, 25 Farringdon Street, London, EC4A 4AB, England
*Johnson Matthey Davy Technologies Limited	5th Floor, 25 Farringdon Street, London, EC4A 4AB, England

49 Related undertakings continued

Entity	Registered address
Johnson Matthey Davy Technologies International Limited (in Liquidation)	30 Finsbury Square, London, EC2A 1AG, England
*Johnson Matthey Hydrogen Technologies Limited[1,7]	5th Floor, 25 Farringdon Street, London, EC4A 4AB, England
Johnson Matthey Investments Limited	5th Floor, 25 Farringdon Street, London, EC4A 4AB, England
*Johnson Matthey (Nominees) Limited	5th Floor, 25 Farringdon Street, London, EC4A 4AB, England
*Johnson Matthey Precious Metals Limited	5th Floor, 25 Farringdon Street, London, EC4A 4AB, England
Johnson Matthey South Africa Holdings Limited	5th Floor, 25 Farringdon Street, London, EC4A 4AB, England
Johnson Matthey Tianjin Holdings Limited	5th Floor, 25 Farringdon Street, London, EC4A 4AB, England
*Johnson Matthey UK Holdings Limited[5]	5th Floor, 25 Farringdon Street, London, EC4A 4AB, England
*Matthey Finance Limited	5th Floor, 25 Farringdon Street, London, EC4A 4AB, England
*Matthey Holdings Limited	5th Floor, 25 Farringdon Street, London, EC4A 4AB, England
Tracerco Global (Topco) Limited[5]	5th Floor, 25 Farringdon Street, London, EC4A 4AB, England
Tracerco Limited	5th Floor, 25 Farringdon Street, London, EC4A 4AB, England
Johnson Matthey Battery Materials Finland Oy	Unioninkatu 22, Helsinki, 00130, Finland
Johnson Matthey Finland Oy (in liquidation)	William Ruthin Katu 1, Kotka, 48600, Finland
Johnson Matthey SAS	Les Diamants - Immeuble B, 41 rue Delizy, 93500 Pantin, France
Johnson Matthey Battery Materials GmbH	Ostenriederstrasse 15, 85368 Moosburg a.d. Isar, Germany
Johnson Matthey B.V.[7]	Otto-Volger-Strasse 9b, 65843 Sulzbach, Germany
Johnson Matthey Catalysts (Germany) GmbH	Bahnhofstrasse 43, 96257 Redwitz an der Rodach, Germany
Johnson Matthey Chemicals GmbH	Wardstrasse 17, D-46446 Emmerich am Rhein, Germany
Johnson Matthey Deutschland GmbH[7]	Otto-Volger-Strasse 9b, 65843 Sulzbach, Germany
Johnson Matthey GmbH & Co. KG[8]	Otto-Volger-Strasse 9b, 65843 Sulzbach, Germany
Johnson Matthey Holding GmbH[8]	Bahnhofstrasse 43, 96257 Redwitz an der Rodach, Germany
Johnson Matthey Management GmbH	Otto-Volger-Strasse 9b, 65843 Sulzbach, Germany
Johnson Matthey Redwitz Real Estate (Germany) B.V. & Co. KG[8]	Bahnhofstrasse 43, 96257 Redwitz an der Rodach, Germany
Johnson Matthey Pacific Limited[3]	Room 803-6, 909 Cheung Sha Wan Road, Kowloon, Hong Kong
Johnson Matthey Process Technologies	Room 803-6, 909 Cheung Sha Wan Road, Kowloon, Hong Kong
Johnson Matthey Tracerco Holdings Hong Kong Limited	Room 802-6, 909 Cheung Sha Wan Road, Kowloon, Hong Kong
Macfarlan Smith (Hong Kong) Limited	Room 803-6, 909 Cheung Sha Wan Road, Kowloon, Hong Kong
Johnson Matthey Chemicals India Private Limited	Plot No 6A, MIDC Industrial Estate, Taloja, District Raigad, Maharashtra 410208, India
Johnson Matthey India Private Limited	Regus Business Centre, 5th Floor, Caddie Commercial Tower - Aerocity, New Delhi, 110037, India
Johnson Matthey Limited	13-18 City Quay, Dublin 2, D02 ED70, Ireland
Johnson Matthey Italia S.r.l.	Corso Trapani 16, 10139, Torino, Italy
Tracerco Italia S.r.l.[5]	Via Campo Bratela, N. 119 - 20069, Aprio D'adda, Milano, Italy
Johnson Matthey Fuel Cells Japan Limited	5123-3 Kitsuregawa, Sakura-shi, Tochigi, 329-1412, Japan

49 Related undertakings continued

Entity	Registered address
*Johnson Matthey Japan Godo Kaisha	5123-3 Kitsuregawa, Sakura-shi, Tochigi, 329-1412, Japan
Johnson Matthey Sdn. Bhd.	Suite 16-03, Level 16, Wisma UOA II, 21 Jalan Pinang, 50450 Kuala Lumpur, Malaysia
Johnson Matthey Services Sdn. Bhd.	Suite 16-03, Level 16, Wisma UOA II, 21 Jalan Pinang, 50450 Kuala Lumpur, Malaysia
Tracerco Asia Sdn. Bhd.	Suite 16-03, Level 16, Wisma UOA II, 21 Jalan Pinang, 50450 Kuala Lumpur, Malaysia
Tracerco Asia Services Sdn. Bhd.	Suite 16-03, Level 16, Wisma UOA II, 21 Jalan Pinang, 50450 Kuala Lumpur, Malaysia
Johnson Matthey de Mexico, S. de R.L. de C.V.	c/o Cacheaux, Cavazos and Newton, No. 437 Col. Colinas del Cimatario, CP 76090 Queretaro, Mexico
Johnson Matthey Servicios, S. de R.L. de C.V.	c/o Cacheaux, Cavazos and Newton, No. 437 Col. Colinas del Cimatario, CP 76090 Queretaro, Mexico
Intercat Europe B.V.	Gelissendomein 8, Office KB103, 6229GJ, Maastricht, Netherlands
Johnson Matthey Holdings B.V[7]	Gelissendomein 8, KB 103, 6229 GJ Maastricht, Netherlands
Johnson Matthey International Management Services B.V.[7]	Gelissendomein 8, KB 103, 6229 GJ Maastricht, Netherlands
Johnson Matthey Netherlands 2 B.V.	Gelissendomein 8, KB 103, 6229 GJ Maastricht, Netherlands
Matthey Finance B.V.[1]	Fregatweg 38, 6222 NZ Maastricht, Netherlands
Johnson Matthey DOOEL Skopje	TIDZ Skopje 1, 1041 Ilinden, North Macedonia
Tracerco Norge AS	Kokstadflaten 35, 5257 Kokstad, Norway
Johnson Matthey Battery Systems Spólka z ograniczoną odpowiedzialnocścią	Ul. Alberta Einsteina 6, 44-109, Gliwice, Poland
Johnson Matthey Poland Spólka z ograniczoną odpowiedzialnocścią	Ul. Alberta Einsteina 6, 44-109, Gliwice, Poland
Johnson Matthey Battery Materials Poland spółka z ograniczoną odpowiedzialnocścią	Ul. Hutnicza 1, 62-510 Konin, Poland
*Macfarlan Smith Portugal, Lda	Largo de São Carlos 3, 1200-410 Lisboa, Portugal
Johnson Matthey Catalysts LLC	1 Transportny Proezd, 660027 Krasnoyarsk, Russia
Johnson Matthey Arabia for Business Services[6]	PO Box 26090, Riyadh 11486, Saudi Arabia
Johnson Matthey General Partner (Scotland) Limited	10 Wheatfield Road, Edinburgh, Midlothian, EH11 2QA, Scotland
Johnson Matthey (Scotland) Limited Partnership[2]	10 Wheatfield Road, Edinburgh, Midlothian, EH11 2QA, Scotland
Johnson Matthey Singapore Private Limited	50 Raffles Place, #19-00, Singapore Lane Tower, Singapore 048623
Johnson Matthey (Proprietary) Limited	Corner Henderson and Premier Roads, Germiston South Ext 7, Gauteng, South Africa
Johnson Matthey Research South Africa (Proprietary) Limited	Corner Henderson and Premier Roads, Germiston South Ext 7, Gauteng, South Africa
Johnson Matthey Salts (Proprietary) Limited	Corner Henderson and Premier Roads, Germiston South Ext 7, Gauteng, South Africa
Johnson Matthey Catalysts Korea Limited	A-dong 2906-ho, 13 Heungdeok 1-ro, Giheung-gu, Yongin-si, Gyeonggi-do, South Korea
Johnson Matthey Korea Limited	101-2803, Lotte Castle, 109, Mapo-daero, Mapo-gu Seoul, South Korea
Johnson Matthey AB	Viktor Hasselblads gata 8, 421 31 Västra Frölunda, Göteborg, Sweden
Johnson Matthey Formox AB	SE-284 80, Perstorp, Sweden
Johnson Matthey & Brandenberger AG	Glatttalstrasse 18, 8052 Zurich, Switzerland
Johnson Matthey Finance GmbH	Hertensteinstrasse 51, 6004 Lucerne, Switzerland
Johnson Matthey Finance Zurich GmbH	Glatttalstrasse 18, 8052 Zurich, Switzerland
LiFePO4+C Licensing AG	Hertensteinstrasse 51, 6004 Lucerne, Switzerland

49 Related undertakings continued

Entity	Registered address
Johnson Matthey Services (Trinidad and Tobago) Limited	Queen's Park Place, 17-20 Queens Park West, Port of Spain, Trinidad and Tobago
Stepac Ambalaj Malzemeleri Sanayi Ve Ticaret Anonim Sirketi (in liquidation)	Güzeloba Mah. Rauf Denktaş Cad., No.56/101, Muratpaşa/Antalya, Turkey
Johnson Matthey Holdings, Inc.	Corporation Service Company, 251 Little Falls Drive, Wilmington DE 19808, USA
Johnson Matthey Hydrogen Technologies, Inc.[7]	Corporation Service Company, 251 Little Falls Drive, Wilmington DE 19808, United States
Johnson Matthey Inc.[4]	Corporation Service Company, 2595 Interstate Drive, Suite 103 PA 17110, USA
Johnson Matthey Medical Device Components LLC	Corporation Service Company, 251 Little Falls Drive, Wilmington DE 19808, USA
Johnson Matthey Process Technologies, Inc.	Corporation Service Company, 251 Little Falls Drive, Wilmington DE 19808, USA
Johnson Matthey Stationary Emissions Control LLC	Corporation Service Company, 251 Little Falls Drive, Wilmington DE 19808, USA
Johnson Matthey USA Holdings Inc.[5]	Corporation Service Company, 251 Little Falls Drive, Wilmington DE 19808, USA
Red Maple LLC (50.0%).[6]	Corporation Service Company, 251 Little Falls Drive, Wilmington DE 19808, USA
Tracerco US LLC[5]	Corporation Service Company, 251 Little Falls Drive, Wilmington DE 19808, USA
Veranova Parent Holdco L.P. (30.0%)[6]	1209 Orange Street, New Castle County, Wilmington, Delaware, 19801

In some jurisdictions in which the group operates, share classes are not defined and in these instances, for the purpose of disclosure, these holdings have been classified as ordinary shares.

1. Ordinary and preference shares.
2. Limited partnership, no share capital.
3. Ordinary and non-cumulative redeemable preference shares.
4. Ordinary and series A preferred stock.
5. Incorporated during current financial year.
6. Joint Venture/Associate.
7. Name change in the year.
8. Merged with another Johnson Matthey subsidiary in the year.

Other information

In this section

Basis of reporting – non-financial data

This integrated report has been prepared in accordance with the GRI Standards for the period 1st April 2022 to 31st March 2023. Our last annual report was published in June 2022. All non-financial performance data is reported on a financial year basis unless otherwise stated.

Johnson Matthey compiles, assesses and discloses non-financial information to demonstrate to its stakeholders that it conducts its business in an ethical, responsible and sustainable manner and where there is a legal obligation to do so (for example, in accordance with the UK Companies Act, UK Stream-lined Energy and Carbon reporting (SECR) regulations, UK Modern Slavery Act).

This report has been developed to incorporate the group's significant economic, environmental and social impacts and is set within the context of the United Nations Brundtland definition of sustainability (1987) and our own sustainable business goals to 2030. The principles of inclusivity, materiality and responsiveness help to shape the structure of the report and to set priorities for reporting. The report also explains how we continue to build sustainability into our business planning and decision-making processes and how, through our governance processes, we manage social, environmental and ethical matters across the group.

Performance data covers all sites that are under the financial control of the group, including all manufacturing, research and warehousing operations of Johnson Matthey Plc and its subsidiaries. Joint ventures where we have a minority share are not included.

For the purposes of reporting, separate businesses resident at the same location are counted as separate sites. Data from 76 sites was included in this report, 45 are manufacturing sites, 15 are R&D sites and 16 are offices. Data from new facilities is included from the point at which the facility becomes owned by JM and operational.

Selected non-financial data has been third-party limited assured to ISAE 3000 (Revised) standard as described on page 228-230. Certain employee data is included in the financial accounts and is also subject to the financial data third-party audit described on page 133.

Rebaselining of previous years' data

During the year we divested several businesses as going concerns, including our Health, Advanced Glass Technologies and our Battery Materials businesses.

In accordance with the recommendations of the greenhouse gas (GHG) Protocol and SECR reporting guidance, we have removed their historical contribution to our operational KPIs for all years from 2019/20, which is our baseline for our 2030 sustainability targets. This specifically includes our historical data for Scope 1, 2 and 3 GHG emissions, water consumption, waste and emissions to air.

This report contains only rebaselined numbers.

Restatements of previous years' data in this report

In addition to rebaselining, there have been some restatements of data to account for improvements in methodology, coverage and quality of available data. JM's materiality threshold for variance is 5%. We have made restatements of environmental performance data for the following KPIs this year:

- Scope 3 emissions from investments has been restated following the inclusion of our pension-related investments where JM has appointed a trustee.
- NO_x emissions to Air has been restated following a review of the methodology to calculate this KPI.
- Recycled PGMs restated due to calculation refinements post 2021/22 ARA publication.
- Following a review of the methodologies for calculating process CO_2 emissions and process N_20 emissions the values have been restated for all years from base year (2019/20).

Material Topics

In July 2022 we partnered with a third party to refresh our materiality assessment. They reviewed public domain opinions of our investors, customers and social media users, as well as interviewing leaders inside JM. Our material topics were identified as:

- Climate Change
- Air Emissions
- Water and wastewater
- Waste management
- Circularity and product innovation
- Health and Safety
- Human rights
- Diversity and inclusion
- Community impact
- Responsible sourcing
- Governance and risk management

These were approved at the SVC meeting in September 2022.

Definition of employees and contractors

These definitions are used when reporting the Health and Safety KPIs on pages 33-34 of this report. For Employee headcount numbers, only Permanent and Temporary employees are counted as "Employees" pages 37 and 173.

Reported as "Employees"			Reported as "Contractors"		
Permanent employees	Temporary employees	Agency employees	Outsourced function	Specialist service	Projects
Continuously site based	Continuously site based	Continuously site based	Continuously or regularly site based	One-off project or regularly based on site	One-off project
Contract signed directly between JM and individual and paid regular salary and other benefits by JM	Fixed term contract signed directly between JM and individual. Paid regular salary and other benefits by JM	Person employed by an agency performing tasks that would normally be expected to be undertaken by a JM employee	Facility management – catering, cleaning or grounds maintenance; IT; and occupational health, where outsourced	Small scale building or ground works; repairing specialist plant or equipment; low level maintenance; small scale repairs to offices or other buildings; stack monitoring	Construction work, capital project work, major maintenance activities
Work is directly supervised by JM	Work is directly supervised by JM	Work is directly supervised by JM	Work is supervised by contractor and monitored by JM	Work is supervised by contractor and monitored by JM	Work is supervised by contractor and monitored by JM

Calculation methodologies for Key Performance Indicators (KPIs) relating to our sustainability targets for 2030

Planet: Protecting the climate

Our goal: Drive lower global GHG emissions

This KPI is a measure of the tonnes of GHG emissions avoided during the year by our customers' technologies which incorporate JM's products and solutions, compared to conventional offerings.

The KPI captures one year's impact for all qualifying technologies that have been operational during the year, as sold since 2020/21.

Our methodology for calculating avoided GHG emissions was developed in-house and independently verified by EcoAct™ for all product families contributing towards our target to ensure it complies with industry best practice. EcoAct concluded that our approach complied with recognised public guidelines and considered our calculations to be both fairly stated and representative of a balanced view of our contribution in enabling avoided emissions through relevant technologies. EcoAct also determined that our calculations follow industry best practice for measurement. Their full statement is available on request.

For each qualifying JM technology solution, we first determine its functional unit. The functional unit is used to determine the boundary of the analysis, to ensure that the scope of the calculation covers the relevant life-cycle stages leading to the avoided emissions. Performance comparisons for our technology solution scenario are then made against identified reference scenarios, which represent current day, conventional technologies dominant in the market, which our emerging technologies are seeking to improve upon.

The following table gives examples of the JM technology solution families included in this KPI and the reference scenarios used for the calculations.

JM's technology solution	Functional unit	Reference scenario	Solution scenario
Sustainable Aviation Fuel/Fischer-Tropsch	tonnes CO_2e / tonne jet fuel produced	Conventional fossil-based jet fuel	Jet fuel produced from municipal waste using Fisch Tropsch technology
Low Carbon Solutions (LCS)	tonnes CO_2e / tonne syngas produced	Syngas plant without LCS (powered by fossil fuels)	Syngas plant with LCS (powered by fossil fuels)
Low Carbon Hydrogen	tonnes CO_2e / TWh produced	Energy generated by natural gas combustion	Energy generated in the form of hydrogen from facility with carbon-capture and storage (CCS) enabled
Hydrogen Electrolysers	tonnes CO_2e / TWh produced	Energy generated by natural gas combustion	Energy generated by electrolysers (in form of hydrogen) powered by 100% renewable electricity
Stationary electricity generation	tonnes CO_2e / TWh produced	Energy generated from fossil fuel sources (in US)	Energy generated from hydrogen combustion (steam reforming process)
Automotive – heavy and light duty	tonnes CO_2e / vehicle	Internal combustion engine – diesel vehicle	Fuel cell electric vehicle powered by average China electricity grid mix

The lifetime of the technology is also considered to discount any impacts from the sale of previous years' technologies if these are no longer operational and, where applicable, adjustments to capture changing performance over time are made.

No allocation between value chain partners is applied, since there are no established guidelines for this. However, our products and solutions are vital to realising the benefits of the technologies being used, and our KPI aims to accurately reflect JM's role, in that we enable avoided GHG emissions via the use of such technologies.

Technologies that were previously included in this metric from businesses that have been divested during the year (Battery Materials) have been removed from the calculation and historical years' performance re-baselined.

SASB Resource efficiency indicator

We have also identified revenues aligned to the SASB Chemicals Sustainability Accounting Standard definition of products designed for use-phase resource efficiency, which includes products that "through their use – can be shown to improve energy efficiency, eliminate or lower greenhouse gas (GHG) emissions, reduce raw materials consumption, increase product longevity, and/or reduce water consumption". Qualifying products are those that either:

- increase the efficiency of a product during its use phase (for example, our battery materials and fuel cell components); or
- increase the efficiency of the manufacturing process used to make a product (for example, our catalysts and additives for the chemical, oil and gas industries).

Products beyond the scope of this assessment include those specifically designed to meet environmental regulatory requirements, and any product where a use-phase resource efficiency benefit is unclear. Revenues aligned to the use-phase resource efficiency criteria represent sales excluding precious metals.

Our goal: Achieve net zero by 2040

Our operational carbon footprint is reported in tonnes of carbon dioxide equivalent (CO_2e) according to the GHG Protocol corporate standard 2015 revision, www.ghgprotocol.org and in with the UK Stream-lined Energy and Carbon Reporting (SECR) April 2019 requirements of the UK Companies Act 2006 (Strategic and Directors' Reports) Regulations 2013.

Scope 1 GHG emissions

Our Scope 1 GHG emissions are generated by the direct burning of fuel (predominantly natural gas), performing chemical reactions in our manufacturing processes and driving company-owned or leased vehicles. They are calculated in tonnes CO_2e using conversion factors for each energy source as published by Defra in June 2022 and subsequently amended in September 2022 – we have used the amended version. We include carbon dioxide (CO_2), nitrous oxide (N_2O), refrigerant and methane (CH_4) process emissions to air in our Scope 1 calculations. We don't believe we have any material Scope 1 GHG emissions of PF5 and SF6

Scope 2 GHG emissions

Our Scope 2 GHG emissions arise from the use of electricity and steam procured from third parties for use at our facilities. They are calculated using the 'dual reporting' methodology outlined in the GHG Protocol corporate standard 2015 revision.

For the location-based method of Scope 2 accounting, for all facilities outside the US, we use national carbon intensity factors related to the consumption of grid electricity in 2020 made available in the 2022 edition of the world CO_2 emissions database of the International Energy Agency. They were purchased under licence in February 2022 for sole use in company reporting. For US facilities we use regional carbon factors published by the Environmental Protection Agency in January 2023 edition of, eGRID data 2021.

For the market-based method of Scope 2 accounting, we have applied the hierarchy of sources for determination of appropriate carbon intensity factors, as outlined in table 6.3 on page 48 of the GHG Protocol Scope 2 Guidance. We have successfully obtained carbon intensity factors directly from our grid electricity suppliers in the EU, US and Australia. However, it has not been possible to obtain this information from suppliers in China, India, South Africa and non-OECD Europe.

Scope 3 GHG emissions

Our annual Scope 3 GHG emissions are reported according to the methodology of the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard. A variety of accounting techniques were used depending on the availability of data. All value chain emissions over which JM has financial control are included; therefore our scope 3 reporting does not include raw materials where JM is a toll manufacturer i.e. when raw materials being used in our factories remain in the financial ownership of our customer at all times.

When calculating the GHG footprint of each Scope 3 category, our principle of using the most accurate data sources was applied in the following order:

- GHG footprint data obtained directly from value chain partners
- Mass based calculations using carbon intensity factors from respected databases, such as Defra's GHG reporting conversion factors and EcoInvent
- Financial allocation using Avieco's proprietary Input-Output (EEIO) model. This combines economic data from central banks and treasury departments with research data from the World Bank, OECD and other leading environmental agencies

Scope 3 GHG category as defined by GHG Protocol	Calculation methodology
1. Purchased goods and services	Where mass of purchased goods was available, this was used in combination with GHG intensity factors obtained either from suppliers or EcoInvent. For the remaining goods and for purchased services a financial allocation (EEIO model) was used
2. Capital goods	Financial allocation (EEIO model) using geographical breakdown of data shown in Accounting note 11 “Property, plant & equipment” on page 175
3. Fuel- and energy-related activities	Defra’s GHG reporting conversion factors 2022 were used to calculate well-to-tank GHG emissions from fuel usage, transmission and distribution losses from purchased electricity, and well-to-tank and transmission and distribution losses of energy from steam
4. Upstream transportation and distribution	Emissions data was provided by our suppliers where available. Otherwise, a financial allocation was made based on spend and intensity factors from the EEIO model
5. Waste generated in operations	Where GHG footprints were available from waste service providers they were used, otherwise Defra’s GHG reporting conversion factors 2022 were used according to mass of waste disposal by destination see page 31
6. Business travel	Footprint business travel for air and rail was obtained from our business travel service providers. Where available mileage for personal car, taxi and public transport use was used in combination with Defra’s GHG reporting conversion factors 2022. In the absence of mileage, a financial allocation was made based on expenses spend and intensity factors from the EEIO model. Accounting is by date of financial transaction
7. Employee commuting	Data is obtained by employee survey of miles travelled per week by modes of transport. Defra’s GHG reporting conversion factors 2022 are used to calculate the GHG intensity of each transport type
8. Upstream leased assets	Financial allocation (EEIO model) using floor space and geographical location
9. Downstream transportation and distribution	Where JM takes responsibility for the downstream distribution of goods, it was included in the upstream category calculation. Where our customers takes responsibility, no data is available
10. Processing of sold products	No quantitative data available, but not expected to be material based on our knowledge of how our customers use our products
11. Use of sold products	We have removed Use of sold products from our footprint by agreement with SBTi, as it determined that the emissions we reported in this category were ‘indirect’ and should not, therefore, be included.
12. End of life treatment of sold products	Many of JM’s products are returned to the company for recovery of the precious metals and thus end of life treatment is included in our Scope 1 and Scope 2 footprint. JM does not have visibility of other end of life treatments
13. Downstream leased assets	Included in Upstream leased assets category
14. Franchises	JM does not have any franchises
15. Investments	GHG footprints from our Pensions trustee providers were used, where available, and scaled to represent JM's global employee count. Financial allocation (EEIO model) using geographical breakdown of investment revenues from each entity

Planet: Protecting nature and advancing the circular economy

Our goal: Advancing the circular economy to conserve scarce resources

Our KPI to monitor how we are advancing the circular economy is a measurement of all % recycled platinum group metals in our manufactured goods on a mass basis.

We include use of five PGMs – platinum, palladium, rhodium, ruthenium and iridium in our target. This is defined as the weighted global average of all goods manufactured in our plants over the course of the reporting year and includes metal that is both sourced and funded by JM and metal sourced and funded by our customers.

We define primary metal as metal from a mine or originating outside of the refining loop. This is measured by recording the amount of metal matching this description that has been used in product manufacturing over the given time-period.

We define secondary or recycled metal as platinum-group metal-bearing material that has come from an end use (including post-consumer product scrap and waste materials) and has not come to JM in the form of ingot, concentrate or matte directly from a mining process.

This makes up the balance of metal that has been used in product manufacturing over the given time-period.

Our goal: Minimising our environmental footprint to protect nature

Total hazardous waste produced

This KPI is a record of how much hazardous waste we generate from our operations that can no longer be used by Johnson Matthey and has to be sent off site for treatment. We define hazardous waste in line with local regulatory requirements in the particular territory where the waste is generated. For example, in Europe we consider the EU Waste Framework Directive (Directive 2008/98/EC of the European Parliament and of the Council). We measure the amount of solid and liquid hazardous waste and report in metric tonnes of material. We measure the total weights sent off site, including any entrained water, and we consider all material waste no longer of use to Johnson Matthey. We categorise its destination in the following ways:

- Sent outside JM for beneficial reuse.
- Sent outside JM for recycling.
- Sent outside JM for incineration with energy recovery.
- Sent outside JM for incineration or treatment without energy recovery.
- Sent outside JM for landfill disposal.

Net water usage

This KPI is a record of how much water we withdraw through our operations.

The KPI includes all freshwater sources – mains supplied water that we receive from municipalities, public or private utility companies, ground water that is extracted from below the earth's surface and fresh surface water that we extract from rivers, wetlands, lakes etc. We do not include rainwater or any brackish surface water. We subtract any water that is returned to the source from which it is extracted at the same or better quality .

Nitrogen Oxide (NO_x) emissions

This KPI is a record of direct emissions of harmful nitrogen oxides to the environment from our manufacturing facilities. NO_x is a generic term which includes nitric oxide (NO) and nitrogen dioxide (NO_2), but excludes nitrous oxide (N_2O).

We measure this KPI in metric tonnes. The value is derived from continuous monitoring equipment where present, or from stoichiometric calculations based on our knowledge of NO_x generation from our chemical processes. We consider all sources of NO_x from the combustion of fuel in steam boilers to the gaseous output of our processes that emit NO_x. We report the value after any abatement or treatment has taken place within our chimney stacks.

People

Our goal: Keep people safe

Total recordable injury and illness rate (TRIIR) is defined as the number of recordable cases per 200,000 hours worked in a rolling year and includes cases affecting both our employees and contractors.

A recordable case (as defined under the US Occupational Safety and Health Administration (OSHA) Regulations) is defined as a work related accident or illness that results in one or more of the following: absence of more than one day; medical treatment beyond first aid; death; loss of consciousness and restricted work or transfer to another job.

The OSHA severity rate is a calculation that gives a company an average of the number of lost days and restricted days per recordable incident.

$$\text{OSHA severity rate} = \frac{\text{Total lost days and restricted days in the year} \times 200{,}000}{\text{Total hrs worked during the year}}$$

The process safety event severity rate (PSESR) is measured according to the methodology approved by International Council of Chemical Associations (ICCA). The metric first requires a determination that the event is to be included in the process safety event severity rate (PSESR) calculation and then determining the severity using the severity table.

In determining this rate, 1 point is assigned for each Level 4 incident attribute, 3 points for each Level 3 attribute, 9 points for each Level 2 attribute, and 27 points for each Level 1 attribute. The PSESR is recorded as a 12 month rolling number. Total worker hours include employees, temporary employees and contractors.

Theoretically, a process safety event could be assigned a minimum of 1 point (i.e. the incident meets the attributes of a Level 4 incident in only one category) or a maximum of 135 points (i.e. the incident meets the attributes of a Level 1 incident in each of the five categories).

A Tier 1 Process Safety Event (T-1 PSE) is a loss of primary containment (LOPC) with the greatest consequence as defined by American Petroleum Institute recommended practice (RP) 754.

ICCA process safety severity rate (Level 1 to Level 4) =

Total severity score for all events per 200,000 hrs worked during the year

Our goal: Create a diverse, inclusive and engaged company

Employee Engagement

All permanent and fixed term contract employees are invited to voluntarily complete an employee survey at regular intervals to determine the engagement and wellbeing of staff using a standard methodology defined by Workday Peakon – an independent third party used by companies globally. All responses are submitted confidentially to Workday Peakon and results are independently analysed and shared with all managers who met the minimum response threshold of five responses from their team. Through the survey we measure attributes on a scale of 0 to 10.
The survey measures employee engagement through three questions:

1) to what extent they would recommend JM as employer to others,
2) to what extent they intend to stay with JM,
3) in general how satisfied they are with their employment at JM.

Gender diversity

Our target KPI counts the percentage of all management level employees (permanent and temporary) who are registered female on the 31st March in the reporting year.

For this purpose, an employee's gender is determined based on their registered gender at birth or otherwise legally recognised gender as disclosed by the employee.

Our goal: Invest in our local communities

Our target KPI is an annual record of the total number of employee volunteering days undertaken by permanent employees within their local communities, in accordance with JM's global Employee Volunteering Policy. The volunteering is recorded in days, assuming that the standard full-time equivalent employee day is 8 hours. The recorded volunteering days may have been completed either on company time or on paid company leave. Volunteering done on unpaid leave, or outside normal working hours, is not included in the reported numbers. In determining the in-kind contribution of employees' volunteering we take the number of volunteering days reported in the year and multiply it by the group average cost of one day of employee time.

Calculation for indirect expenditure in community investment

Number of working days in a year is five days per week for 50 weeks per year.

$$\text{Average cost of one day of employee time} = \frac{\text{Total employee benefits expense in year}}{\text{Number of working days in year} \times \text{Average number of permanent employees}}$$

Externally assured selected information by ERM CVS

ERM Certification and Verification Services Limited ("ERM CVS") was engaged by Johnson Matthey PLC ("Johnson Matthey") to provide limited assurance in relation to the selected information set out below and presented in the Johnson Matthey Annual Report and Accounts 2023 (the "Report").

Metric name	Unit of Measure	2022/23 total figure
Total Scope 1 GHG emissions	tonnes CO_2e	233,300
Total Scope 2 GHG emissions (market-based)	tonnes CO_2e	130,386
Total Scope 2 GHG emissions (location-based)	tonnes CO_2e	204,848
Total Scope 1 and 2 GHG emission (market-based)	tonnes CO_2e	363,686
Total Scope 1 and 2 carbon intensity (market-based)	tonnes CO_2e/ tonne sales	3.4
Year on year change in Scope 1 and 2 carbon intensity	%	-8%
Total Scope 3 (Category 3) Fuel and Energy-related GHG emissions	tonnes CO_2e	41,018
Total energy consumption	MWh	1,185,612
Total non-renewable energy consumption	kWh	986,948,044
Total renewable energy purchased or generated	kWh	198,664,193
Certified renewable electricity consumption	%	41%
Total Scope 3 (Category 1) Purchased Goods and Services GHG emissions	tonnes CO_2e	2,495,475
Total freshwater withdrawal (all sources)	m^3	1,800,878
Total water discharged back to original source	m^3	48,993
Net freshwater consumption	000's m^3	1,752
Average direct Chemical Oxygen Demand of wastewater (COD)	mg/L	242
Coverage for COD reporting	%	75%

Metric name	Unit of Measure	2022/23 total figure
Freshwater consumed in regions of high or extremely high baseline water stress	000's m^3	399
Total waste sent off site	tonnes	62,885
Total waste disposed off site to landfill	tonnes	4,347
Total solid waste disposed off site	tonnes	4,369
Total solid waste generated for treatment off site	tonnes	17,307
Total solid waste sent off site to be reused or recycled	tonnes	12,938
Total hazardous waste sent off site for treatment	tonnes	41,860
Nitrogen oxides (NO_x) emissions to air	tonnes	336
Sulphur oxides (SO_x) emissions to air	tonnes	31
Volatile organic chemicals (VOCs) emissions to air	tonnes	42
Coverage for NO_x reporting	%	86%
Coverage for SO_x reporting	%	36%
Coverage for VOCs reporting	%	57%
Lost Time Injury Frequency Rate (LTIFR) employees	n/million hrs	1.16
Lost Time Injury Frequency Rate (LTIFR) contractors	n/million hrs	1.37
Occupational Illness Frequency Rate (OIFR)	n/million hrs	0.08
Tier 1 Process Safety events rate	Tier 1 events/ 1,000,000 hrs	0.30
Total Recordable Injury and Illness Rate(TRIIR) employees + contractors	n/200,000 hrs	0.47
ICCA Process Safety Event Severity Rate (PSESR)	PSESR/200,000 hrs	1.02

Independent Limited Assurance Statement to Johnson Matthey PLC

ERM Certification and Verification Services Limited ("ERM CVS") was engaged by Johnson Matthey PLC ("Johnson Matthey") to provide limited assurance in relation to the selected information set out below and presented in the Johnson Matthey Annual Report and Accounts 2023 (the "Report").

Engagement summary	
Scope of our assurance engagement	Whether the 2022/23 selected information as presented on page 228 of the Report are fairly presented, in all material respects, in accordance with the reporting criteria. Our assurance engagement does not extend to information in respect of earlier periods or to any other information included in the Report.
Reporting period	1st April 2022 – 31st March 2023
Reporting criteria	• WBCSD/WRI GHG Protocol Corporate Accounting and Reporting Standard (2004, as updated January 2015) and GHG Protocol Scope 2 Guidance • Occupational Safety and Health (OSHA) regulations • Johnson Matthey's Basis of reporting – non-financial data found in the 'other information' section of the Report.
Assurance standard and level of assurance	We performed a limited assurance engagement, in accordance with the International Standard on Assurance Engagements ISAE 3000 (Revised) 'Assurance Engagements other than Audits or Reviews of Historical Financial Information' issued by the International Auditing and Standards Board. The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for a reasonable assurance engagement and consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.
Respective responsibilities	Johnson Matthey is responsible for preparing the Report and for the collection and presentation of the information within it, and for the designing, implementing and maintaining of internal controls relevant to the preparation and presentation of the Report. ERM CVS' responsibility is to provide conclusions to Johnson Matthey on the agreed scope based on our engagement terms with Johnson Matthey, the assurance activities performed and exercising our professional judgement. We accept no responsibility, and deny any liability, to any party other than Johnson Matthey for the conclusions we have reached.

Our conclusion

Based on our activities, as described below, nothing has come to our attention to indicate that the 2022/23 selected information presented on page 228 of the Report, are not fairly stated, in all material respects in accordance with the reporting criteria.

Our assurance activities

Considering the level of assurance and our assessment of the risk of material misstatement of the Report a multi-disciplinary team of sustainability and assurance specialists performed a range of procedures that included, but was not restricted to, the following:

- Assessing the appropriateness of the reporting criteria for the selected information.
- Interviews with management representatives responsible for managing the selected issues.
- Interviews with relevant staff to understand and evaluate the relevant management systems and processes (including internal review and control processes) used for collecting and reporting the selected disclosures.
- A review at corporate level of a sample of qualitative and quantitative evidence supporting the reported information.
- An analytical review of the year-end data submitted by locations included in the consolidated group data for the selected disclosures which included testing the completeness and mathematical accuracy of conversions and calculations, and consolidation in line with the stated reporting boundary.
- In-person site visits to Bawal (India), Skopje (North Macedonia) and West Deptford Chemicals, NJ (USA), as well as virtual site visits to Brimsdown (UK) and Clitheroe (UK) and desktop reviews of Emmerich (Germany) and Savannah, GA (USA) to review local reporting processes and consistency of reported annual data with selected underlying source data.
- Confirming conversion and emission factors and assumptions used.
- Reviewing the presentation of information relevant to the scope of our work in the Report to ensure consistency with our findings.

The limitations of our engagement

The reliability of the assured information is subject to inherent uncertainties, given the available methods for determining, calculating or estimating the underlying information. It is important to understand our assurance conclusions in this context.

Our independence, integrity and quality control

ERM CVS is an independent certification and verification body accredited by UKAS to ISO 17021:2015. Accordingly we maintain a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements. Our quality management system is at least as demanding as the relevant sections of ISQM-1 and ISQM-2 (2022).

ERM CVS applies a Code of Conduct and related policies to ensure that its employees maintain integrity, objectivity, professional competence and high ethical standards in their work. Our processes are designed and implemented to ensure that the work we undertake is objective, impartial and free from bias and conflict of interest. Our certified management system covers independence and ethical requirements that are at least as demanding as the relevant sections of Parts A & B of the IESBA Code relating to assurance engagements.

The team that has undertaken this assurance engagement has extensive experience in conducting assurance on environmental, social, ethical and health and safety information, systems and processes, and provides no consultancy related services to Johnson Matthey in any respect.

Gareth Manning
Partner, Corporate Assurance

London, United Kingdom
18 May 2023

Shareholder information

Key shareholder facts

Johnson Matthey share price as at 31st March

2018	2019	2020	2021	2022	2023
3,042p	3,142p	1,798p	3,013p	1,879p	1,983p

By location

	Number of shares[1]	Percentage
UK and Eire	112,046,998	61.08%
USA and Canada	30,772,579	16.77%
Continental Europe	29,918,105	16.31%
Asia Pacific	4,612,414	2.51%
Rest of World	702,934	0.38%
Unidentified	5,400,387	2.94%
Total	183,453,417	100.00%

By category

	Number of shares[1]	Percentage
Investment and unit trusts	95,338,887	51.97%
Pension funds	21,393,579	11.66%
Individuals	67,278	0.04%
Custodians	17,611,620	9.60%
Insurance companies	11,051,044	6.02%
Sovereign wealth funds	4,718,398	2.57%
Charities	333,464	0.18%
Other	32,939,147	17.96%
Total	183,453,417	100.00%

By size of holding

	Number of holdings	Percentage of holders	Percentage of issued capital[1,2]
1 – 1,000	3,929	74.05%	0.65%
1,001 – 10,000	1,049	19.77%	1.65%
10,001 – 100,000	192	3.62%	3.74%
100,001 – 1,000,000	97	1.83%	18.63%
1,000,001 – 5,000,000	33	0.62%	36.65%
5,000,001 and over	6	0.11%	38.68%
Total	5,306	100.00%	100.00%

Dividend – pence per share

	2018	2019	2020	2021		2023
Interim	21.75	23.25	24.50	20.00	22.00	22.00
Final	58.25	62.25	31.125	50.00	55.00	55.00
Total ordinary	80.0	85.5	55.625	70.00	77.00	77.00

1. Issued share capital balances exclude treasury shares of 10,136,428
2. The size of holding figures as a percentage of the issued share capital are approximate due to the liquidity of the register

The Board is proposing a final dividend for 2022/23 of 55.00 pence, to take the total for the year to 77.00 pence.

Electronic communications

We're encouraging our shareholders to receive their shareholder information by email and via our website. This allows us to provide you with information quicker and helps us to be more sustainable by reducing paper and printing materials.

To register for electronic shareholder communications, visit our registrar's website shareview.co.uk.

Dividends

Dividends can be paid directly into shareholders' bank or building society accounts. This allows you to receive your dividend immediately and is cost-effective for your company. To take advantage of this, please contact Equiniti via shareview.co.uk or complete the dividend mandate form you receive with your next dividend cheque. A Dividend Reinvestment Plan is also available which allows shareholders to purchase additional shares in the company.

Matthey.com

You can find information about the company quickly and easily on our website matthey.com. Here you will find information on the company's current share price together with copies of the group's full-year and half-year reports and major presentations to analysts and institutional shareholders.

Enquiries

Shareholders who wish to contact Johnson Matthey Plc on any matter relating to their shareholding are invited to contact the company's registrars, Equiniti. Their contact details are included below. Equiniti also offer a share dealing service by telephone: 0345 603 7037 or online shareview.co.uk/dealing.

By phone: +44(0)371 384 2344 Please use the country code when calling from outside the UK. When you call, please quote your 11-digit Shareholder Reference Number.

Telephone lines are open 8.30am to 5.30pm Monday to Friday excluding public holidays in England and Wales.

By post: Equiniti, Aspect House, Spencer Road, Lancing, West Sussex BN99 6DA

Online: shareview.co.uk

Shareholders may also contact the company directly using the details below.

By phone: +44 20 7269 8000

By email: jmir@matthey.com

By post: The Company Secretary, Johnson Matthey Plc, 5th Floor 25 Farringdon Street, London EC4A 4AB

American Depositary Receipts

Johnson Matthey has a sponsored Level 1 American Depositary Receipt (ADR) programme which BNY Mellon administers and for which it acts as Depositary. Each ADR represents two Johnson Matthey ordinary shares. The ADRs trade on the US over-the-counter (OTC) market under the symbol JMPLY. When dividends are paid to shareholders, the Depositary converts those dividends into US dollars, net of fees and expenses, and distributes the net amount to ADR holders.

For enquiries, BNY Mellon can be contacted on 1-888-BNY-ADRS (1-888-269-2377) toll free if you are calling from within the US. Alternatively, they can be contacted by e-mail at shrrelations@cpushareownerservices.com or via their website at www.adrbnymellon.com.

Financial calendar 2023

8th June

Ex dividend date

9th June

Final dividend record date

20th July

Annual General Meeting (AGM)

1st August

Payment of final dividend subject to the approval of shareholders at the AGM

23rd November

Announcement of results for the six months ending 30th September 2023

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We have chosen to print on Edixion Offset, a primary material paper which is independently certified according to the rules of the Forest Stewardship Council® (FSC®) and from responsible sources. We continue to educate ourselves and evolve our thoughts in this area as well as search for a secondary material paper which can offer the same consistency in colour, robustness and print quality to produce a clear, crisp report for our stakeholders. We kindly ask that once you have finished with this report to share it with someone who it may be of interest to or to recycle this as we acknowledge that primary fibres from sustainably managed forests are critical to maintain the paper cycle.

More on paper sustainability: twosides.info

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Johnson Matthey
Inspiring science, enhancing life