VESUVIUS PLC

29 February 2024

Full Year Results for the twelve months ended 31 December 2023

Robust trading despite difficult market conditions

Vesuvius plc, a global leader in molten metal flow engineering and technology, announces its audited results for the twelve months ended 31 December 2023.

Financial summary	2023 (£m)	2022 (£m)	Year-on-year change	Underlying change[1]
Headline (non-statutory)				
Revenue	1,929.8	2,047.4	(5.7%)	(3.1%)
Trading Profit [2] (EBITA)	200.4	227.2	(11.8%)	(6.7%)
Return on Sales [2]	10.4%	11.1%	(70bps)	(40bps)
Headline basic EPS [2] (pence)	46.7	56.5	(17.3%)	(11.9%)
Free cash flow [2]	128.2	123.1	4.1%	
Net Debt / EBITDA[2]	0.9x	0.9x	-	
Statutory				
Operating Profit	190.1	216.8	(12.3%)	
Profit Before Tax	179.4	206.6	(13.2%)	
Statutory basic EPS (pence)	44.0	67.2	(34.5%)	
Cash inflow from operations	272.0	268.3	1.4%	
Dividend (pence per share)	23.0	22.25p	3.4%	

[1] Underlying basis is at constant currency and excludes separately reported items, and the impact of acquisitions and disposals.
[2] For definitions of non-GAAP measures, refer to Note 16 in the Condensed Group Financial Statements.

Highlights

- Revenue of £1,929.8m, was 3.1% lower on an underlying basis vs. 2022, reflecting lower volumes in a weaker market, partially offset by good pricing performance and market share gains in Flow Control and Foundry
- Robust trading profit of £200.4m, 6.7% lower on an underlying basis vs. 2022. Return on sales of 10.4%, 40bps lower than 2022 on an underlying basis
- Increased R&D investment (£37.4m, up 3.7% vs. 2022 and now 1.9% of sales) leading to 21 new products launched in 2023 and a strong pipeline of new products for the coming years
- Strategic expansion programme in Asia and Flow Control fully on track
- Strong cash management performance (cashflow conversion of 93%) with an increase in cash generated from operations despite reduction of trading profit, due to good progress on reducing trade working capital, supporting the launch of our £50m share buy-back programme
- Strong, stable balance sheet with net debt / EBITDA of 0.9x (31 December 2023)
- Proposed final dividend of 16.2p, bringing the full year dividend to 23.0p, +3.4%
- Programme to achieve cash cost savings of £30m by 2026 initiated
- Best ever health and safety performance with our Lost-Time Injury Frequency Rate down to 0.6
- Reduction of 20% in CO_2e intensity vs. 2019 baseline, reaching 2025 interim target two years earlier than planned

Comment from Patrick André, CEO:

"Despite the short-term uncertainties in our end steel and foundry markets, we remain confident in the mid to long term growth potential of these markets and in particular the steel market outside of China, which should be a tailwind for us.

The strength of our technology-based business model should also enable us to continue simultaneously outperform our underlying markets in Flow Control and Foundry and maintain a positive pricing performance for all our business units in the coming years.

This, coupled with our relentless drive to optimise our cost base as illustrated by the launch of our new cost optimisation programme, positions us very well to achieve our objectives of 12.5% return on sales by 2026 and free cash flow generation of £400m over the next three years."

Presentation of Full Year 2023 Results

Vesuvius management will make a presentation to analysts and investors on 29 February at 09:00 UK time at the London Stock Exchange, 10 Paternoster Square, London EC4M 7LS. For those unable to attend, the event will be livestreamed and can be accessed by clicking here. Participants can also join via an audio conference call. Please click here to register. Once registered, you will be provided with the information needed to join the conference, including dial-in numbers and passcodes. Be sure to save this information in your calendar.

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About Vesuvius plc

Vesuvius is a global leader in molten metal flow engineering and technology principally serving process industries operating in challenging high-temperature conditions.

We develop innovative and customised solutions, often used in extremely demanding industrial environments, which enable our customers to make their manufacturing processes safer, more efficient and more sustainable. These include flow control solutions, advanced refractories and other consumable products and increasingly, related technical services including data capture.

We have a worldwide presence. We serve our customers through a network of cost-efficient manufacturing plants located close to their own facilities, and embed our industry experts within their operations, who are all supported by our global technology centres.

Our core competitive strengths are our market and technology leadership, strong customer relationships, well established presence in developing markets and our global reach, all of which facilitate the expansion of our addressable markets.

Our ultimate goal is to create value for our customers, and to deliver sustainable, profitable growth for our shareholders giving a superior return on their investment whilst providing each of our employees with a safe workplace where they are recognised, developed and properly rewarded.

We think beyond today to create solutions that will shape the future.

Forward looking statements

This announcement contains certain forward looking statements which may include reference to one or more of the following: the Group's financial condition, results of operations, cash flows, dividends, financing plans, business strategies, operating efficiencies or synergies, budgets, capital and other expenditures, competitive positions, growth opportunities for existing products, plans and objectives of management and other matters. Forward-looking statements can be identified by the use of terms such as 'intend', 'aim', 'project', 'anticipate', 'estimate', 'plan', 'believe', 'expect', 'forecasts', 'may', 'targets', 'could', 'should', 'will', 'continue' or similar words.

Such forward looking statements, including, without limitation, those relating to the future business prospects, revenue, working capital, liquidity, capital needs, interest costs and income, in each case relating to Vesuvius, wherever they occur in this announcement, are necessarily based on assumptions reflecting the views of Vesuvius. Although Vesuvius makes such statements based on assumptions that it believes to be reasonable, by their nature, these forward looking statements are subject to a number of known and unknown risks, uncertainties and other factors beyond Vesuvius' control that could cause actual results, performance or achievements to differ materially from those expressed or implied by the forward looking statements. Such forward looking statements should, therefore, be considered in light of various important factors that could cause actual results to differ materially from estimates or projections contained in the forward looking statements. These include without limitation: economic and business cycles; the terms and conditions of Vesuvius' financing arrangements; foreign currency rate fluctuations; competition in Vesuvius' principal markets; acquisitions or disposals of businesses or assets; and trends in Vesuvius' principal industries.

The foregoing list of important factors is not exhaustive. When considering forward looking statements, careful consideration should be given to the foregoing factors and other uncertainties and events, as well as factors described in documents the Company files with the UK regulator from time to time including its annual reports and accounts. In light of these risks, uncertainties and assumptions, the forward looking events discussed in this announcement might not occur and such forward looking statements are not guarantees or predictions of Vesuvius' future performance. You should not place undue reliance on such forward looking statements which speak only as of the date on which they are made. Past performance is no guide to future performance and persons needing advice should consult an independent financial adviser.

Neither Vesuvius nor any of its affiliates, associates, employees, directors, officers or advisers assumes any responsibility for the accuracy or completeness or undertakes any obligation, to update or revise any of these forward-looking statements to reflect any new information or any changes in events, conditions or circumstances on which any such forward-looking statement is based save in respect of any requirement under applicable law or regulation.

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Vesuvius plc

Full Year Results for the twelve months ended 31 December 2023

In 2023, we delivered robust results and profitability despite a difficult market environment and we continued to make good progress in the implementation of our strategic revenue and profitability growth initiatives.

£m	2023 Reported	2022 Reported	currency	2022 Underlying	Reported Change	Underlying Change
Revenue	**1,929.8**	2,047.4	**(55.3)**	**1,992.1**	**(5.7%)**	**(3.1%)**
Trading Profit	**200.4**	227.2	**(12.5)**	**214.7**	**(11.8%)**	**(6.7%)**
Return on Sales	**10.4%**	11.1%		**10.8%**	**-70bps**	**-40bps**

Robust Group trading performance

In 2023, revenue was £1,929.8m, a decrease of 5.7% compared to 2022, of which 2.6% relates to FX translation. The fall in revenue was due to volume declines of 5.5%, partially offset by positive pricing of 2.3%. Overall volume declines in Flow Control and Foundry due to general market decline and destocking were partially offset by market share gains. In Advanced Refractories, volume declines were amplified due to our strategic priority on pricing over volume, in particular, in EMEA and the Americas. Conversely, Advanced Refractories gained market share in Asia.

Trading profit was £200.4m, a decrease of 6.7% on an underlying basis and 11.8% on a reported basis versus the prior year. The Group achieved a return on sales of 10.4% in 2023, a decrease of 40bps on an underlying basis. This robust performance, delivered through resilient pricing in all business units and market share gains in Flow Control and Foundry, demonstrates the strength of the technology-based business model of the Group.

Difficult market background

Our steel markets, after some limited improvement during H1 2023 from the very low level of H2 2022, weakened again during H2 2023. This was particularly pronounced in Europe (EU+UK) where steel production declined overall 7.3% in 2023 as compared with the previous year, 5% below the worst year of the pandemic in 2020. Steel markets were also particularly difficult in South America, where production declined 5.8 % as compared with the previous year. India was, in 2023, for the second year in a row, the only major region in the world to exhibit strong growth, of 11.8%. Steel production in China was stable but Chinese net steel exports increased very significantly during the year, putting pressure on steel producers outside China, with the exception of those in the US who were insulated by efficient trade protections. Overall, steel production in the world excluding China, Russia, Iran and Ukraine declined by 0.7% in 2023, after a decline of 3.9 % in 2022. (Source: World Steel Association)

Our foundry markets, with the exception of India, also remained weak in 2023, in particular in Europe (specifically in and around Germany), in China and in South America. Weakness in non-automotive sectors more than offset a limited recovery in the automotive sector. Destocking of excess castings inventories accumulated during the pandemic also had a negative impact on our end markets.

Robust results and profitability thanks to positive pricing performance in all business units and market share gains in Flow Control and Foundry

Both the Steel and Foundry Divisions achieved a positive pricing performance in 2023, sharing the value we create for our customers with our technology leading products and solutions and fully compensating for increases in our cost base from the continuing inflationary environment.

At the same time, both the Flow Control and the Foundry business units continued to gain market share in most regions, with the exception of Europe (EU+UK) for Flow Control where the business unit was negatively impacted by destocking at certain key customers and where we applied strict credit limit rules limiting our sales to customers at heightened risk of insolvency.

This ability to simultaneously improve market share and prices in both Flow Control and Foundry was again made possible by the technological differentiation of our products and solutions, driven by our market-leading investment in research and development.

In the Advanced Refractories business unit, however, we lost market share in 2023, particularly in Europe and in the Americas, as we gave priority to pricing.

Thanks to this overall positive pricing performance and to our market share gains in Flow Control and Foundry, we delivered robust results in 2023 despite the very challenging market environment. Our revenue reached £1929.8m (versus £2047.4m in 2022), our trading profit reached £200.4m (versus £227.2m in 2022), resulting in a return on sales of 10.4% (11.1% in 2022), demonstrating again the positive impact of the cost competitiveness and technology strategy we have implemented for several years.

Successful implementation of our growth generating investment programme in Flow Control and Asia.

The growth-generating investment programme we initiated in 2021 continues apace and will support the progression of our results and profitability in the years to come. The expansion of our VISO, Slide gate and mould flux production capacity in Flow Control will be fully operational by mid-2024 and will support the business unit's expansion in India, South-East Asia, EEMEA and North America. In China, our new Foundry flux production line is now fully operational and will enable the business unit to accelerate its penetration of the fast-growing aluminium foundry market in the country. In Advanced Refractories, the expansion of our basic monolithics, AlSi monolithics and precast capacity at our new flagship plant in Vizag, India, will be completed by the end of 2024 and will support the profitable growth of the business unit in India and South-East Asia.

Strong free cash flow generation

Thanks to our stringent cash management discipline and in particular good progress in the management of our trade working capital, our cash conversion ratio reached 93% in 2023. This enabled us to maintain a very low debt leverage ratio of 0.9x despite capital expenditure being temporarily higher than the long-term average, to increase our dividend and to launch a £50m share buyback programme at the end of 2023.

Our free cashflow generation is expected to improve further from 2025, when our strategic expansion programme will be complete, and capex should return to a more normalised level.

Continued progress in the productivity of R&D and new product development

We have again increased our investment in research and development in 2023, spending £37.4m, an uplift of 3.7% over 2022 (on a constant currency basis). This was fully expensed in our profit and loss statement. Our two focus areas remain: innovation in materials science, with an objective to continuously improve the performance of our consumables; and, the development of mechatronics solutions to enable our customers to substitute the operators who manipulate our consumables with robots and, by doing so, improve their safety, reliability, cost and quality performance.

We successfully launched 21 new products in 2023. Our New Product Sales ratio, defined as the percentage of our sales realised with products which didn't exist five years ago, reached 17.6% in 2023, up from 16.4% in 2022.

Thanks to the continuous efforts we are putting into R&D, we now have a full pipeline of products under development which will be progressively introduced in the market over the next three years and will support our ambition to grow our revenue and profitability.

New cost optimisation programme to deliver £30m recurring cash savings by 2026

We launched at the end of 2023 a new cost optimisation programme aiming to deliver £30m recurring cash savings by 2026. This program will cover all our activities worldwide and will focus on operational improvement, lean initiatives, automation and digitalisation as well as further optimisation of our manufacturing footprint.

Sustainability

While one of the key attributes of our products is to reduce the carbon intensity of our customers' processes, we are also focused on what we can do within our own business. We have set nine sustainability targets and continue to monitor performance against these. However, we have identified four key drivers for our sustainability programme, namely: becoming a zero-accident company; reaching net zero CO_2e emissions (Scope 1 and Scope 2) by 2050; continuing to help our customers reduce their CO_2 emissions; and improving our gender diversity at every level of the Company.

Best-ever safety performance

We achieved our best-ever safety result in 2023, with a Lost Time Injury Frequency Rate (the number of injuries necessitating a lost work-shift, per million hours worked) of 0.6, versus 1.08 achieved in 2022, which now positions us among the best-in-class companies worldwide. This is the result of many years of efforts to integrate safety as the number one priority in the company culture. Our ultimate goal remains for us to be a zero-accident company and we will intensify our efforts to continue progressing rapidly towards this objective.

Our journey to net zero

In 2023, we continued to implement our action plan to decarbonise our activities. In particular, we reinforced further our energy savings initiatives and our programme to shift our electricity consumption worldwide to non-carbon emitting sources. Thanks to these efforts, we reduced our carbon intensity by 20.2% as compared with our 2019 reference year (versus a reduction of 18.5% in 2022), achieving our 2025 objective two years ahead of schedule and setting us on track to achieve our next intermediary target of 50% reduction by 2035.

Excluding the impact of our rotary kiln in South Africa, which we do not consider as core to our long-term strategy, our carbon intensity decreased by 33.2% worldwide in 2023 as compared with 2019.

Cyber update

On 6 February 2023, we announced that we had suffered a major cyber security incident. Thanks to the protective measures implemented in the previous years with the strong support of the Board, and despite the severity of the attack, our customers didn’t suffer any supply disruption, we recovered the use of the majority of our systems in a matter of weeks. The overall cost of this incident was limited to £3.5m.

We have analysed the event in detail and derived the necessary leanings. This has enabled us to improve our protection further and should minimise both the risk and the impact of any subsequent incident.

Dividend and share buy-back

Our dividend policy aims to deliver long-term dividend growth via a progressive dividend, provided this is supported by cashflow and underlying earnings and is justified in the context of our capital expenditure requirements and the prevailing market outlook.

The Board has recommended a final dividend of 16.2 pence, bringing the total dividend for the year to 23.0 pence per share, which is a 3.4% year on year increase on the total dividend for 2022 of 22.25 pence per share. This represents a dividend cover of 2.0x compared to adjusted EPS for 2023.

On 4 December 2023 we launched a share buy-back programme of £50m, which is expected to take 9 to 12 months to complete. This is part of our commitment to return cash to shareholders where it is not required for additional investment, while maintaining a strong and prudent balance sheet. During 2023, shares with a value of £3.1m were acquired (at an average price of 464p per share) and cancelled by the Company.

Medium-term strategic position

In November 2023 we presented our strategy and medium-term targets to investors at a Capital Markets Event. We highlighted favourable medium-term trends in our end-markets, and, through our market leading investment in research and development, demonstrated our ability to gain both market share while pricing for the value we generate for our customers. We also set out a cost reduction programme to achieve at least £30m of annually recurring costs savings in 2026, as described above.

On track to achieve our mid-term growth and profitability objectives

Despite the short-term uncertainties in our end steel and foundry markets, we remain confident in the mid to long term growth potential of these markets and in particular growth in the steel market outside of China, which should be a tailwind for us.

The strength of our technology-based business model should also enable us to continue simultaneously outperform our underlying markets in Flow Control and Foundry and maintain a positive pricing performance for all our business units in the coming years.

This, coupled with our relentless drive to optimise our cost base as illustrated by the launch of our new cost optimisation programme, positions us very well to achieve our objectives of 12.5% return on sales by 2026 and cash flow generation of £400m over the next three years.

Current trading and outlook for 2024

In line with the end of 2023, the activity level of both our Steel and Foundry markets remained subdued at the beginning of the year. However, we expect some improvement in market activity as the year progresses, consistent with external forecasts.

We expect to continue to outperform our markets in both Flow Control and Foundry and we are progressing the implementation of our £30m cost savings programme, of which we expect to deliver around £3m of in-year savings in 2024 and a run-rate of £10m - £15m by the end of the year.

Overall, on an underlying, constant currency basis (excluding one off restructuring costs estimated at £6m), we expect to make moderate progress in 2024. Beyond 2024 we anticipate delivering stronger progress supported by the benefits of the cost savings programme together with our innovation and significant capacity investments in growing markets.

Board changes

In 2023, we had a number of changes to the Board, being joined by Carla Bailo, Mark Collis and Robert MacLeod and Jane Hinkley and Guy Young leaving the Board. Having served nine years on the Board, Douglas Hurt, Senior Independent Director and Audit Committee Chair, will be stepping down at this year's AGM. We are delighted that Eva Lindqvist has agreed to join the Board, who will be standing for election at the AGM. Eva is an engineer with more than 35 years' experience in global industrial and service businesses.

Operational Review

Vesuvius comprises two Divisions, Steel and Foundry. The Steel Division operates as three business lines, Flow Control, Advanced Refractories and Sensors & Probes. Changes described are versus 2022 on an underlying basis, excluding the impact of FX, unless otherwise noted. There were no acquisitions or disposals in 2023 and hence no adjustments were required.

Steel Division

Steel Division	**2023 (£m)**	**2022 (£m)**	**Change**	**Underlying change**
Flow Control Revenue	793.0	810.9	(2.2%)	0.6%
Advanced Refractories Revenue	567.9	645.3	(12.0%)	(9.4%)
Steel Sensors & Probes Revenue	39.1	40.2	(2.8%)	(0.6%)
Total Steel Revenue	**1,400.0**	**1,496.4**	**(6.4%)**	**(3.7%)**
Total Steel Trading Profit	**147.6**	**172.7**	**(14.6%)**	**(9.6%)**
Total Steel Return on Sales	**10.5%**	**11.5%**	**-100bps**	**-70bps**

Our Steel Division reported revenues of £1,400.0m in 2023, a decrease of 3.7%, reflecting a positive revenue growth of 0.6% in the Flow Control business despite the difficult market conditions, due to good pricing performance and market share gains in most markets, and a revenue decline of 9.4% in Advanced Refractories due to prioritising pricing over volume in EMEA and Americas, which more than offset market share gains in Asia. Revenue from Sensors and Probes was broadly flat due to market share gains offsetting market decline.

Steel Division trading profit reduced by 9.6% to £147.6m, due to the negative drop through impact of reduced volumes in the division, partially compensated by a positive pricing performance enabling the division's return on sales to contract only 70bps to 10.5%.

Flow Control

Flow Control Revenue	2023 (£m)	2022 (£m)	Change	Underlying change
Americas	317.8	321.4	(1.1%)	1.3%
Europe, Middle East & Africa (EMEA)	252.7	275.4	(8.2%)	(6.2%)
Asia-Pacific	222.4	214.1	3.9%	8.7%
Total Flow Control Revenue	**793.0**	**810.9**	**(2.2%)**	**0.6%**

In 2023, revenue in the Group's Flow Control business increased by 0.6% year-on-year to £793.0m, driven by a strong pricing performance and overall market share gains, offset by market, destocking and customer-related volume declines.

In EMEA, revenue declined 6.2% compared to 2022, broadly in line with declines in steel production (in EMEA excluding Russia, Ukraine and Iran) of 5%. This comprised an out-performance in EEMEA (excluding Iran, Russia and Ukraine) where the steel market was broadly flat and where we gained market share, offset by volume declines higher than the steel market evolution in the EU+UK reflecting a combination of the weak market, destocking by our European customers and voluntary reduction of our sales to some customers at risk of insolvency. In the Americas, our underlying revenue grew 1.3% reflecting out-performance of the market in the US (volumes +1.1% against a market +0.2%) and in South America (stable sales volumes versus a declining market), and resilient pricing. This good performance was partly offset by challenges in Mexico, where a major customer in which we had a very strong market share ceased operations at the end of 2022. In Asia Pacific, revenue grew 8.7%, driven by exceptionally strong sales volume growth in both India and China, materially exceeding market volume growth in these two countries. We also out-performed the market in South East Asia, with modest volume growth versus market volume declines of -6.5%.

Advanced Refractories

Advanced Refractories Revenue	2023 (£m)	2022 (£m)	Change	Underlying change
Americas	212.1	244.5	(13.3%)	(11.5%)
Europe, Middle East & Africa (EMEA)	191.5	230.9	(17.0%)	(15.1%)
Asia-Pacific	164.3	169.9	(3.3%)	1.5%
Total Advanced Refractories Revenue	**567.9**	**645.3**	**(12.0%)**	**(9.4%)**

Advanced Refractories reported revenue of £567.9m in 2023, a decrease of 9.4%, principally reflecting volume declines, with overall stable pricing. Volume decline was higher than the underlying steel market in both Americas and EMEA due to market share losses associated with priority having been given to pricing, and destocking in EMEA. Market share started to recover in EMEA in the second half. In Asia Pacific however, revenue grew 1.5% driven by double-digit volume increases in India and China, materially ahead of the market, partially offset by more difficult trading conditions in South-East Asia.

Steel Sensors & Probes

Steel Sensors & Probes Revenue	2023 (£m)	2022 (£m)	Change	Underlying change
Americas	28.2	29.1	(2.9%)	0.5%
Europe, Middle East & Africa (EMEA)	10.2	10.7	(5.0%)	(6.0%)
Asia-Pacific	0.6	0.4	77.8%	85.0%
Total Steel Sensors & Probes Revenue	**39.1**	**40.2**	**(2.8%)**	**(0.6%)**

Revenue in Steel Sensors & Probes was £39.1m in 2023, broadly flat year-on-year, reflecting market share gains offsetting a declining market. We expect our sales volume in the coming years to continue to outperform the underlying steel market due in particular to an increased penetration in Asia where we have been performing several successful customer trials.

Foundry Division

Foundry Revenue	2023 (£m)	2022 (£m)	Change (%)	Underlying change (%)
Americas	136.4	145.5	(6.2%)	(5.8%)
Europe, Middle East & Africa (EMEA)	215.1	224.7	(4.3%)	(3.0%)
Asia-Pacific	178.3	180.8	(1.4%)	4.2%
Total Foundry Revenue	**529.8**	**551.0**	**(3.8%)**	**(1.5%)**
Total Foundry Trading Profit	**52.8**	**54.5**	**(3.1%)**	**2.5%**
Total Foundry Return on Sales	**10.0%**	**9.9%**	**+10bps**	**+40bps**

Our Foundry Division reported revenues of £529.8m in 2023, a decrease of 1.5%, reflecting revenues contracting in EMEA and the Americas while expanding in Asia-Pacific. After a positive start of the year, trading has been difficult in the second half of the year due to significant market weakness in the northern part of EMEA (historically an important market area for our Foundry division), in South America and in China. This market weakness was partially but not entirely compensated by market share gains in all regions and a positive pricing performance. Foundry revenues in the Americas fell 5.8% year-on-year, driven by contraction in South America partially offset by modest growth in North America. In EMEA, underlying revenues decreased by 3.0%, driven by a slowdown in Germany and more generally Northern Europe as well as broader regional destocking. Performance in Asia was largely positive with revenue up 4.2%, reflecting very strong growth in India and market share gains in China, progressively increasing the relative importance of this region in the Foundry division. This trend should continue in the coming years.

For the third year in succession, the Foundry Division delivered an increase in its return-on-sales. Trading profit increased 2.5% (on an underlying basis) to £52.8m and return-on-sales increased by 40bps to 10%. This improvement trend should accelerate when end markets recover, especially in Northern Europe and South America.

Financial Review

Basis of Preparation

All references in this financial review are to headline performance unless stated otherwise. See Note 16.1 to the Group Financial Statements for the definition of headline performance.

We also report key metrics on an underlying basis, where we adjust to ensure appropriate comparability between periods, irrespective of currency fluctuations and any business acquisitions and disposals.

This is done by:

- Restating the previous period's results at the same foreign exchange (FX) rates used in the current period
- Removing the results of disposed businesses in both the current and prior years
- Removing the results of acquired businesses in both the current and prior years

Therefore, for 2023, we have:

- Retranslated 2022 results at the FX rates used in calculating the 2023 results
- No adjustments have been required for acquisitions or disposals

2023 performance overview

Income statement

£m	2023	2022			% change	
Revenue	Reported	Reported	Currency	Underlying	Reported	Underlying
Steel	1,400.0	1,496.4	(42.0)	1,454.5	(6.4%)	*(3.7%)*
Foundry	529.8	551.0	(13.3)	537.7	(3.8%)	*(1.5%)*
Total Group	1,929.8	2,047.4	(55.3)	1,992.1	(5.7%)	*(3.1%)*
Trading profit						
Steel	147.6	172.7	(9.6)	163.2	(14.6%)	*(9.6%)*
Foundry	52.8	54.5	(3.0)	51.5	(3.1%)	*2.5%*
Total Group	200.4	227.2	(12.5)	214.7	(11.8%)	*(6.7%)*
Return on sales						
Steel	10.5%	11.5%		11.2%	(100bps)	(70bps)
Foundry	10.0%	9.9%		9.6%	+10bps	+40bps
Total Group	10.4%	11.1%		10.8%	(70bps)	(40bps)

2023 was a robust year in terms of trading profit and return on sales, despite the depressed underlying markets, and we have continued to generate significant free cashflow. This has enabled the Board to recommend an attractive final dividend to our shareholders and initiate a share buy-back, while maintaining investment in strategic areas.

Revenue for the year decreased by 5.7%, of which 2.6% related to FX headwinds and 3.1% underlying performance. Underlying revenue was driven by a decline in volume (-5.5% partially offset by positive pricing of +2.3%). On a reported basis, the Steel and Foundry Division revenue decreased by 6.4% and 3.8% respectively in the year.

We achieved a trading profit of £200.4m, down 11.8% on a reported basis of which 6.7% was underlying and 5.1% related to FX headwinds. Within the underlying profit changes, there was a £48.4m decline due to the drop-through from volume declines, partially offset by positive contribution of £32.1m from net pricing, with the remainder due to the impact of the February 2023 cyber attack (£3.5m cost) and other non-recurring one-off items (£5.5m benefit), which largely arose in H2. Return on sales of 10.4% was down 40bps on an underlying basis. The reduction in trading profit and Return on Sales is primarily due to the drop-through impact of volume declines.

The pattern of trading in the year was relatively strong in H1, while trading in H2 was somewhat weaker, reflecting both seasonality and weaker market conditions, notably in Europe.

The net impact of average 2023 exchange rates compared to 2022 averages has been a headwind of £12.5m at a trading profit level, in particular, due to the depreciation of the Turkish Lira, Indian Rupee, Chinese Renminbi and the Argentine Peso versus Sterling. Translated at FX rates as at 28 February 2024, FY23 revenue would be c. £1,875m and trading profit would be c. £191m.

Investment in R&D is central to our strategy of delivering market-leading product technology and services to customers. In 2023 we spent £37.4m on R&D activities (2022: £35.9m), which represents 1.9% of our revenue (2022: 1.8%).

Net Interest cost for FY23 was broadly flat year on year at £11.6m (2022: £11.4m), reflecting both an increase in net interest expense and interest income due to the higher interest rate environment and some small deposits held in high inflation-rate countries.

Profit from joint ventures and associates was broadly flat year on year at £0.9m (2022: £1.2m).

Headline profit before tax ("PBT") was £189.7m, down 12.6% versus last year on a reported basis. Including amortisation (£10.3m), PBT of £179.4m was 13.2% lower than last year.

A key measure of tax performance is the Headline Effective Tax Rate ("ETR"), which is calculated on the income tax associated with headline performance, divided by the headline profit before tax and before the Group's share of post-tax profit of joint ventures. The Group's headline ETR, based on the income tax costs associated with headline performance of £51.9m (2022: £57.2m), was 27.5% (2022: 26.5%).

The Group's total income tax costs for the period include a credit within separately reported items of £3.1m (2022: £39.1m) which primarily relates to deferred tax on intangible assets.

A tax charge reflected in the Group Statement of Comprehensive Income in the year amounted to £2.0m (2022: £8.2m charge) which primarily relates to tax on net actuarial gains and losses on pensions.

We expect the Group's effective tax rate on headline profit before tax and before the share of post-tax profits from joint ventures to be around 27.5%, dependent on profit mix, in 2024.

Non-controlling interests principally comprise the minority holdings in Indian subsidiaries for the Steel and Foundry businesses. This increased to £12.1m in 2023 (2022: £7.4m) reflecting the strong growth in profit in those subsidiaries.

Headline EPS from continuing operations at 46.7p was 11.9% lower on an underlying basis than 2022, reflecting both the lower profit and the higher level of non-controlling interests.

Dividend

The Board has recommended a final dividend of 16.2 pence per share to be paid, subject to shareholder approval, on 31 May 2024 to shareholders on the register at 19 April 2024. When added to the 2023 interim dividend of 6.8 pence per share paid on 15 September 2023, this represents a full-year dividend of 23.0 pence per share. The last date for receipt of elections from shareholders for the Vesuvius Dividend Reinvestment Plan will be 9 May 2024.

Cost saving programme

We have initiated an efficiency programme to realise recurring savings of £30m per annum by 2026, of which c. £3m is expected to be delivered in 2024. We expect to achieve a run-rate of c. £10 – 15m savings by the end of 2024. The programme costs are expected to be c. £40m, estimated to be split £30m / £10m to capex and operating expense respectively, of which c. £6m of operating expense is expected to be incurred in 2024. Material restructuring costs will be excluded from underlying performance, allowing for a clear measure of our operating performance.

Cash-flow and balance sheet

Our cash management performance was robust, achieving an 93% cash conversion (2022: 82%), thanks to a good operational performance and an in-flow from trade working capital, partially offset by a continued investment in strategic capacity expansion. As a result, we have reduced our net debt position and maintained our leverage ratio of net debt to EBITDA at 0.9x at 31 December 2023.

We measure working capital both in terms of actual cash flow movements, and as a percentage of sales revenue. Trade working capital as a percentage of sales in 2023 improved to 23.4% (2022: 23.8%), measured on a 12-month moving average basis. In absolute terms on a constant currency basis trade working capital decreased by £20.9m in 2023 to £420.3m. The reduction was principally due to a fall in inventory days (from 89.9 to 88.9, 12m average, December 2022 to 2023), broadly flat debtor days (78.0 to 77.6, 12m average, December 2022 to 2023) and flat creditor days (64.9 days, 12m average). The 12-month rolling average measurement masks the phasing in the year, with working capital peaking in H1 and then falling progressively in Q3 and Q4 as a percentage of revenue. We intend to continue to reduce our working capital intensity in 2024.

Free cash flow from continuing operations was £128.2m in 2023 (2022: £123.1m).

Capital expenditure

Cash capital expenditure in 2023 was £92.6m (2022: £89.2m) (£125.3m including capitalised leases) of which £93.2m was in the Steel Division (2022: £85.2m) and £32.1m in the Foundry Division (2022: £18.7m). Capital expenditure on revenue-generating customer installation assets, primarily in Steel, was approximately £9m (2022: £8m) and we spent c. £30m in 2023 on growth capex, largely focused on expansion in Flow Control worldwide and, more specifically, in Asia for all three divisions. Total cash capex in 2024 is expected to be c. £100m, of which growth capex is expected to be c. £30-35m. Capital expenditure will then revert to more normalized levels from 2025 onwards.

The Group had committed borrowing facilities of £685.8m as of 31st December 2023 (2022: £721.9m), of which £333.4m was undrawn (2022: £322.5m).

Net debt

Net debt on 31 December 2023 was £237.5m, a £17.5m decrease from £255.0m on 31 December 2022, due to significant free cash flow partially offset by a return to shareholders of £63.8m by way of dividends and share buy-back, by right of use asset additions of £31.2m and by a foreign exchange adjustment of £11.3m.

At the end of 2023, the net debt to EBITDA ratio was 0.9x (2022: 0.9x) and EBITDA to interest was 31.5x (2022: 29.8x). These ratios are monitored regularly to ensure that the Group has sufficient financing available to run the business and fund future growth.

The Group’s debt facilities have two financial covenants: the ratios of net debt to EBITDA (maximum 3.25x limit) and EBITDA to interest (minimum 4x limit). Certain adjustments are made to the net debt calculations for bank covenant purposes, the most significant of which is to exclude the impact of IFRS 16.

Return on invested capital (ROIC)

Our ROIC for 2023 was 8.9% (2022: 10.7%). Excluding goodwill on our balance sheet from the acquisition of Foseco in 2008, ROIC for 2023 would be 14.3%. ROIC is our key measure of return from the Group’s invested capital, calculated as trading profit less amortisation of acquired intangibles plus share of post-tax profit of joint ventures and associates for the previous 12 months after tax, divided by the average (being the average of the opening and closing balance sheet) invested capital (defined as: total assets excluding cash plus non-interest-bearing liabilities), at the average foreign exchange rate for the year).

Pensions

The Group has a limited number of historical defined benefit plans located mainly in the UK, USA, Germany and Belgium. The main plans in the UK and USA are closed to further benefits accrual. All of the liabilities in the UK were insured following a buy-in agreement with Pension Insurance Corporation plc ("PIC") in 2021. This buy-in agreement secured an insurance asset from PIC that matches the remaining pension liabilities of the UK Plan, with the result that the Company no longer bears any investment, longevity, interest rate or inflation risks in respect of the UK Plan.

The Group's net pension liability at 31 December 2023 was £46.3m (2022: £56.1m liability).

Financial Risk Factors

The Group's approach to risk management, including the mitigations in place for our principal risks, is detailed below. We consider the main financial risk faced by the Group to be a material business interruption incident leading to reduced revenue and profit. We also manage broad financial risks such as cost inflation, bank financing and capital market activity and to a lesser extent foreign exchange and interest rate movements (see Note 24 to the Group Financial Statements). We mitigate liquidity risk by financing using both the bank and private placement debt markets and we mitigate refinancing risk by seeking to avoid a concentration of debt maturities in any one calendar year.

Principal Risks and Uncertainties

Risk Management

The Board exercises oversight of the Group's principal risks and reviews the way in which the Group manages those risks. As part of this process the Board (i) understands which individuals within the business are responsible for managing each principal risk; and (ii) reviews and, where appropriate, updates, the Group's appetite for each principal risk and assesses the adequacy of the steps taken to mitigate them.

The Board takes overall responsibility for establishing and maintaining a system of risk management and internal control and for reviewing its effectiveness. The Group undertakes a continuous process to identify and review risk and this assessment undergoes a formal review at half-year and at year-end. The risks identified by the business are compiled centrally to deliver a coordinated picture of the Group's key risks. These risks are then reviewed by the Group Executive Committee.

An integral part of the Group's risk management process is for each Non-executive Director to contribute their view on the principal risks facing the Group, the risk appetite the Group should have for each of these risks and what emerging risks the Group might face in the future. These contributions are overlaid on the Group's assessment of risks to build a comprehensive analysis of existing and emerging risks. In this way, the Directors' views on each of the principal risks and on emerging risks in general, are independently gathered and integrated into management discussions and actions taken on risk.

The Group's risk process covers both financial and non-financial risks, and considers the risks associated with the impact of the Group's activities on employees, customers, suppliers, the environment, local communities and wider society.

The Directors undertake regular, individual site visits and they believe this direct engagement with employees is an effective way to hear firsthand about issues, concerns and potential risks.

Risk mitigation

Each principal risk is owned by specific members of senior management who actively manage the risk as well as contributing to the analysis of its likelihood and impact, and continually monitoring the process for mitigation. This analysis is reported to the Board. Risks are analysed in the context of our business structure which protects against certain of our principal risks with diverse currencies, a widespread customer base and local production matching the diversity of our markets. Additionally, we mitigate risk through employee training and our contractual terms. Our processes are not designed to eliminate risk, but to identify our principal risks and to reduce them to a reasonable level in the context of delivering the Group's strategy.

Principal risks

The Board has not identified any new principal risks or any material changes to the Group's previously identified principal risks and uncertainties. The risks identified and are those the Board considers to be most relevant in terms of their potential impact on the Group achieving its strategic objectives. Each principal risk could materially affect the Group, its businesses, future operations and financial condition, and could cause actual results to differ materially from expected or historical results. Principal risks are not the only ones that the Group faces or will face. Some risks are not yet known and some currently not deemed to be material could become so.

Changes to risk in 2023

We detail below changes during 2023 to the scale or nature of risks facing the Group. As in previous years, certain aspects of the Group's principal risks materialised, noting that in each case the business impact was limited by the mitigations already in place and by the Group's risk management processes. We also detail the emerging risks facing the Group to which we remain vigilant.

Geopolitical tension

Increasing geopolitical tensions during the year adversely impacted two of our principal risks: business interruption and the regulatory environment. The war in Ukraine continued to promote increased regulatory activity in the UK, EU and USA, which continued to impact the business and was closely monitored to ensure that we reflected these new developments in our business. Additionally, the conflict in the Middle East (including the recent impact on shipping in the Red Sea) increased the risk of an interruption to our supply chain. This impacted the cost and timing of certain inbound and outbound freight and we worked closely with our intermediaries and insurers to understand and minimise the impact on our business.

During the year we also paid close attention to wider geopolitical dynamics, as these could push certain of the countries in which we operate to adopt a more protectionist approach. We capture this in our principal risk of protectionism and globalisation.

Cyber

Cyber security remains a critical component of our business interruption risk. As previously disclosed, in February 2023, the Group was the subject of a cyber incident involving unauthorised access to our IT systems. We shut down our systems on a precautionary basis and our sites implemented their business continuity plans; as a result we incurred only a minimal level of business interruption.

In order to mitigate further the business interruption risk arising from this constantly evolving threat we have accelerated the implementation of our cyber security strategy and in 2023, we upgraded our third-party access solutions, further developed our network infrastructure and implemented additional layers of protection for our systems.

During the year we worked with leading cyber security experts to enhance our systems and expanded the scale and scope of our security verifications. We also conducted a range of additional tests and simulations to improve the control environment. We continued to work on cyber security awareness through ongoing employee training and conducted additional training during the year to ensure that the correct behaviours in terms of cyber risk are clearly understood.

Recruitment

Post pandemic challenges remain in many of our labour markets, including the ability to recruit high calibre individuals in a competitive environment, particularly for manufacturing roles. We also continue to see a reduction in the promotion of material science teaching within our developed markets; this may further reduce the availability of suitably qualified candidates going forward.

End-markets

The underlying strength of our end-markets was discussed extensively at our recent Capital Markets Day. Whilst short-term volatility in our markets is likely to continue, we believe that our end-markets of Steel and Foundry are structurally set to grow in the longer term. The Group is well placed to manage short-term impacts with its flexible manufacturing footprint, geographically diversified revenue streams and strong financial position.

Emerging risks

We are focused on the increased use of artificial intelligence as part of our wider strategy on digitalisation, to ensure we leverage the benefits to the fullest extent whilst minimising any adverse impact.

As detailed at our Capital Markets Day, we believe that future growth will come from outside our traditional developed markets. We will continue to focus on this emerging trend, investing in markets with high future growth and ensuring that we remain sufficiently dynamic and responsive to take advantage of future growth opportunities.

Consumers, employees and other stakeholders in many countries are increasingly focused on the impact of businesses on society and the environment. With this there is a growing regulatory demand on businesses for transparency in this area. Vesuvius already has a set of broad Environmental, Social and Governance (ESG) commitments and has long been focused on driving efficiency in our customers' processes, with our products now clearly seen as having environmental/climate benefits. However, the reporting obligations in this area and the increasing pressure on the need for external assurance in these areas, are expected to increase in both cost and complexity in the coming years.

At the end of 2023 we committed to make annualised cost savings of £30m by 2026 and we will remain disciplined to ensure this saving is achieved. Part of this efficiency saving is enabled by the ongoing implementation of a new Enterprise Resource Planning (ERP) system in certain countries. The Group is aware of the challenges associated with an ERP implementation and will manage these closely to minimise the risk of business interruption and cost overruns and to ensure that the operational efficiencies envisaged are delivered on a timely basis.

All of these issues could represent disruptors to our business. We remain focused on each of them through our risk identification and management processes as well as on the management of any other new risks that emerge during 2024.

Cyber Security

The processes and controls to manage the constantly evolving cyber security threat are a significant area of focus for the Group. Members of the GEC, Group IT and senior management meet regularly to manage operational cyber risks. These risks were thrown into sharp focus for the Group in 2023, as a result of the cyber attack we suffered in February.

The Board oversees the Group's control systems for managing cyber risk and together with the Audit Committee receives regular updates on the Group's activities in this respect.

Cyber risks are integrated within the Group's risk management processes and form part of its Business Continuity Plan (BCP). The Group also maintains a Disaster Recovery Plan to address any network, data centre or IT infrastructure issue. The Group's Incident Handling and Response Policy ensures we maintain appropriate visibility of all network infrastructure.

The Group takes a holistic approach to addressing cyber challenges, focusing on improving our IT infrastructure, including our OT environments, as well as our IT procedures and data governance. We run regular training programmes on cyber security and conduct regular cyber security risk assessments, including scenario analysis to mitigate the business impact of any downtime, and increase awareness of social engineering fraud and system access through poor security behaviour. We also perform in-house and externally conducted vulnerability/ penetrative testing, comparing the results with industry benchmarks to improve our processes and undertake an ongoing external assessment of our cyber security resilience and maturity.

Climate change

The Group's risk management processes consider the potential impact of climate-related risks. The Group does not regard climate change itself to represent a material stand-alone risk to the Group's operations.

Whilst a significant proportion of the Group's revenue is generated from steel manufacture and automotive castings, industries that are under transition as a result of the focus on improving environmental performance, we believe these changes will, overall, be positive for the Group. The Group's business strategy is based on helping our customers improve their manufacturing efficiency and the quality of their products thereby reducing their climate impact. We also envisage benefits for the Group from the acceleration of the energy transition, as this will create continued demand for the high-quality steel produced using Vesuvius' products and solutions.

One of the Group's principal risks is Environmental, Social and Governance criteria. This captures our sustainability performance and our customers' sustainability transition and recognises the impact Vesuvius can have on reducing the environmental impact of our customers. The Group recognises that climate change could present uncertainty for the Group in terms of increased regulation and the evolution of the geographical distribution of our customer base.

Principal risks and uncertainties

Risk	**Potential impact**	**Mitigation**
End market risks *Vesuvius suffers an unplanned drop in demand, revenue and/ or margin because of market volatility beyond its control*	• Unplanned drop in demand and/or revenue due to reduced production by our customers • Margin reduction	• Geographic diversification of revenues

	• Customer failure leading to increased bad debts • Loss of market share to competition • Cost pressures at customers leading to use of cheaper solutions	• Product innovation and service offerings securing long-term revenue streams and maintaining performance differential • Increase in service and product lines by the development of the Technical Services offering • R&D includes assessment of emerging technologies • Manufacturing capacity rationalisation and flexible cost base • Diversified customer base: no customer is greater than 10% of revenue • Robust credit and working capital control to mitigate the risk of default by counterparties
Protectionism and globalisation *The Vesuvius business model cannot adapt or respond quickly enough to threats from protectionism and globalisation*	• Restricted access to market due to enforced preference of local suppliers • Increased barriers to entry for new businesses or expansion • Increased costs from import duties, taxation or tariffs • Loss of market share	• Highly diversified manufacturing footprint with manufacturing sites located in 26 countries • Strong local management with delegated authority to run their businesses and manage customer relationships • Cost flexibility • Tax risk management and control framework together with a strong control of inter-company trading

Product quality failure *Vesuvius staff/contractors are injured at work or customers, staff or third parties suffer physical injury or financial loss because of failures in Vesuvius products*	• Injury to staff and contractors • Product or application failures lead to adverse financial impact or loss of reputation as technology leader • Incident at customer plant caused manufacturing downtime or damage to infrastructure • Customer claims from product quality issues	• Quality management programmes including stringent quality control standards, monitoring and reporting • Experienced technical staff knowledgeable in the application of our products and technology • Targeted global insurance programme • Experienced internal legal function controlling third-party contracting
Complex and changing regulatory environment *Vesuvius experiences a contracting customer base or increased transaction and*	• Revenue reduction from reduced end-market access	• Compliance programmes and training across the Group

administrative costs due to compliance with changing regulatory requirements	• Disruption of supply chain and route to market • Increased internal control processes • Increased frequency of regulatory investigations • Trading restrictions • Reputational damage	• Internal Audit function • Experienced internal legal function including dedicated compliance specialists • Global procurement category management of strategic raw materials
Failure to secure innovation *Vesuvius fails to achieve continuous improvement in its products, systems and services*	• Product substitution by customers • Increased competitive pressure through lack of differentiation of Vesuvius offering • Commoditisation of product portfolio through lack of development • Lack of response to changing customer needs • Loss of intellectual property protection	• Enduring and significant investment in R&D, with market-leading research • A shared strategy for innovation throughout the Group, deployed via our R&D centres • Stage gate process from innovation to commercialisation to foster innovation and increase alignment with strategy • Programme of manufacturing and process excellence • Quality programme, focused on quality and consistency • Stringent intellectual property registration and defence
Business interruption *Vesuvius loses production capacity or experiences supply chain disruption due to physical site damage (accident, fire, natural disaster, terrorism) or other events such as industrial action, cyber attack or global health crises*	• Loss/closure of a major plant temporarily or permanently impairing our ability to serve our customers • Damage to or restriction in our ability to use assets • Denial of access to critical systems or control processes • Disruption of manufacturing processes • Inability to source critical raw materials • Loss of data, leading to confidentiality, regulatory and reputational issues	• Diversified manufacturing footprint • Disaster recovery planning • Business continuity planning with strategic maintenance of excess capacity • Physical and IT access controls, security systems and training • Cyber risks integrated into wider risk-management structure • Well-established global insurance programme • Group-wide safety management programmes • Dual sourcing strategy and development of substitutes

People, culture and performance *Vesuvius is unable to attract and retain the right calibre of staff, fails to instil an appropriate culture or fails to embed the right systems to drive personal performance in pursuit of the Group's long-term growth*	• Organisational culture of high performance is not achieved • Staff turnover in growing economies and regions • Stagnation of ideas and development opportunities • Loss of expertise and critical business knowledge • Reduced management pipeline for succession to senior positions	• Internal focus on talent development and training, with tailored career-stage programmes and clear performance management strategies • Contacts with universities to identify and develop talent • Career path planning and global opportunities for high-potential staff • Internal programmes for the structured transfer of technical and other knowledge • Clearly defined Values underpin business culture • Growing focus on enhancing gender diversity
Health and safety *Vesuvius staff or contractors are injured at work because of failures in Vesuvius' operations, equipment or processes*	• Injury to staff and contractors • Health and safety breaches • Lack of staff availability and operational downtime • Inability to attract and retain the necessary workforce • Reputational damage	• Active safety programmes, with ongoing wide-ranging monitoring and safety training • Independent safety audit team • Quality management programmes including stringent manufacturing process control standards, monitoring and reporting
Environmental, social and governance (ESG) criteria *Vesuvius fails to capitalise on the opportunity to help its customers significantly reduce their carbon emissions as environmental pressure grows on the Steel Industry or Vesuvius fails to meet the expectations of its various stakeholders including employees and investors*	• Loss of opportunity to grow sales • Loss of opportunity to increase margin • Loss of stakeholder confidence including Investors • Reputational damage	• Development and implementation of a new Sustainability initiative, which includes stretching targets focused on reducing the Group's energy usage, CO_2 emissions and waste, and increasing recycled materials • R&D focus on products that assist customers to reduce carbon emissions and improve their own sustainability measures • Skilled technical sales force to develop efficient solutions for our customers • Globally disseminated Code of Conduct sets out standards of conduct expected and ABC Policy adopted with a zero tolerance regarding bribery and corruption

		• Internal Speak up mechanisms to allow reporting of concerns • Extensive use of due diligence to assess existing and potential business partners and customers

Group Income Statement

For the year ended 31 December 2023

	Notes	2023 (1) Headline performance £m	2023 (1) Separately reported items £m	2023 Total £m	2022 (1) Headline performance £m	2022 (1) Separately reported items £m	2022 Total £m
Revenue	2	**1,929.8**	**-**	**1,929.8**	2,047.4	-	2,047.4
Manufacturing costs		**(1,391.9)**	**-**	**(1,391.9)**	(1,475.9)	-	(1,475.9)
Administration, selling and distribution costs		**(337.5)**	**-**	**(337.5)**	(344.3)	-	(344.3)
Trading profit[2]	2	**200.4**	**-**	**200.4**	227.2	-	227.2
Amortisation of acquired intangible assets		**-**	**(10.3)**	**(10.3)**	-	(10.4)	(10.4)
Operating profit/(loss)		**200.4**	**(10.3)**	**190.1**	227.2	(10.4)	216.8
Finance expense		**(28.2)**	**-**	**(28.2)**	(20.8)	-	(20.8)
Finance income		**16.6**	**-**	**16.6**	9.4	-	9.4
Net finance costs	4	**(11.6)**	**-**	**(11.6)**	(11.4)	-	(11.4)
Share of post-tax income of joint ventures and associates		**0.9**	**-**	**0.9**	1.2	-	1.2
Profit/(loss) before tax		**189.7**	**(10.3)**	**179.4**	217.0	(10.4)	206.6
Income tax (charge)/credits	5	**(51.9)**	**3.1**	**(48.8)**	(57.2)	39.1	(18.1)
Profit/(loss)		**137.8**	**(7.2)**	**130.6**	159.8	28.7	188.5
Profit/(loss) attributable to:							
Owners of the parent		**125.7**	**(7.2)**	**118.5**	152.4	28.7	181.1
Non-controlling interests		**12.1**	**-**	**12.1**	7.4	-	7.4
Profit/(loss)		**137.8**	**(7.2)**	**130.6**	159.8	28.7	188.5
Earnings per share — pence	6						
Total operations — basic		**46.7** [1]		**44.0**	56.5 [1]		67.2
— diluted		**46.2** [1]		**43.6**	56.1 [1]		66.7

(1) *Headline performance and separately reported items are non-GAAP measures. Headline performance is defined in Note 16.1 and separately reported items are defined in Note 1.5.*

(2) *Trading profit is a non-GAAP measure and is defined in Note 16.4.*

The above results were derived from continuing operations. Manufacturing costs are costs of goods sold. The pre-tax separately reported items would form part of Administration, selling & distribution costs if classified within headline performance, which including these amounts would total £347.8m (2022: £354.7m).

Group Statement of Comprehensive Income

For the year ended 31 December 2023

	2023	2022
	£m	£m
Profit	**130.6**	188.5
Items that will not subsequently be reclassified to income statement:		
Remeasurement of defined benefit assets/liabilities	**8.4**	27.4
Income tax relating to items not reclassified	**(2.0)**	(8.2)
Items that may subsequently be reclassified to income statement:		
Exchange differences on translation of the net assets of foreign operations	**(84.3)**	96.7
Exchange differences on translation of net investment hedges	**7.9**	(20.7)
Net change in costs of hedging	**0.4**	-
Change in the fair value of the hedging instrument	**(4.2)**	8.3
Amounts reclassified from Net finance costs	**3.5**	(7.5)
Other comprehensive income/(loss), net of income tax	**(70.3)**	96.0
Total comprehensive income/(loss)	**60.3**	284.5
Total comprehensive income attributable to:		
Owners of the parent	**51.7**	276.5
Non-controlling interests	**8.6**	8.0
Total comprehensive income/(loss)	**60.3**	284.5

The above results were derived from continuing operations.

Group Statement of Cash Flows

For the year ended 31 December 2023

	Notes	2023 £m	2022 £m
Cash flows from operating activities			
Cash generated from operations	9	**272.0**	268.3
Interest paid		**(16.8)**	(15.6)
Interest received		**14.1**	6.3
Income taxes paid		**(52.8)**	(47.9)
Net cash inflow from operating activities		**216.5**	211.1
Cash flows from investing activities			
Capital expenditure		**(92.6)**	(89.2)
Proceeds from the sale of property, plant and equipment		**5.4**	3.1
Acquisition of subsidiaries and joint ventures, net of cash acquired		**-**	(3.5)
Dividends received from joint ventures		**1.0**	1.3
Net cash income/(outflow) from investing activities		**(86.2)**	(88.3)
Net cash income/(outflow) before financing activities		**130.3**	122.8
Cash flows from financing activities			
Proceeds from borrowings		**-**	18.7
Repayment of borrowings		**(37.1)**	(41.1)
Payment of lease liabilities		**(24.2)**	(14.6)
Purchase of ESOP shares		**(1.1)**	(6.9)
Share buyback		**(3.1)**	-
Dividends paid to equity shareholders	7	**(60.7)**	(58.1)
Dividends paid to non-controlling shareholders		**(2.1)**	(3.2)
Net cash income/(outflow) from financing activities		**(128.3)**	(105.2)
Net increase in cash and cash equivalents	8	**2.0**	17.6
Cash and cash equivalents at 1 January		**179.8**	162.4
Effect of exchange rate fluctuations on cash and cash equivalents	8	**(21.0)**	(0.2)
Cash and cash equivalents at 31 December		**160.8**	179.8

Free cash flow	16.11		
Net cash inflow from operating activities		**216.5**	211.1
Capital expenditure		**(92.6)**	(89.2)
Proceeds from the sale of property, plant and equipment		**5.4**	3.1
Dividends received from joint ventures		**1.0**	1.3
Dividends paid to non-controlling shareholders		**(2.1)**	(3.2)
Free cash flow[1]	16	**128.2**	123.1

(1) For definitions of alternative performance measures, refer to Note 16

Group Balance Sheet

As at 31 December 2023

	Notes	2023 £m	2022 £m
Assets			
Property, plant and equipment		**460.8**	417.6
Intangible assets		**706.0**	737.5
Employee benefits - net surpluses	10	**34.6**	26.2
Interests in joint ventures and associates		**11.3**	13.0
Investments	15	**0.3**	0.5
Deferred tax assets		**114.6**	110.6
Other receivables		**26.8**	33.7
Derivative financial instruments		**0.6**	2.7
Total non-current assets		**1,355.0**	1,341.8
Cash and short-term deposits	8	**164.2**	184.2
Inventories		**291.0**	316.0
Trade and other receivables		**460.5**	476.9
Income tax receivable		**11.5**	15.3
Derivative financial instruments	15	**-**	0.1
Total current assets		**927.2**	992.5
Total assets		**2,282.2**	2,334.3
Equity			
Issued share capital		**27.7**	27.8
Retained earnings		**2,691.2**	2,623.8
Other reserves		**(1,464.6)**	(1,391.4)
Equity attributable to the owners of the parent		**1,254.3**	1,260.2
Non-controlling interests		**65.9**	59.4
Total equity		**1,320.2**	1,319.6
Liabilities			
Interest-bearing borrowings	8	**326.4**	327.2
Employee benefits - net liabilities	10	**80.9**	82.3
Other payables		**9.1**	13.8
Provisions	14	**47.6**	49.3
Deferred tax liabilities		**23.5**	11.9
Derivative financial instruments	15	**-**	-
Total non-current liabilities		**487.5**	484.5
Interest-bearing borrowings	8	**75.8**	114.7
Trade and other payables		**377.8**	378.4
Income tax payable		**9.8**	19.6
Provisions	14	**11.0**	17.4
Derivative financial instruments	15	**0.1**	0.1
Total current liabilities		**474.5**	530.2
Total liabilities		**962.0**	1,014.7
Total equity and liabilities		**2,282.2**	2,334.3

Group Statement of Changes in Equity

For the year ended 31 December 2023	Issued share capital £m	Other reserves £m	Retained earnings £m	Owners of the parent £m	Non-controlling interests £m	Total equity £m
As at 1 January 2022	**27.8**	**(1,467.6)**	**2,483.4**	**1,043.6**	**54.6**	**1,098.2**
Profit	**-**	**-**	**181.1**	**181.1**	**7.4**	**188.5**
Remeasurement of defined benefit liabilities/assets	-	-	27.4	27.4	-	27.4
Income tax relating to items not reclassified	-	-	(8.2)	(8.2)	-	(8.2)
Exchange differences on translation of the net assets of foreign operations	-	96.1	-	96.1	0.6	96.7
Exchange differences on translation of net investment hedges	-	(20.7)	-	(20.7)	-	(20.7)
Net change in costs of hedging	-	-	-	-	-	-
Change in the fair value of the hedging instrument	-	8.3	-	8.3	-	8.3
Amounts reclassified from the Income Statement	-	(7.5)	-	(7.5)	-	(7.5)
Other comprehensive income/(loss), net of income tax	**-**	76.2	19.2	95.4	0.6	96.0
Total comprehensive income (loss)	**-**	**76.2**	**200.3**	**276.5**	**8.0**	**284.5**
Recognition of share-based payments	-	-	5.1	5.1	-	5.1
Purchase of ESOP shares	-	-	(6.9)	(6.9)	-	(6.9)
Dividends paid (Note 7)	-	-	(58.1)	(58.1)	(3.2)	(61.3)
Total transactions with owners	**-**	**-**	**(59.9)**	**(59.9)**	**(3.2)**	**(63.1)**
As at 31 December 2022	**27.8**	**(1,391.4)**	**2,623.8**	**1,260.2**	**59.4**	**1,319.6**
Profit	**-**	**-**	**118.5**	**118.5**	**12.1**	**130.6**
Remeasurement of defined benefit liabilities/assets	-	-	8.4	8.4	-	8.4
Income tax relating to items not reclassified	-	-	(2.0)	(2.0)	-	(2.0)
Exchange differences on translation of the net assets of foreign operations	-	(80.8)	-	(80.8)	(3.5)	(84.3)
Exchange differences on translation of net investment hedges	-	7.9	-	7.9	-	7.9
Net change in costs of hedging	-	0.4	-	0.4	-	0.4
Change in the fair value of the hedging instrument	-	(4.2)	-	(4.2)	-	(4.2)
Amounts reclassified from Net finance costs	-	3.5	-	3.5	-	3.5
Other comprehensive income/(loss), net of income tax	**-**	(73.2)	6.4	(66.8)	(3.5)	(70.3)
Total comprehensive income (loss)	**-**	**(73.2)**	**124.9**	**51.7**	**8.6**	**60.3**
Recognition of share-based payments	-	-	7.3	7.3	-	7.3
Purchase of ESOP shares	-	-	(1.1)	(1.1)	-	(1.1)
Share buyback	(0.1)	-	(3.0)	(3.1)	-	(3.1)
Dividends paid (Note 7)	-	-	(60.7)	(60.7)	(2.1)	(62.8)
Total transactions with owners	**(0.1)**	**-**	**(57.5)**	**(57.6)**	**(2.1)**	**(59.7)**
As at 31 December 2023	**27.7**	**(1,464.6)**	**2,691.2**	**1,254.3**	**65.9**	**1,320.2**

Notes to the Group Financial Statements

1 Basis of preparation

1.1 Basis of preparation

The financial information in this preliminary announcement has been extracted from the audited Group Financial Statements for the year ended 31 December 2023 and does not constitute statutory accounts within the meaning of section 434 of the Companies Act 2006. The Group Financial Statements and this preliminary announcement were approved by the Board of Directors on 29 February 2024.

The auditors have reported on the Group Financial Statements for the years ended 31 December 2023 and 31 December 2022 under section 495 of the Companies Act 2006. The auditors' reports are unqualified and do not contain a statement under section 498(2) or (3) of the Companies Act 2006. The Group's statutory financial statements for the year ended 31 December 2022 have been filed with the Registrar of Companies and those for the year ended 31 December 2023 will be filed following the Company's Annual General Meeting.

The Group financial statements have been prepared in accordance with UK-adopted international accounting standards (IFRS) and with the requirements of the Companies Act 2006 as applicable to companies reporting under those standards. The financial statements have been prepared under the historical cost convention, with the exception of fair value measurement applied to defined benefit pension plans, investments and derivative financial instruments.

The same accounting policies, presentation and computation methods are followed in this preliminary announcement as in the preparation of the Group Financial Statements. The accounting policies have been applied consistently by the Group.

1.2 Basis of consolidation

The Group Financial Statements incorporate the financial statements of the Company and entities controlled by the Company (its 'subsidiaries'). Control exists when the Company has the power to direct the relevant activities of an entity that significantly affect the entity's return so as to have rights to the variable return from its activities. In assessing whether control exists, potential voting rights that are currently exercisable are taken into account. The results of subsidiaries acquired or disposed of during the year are included in the Group Income Statement from the effective date of acquisition or up to the effective date of disposal, as appropriate.

The principal accounting policies applied in the preparation of these Group Financial Statements are set out in the Notes. These policies have been consistently applied to all of the years presented, unless otherwise stated. Where necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with those detailed herein to ensure that the Group Financial Statements are prepared on a consistent basis. All intra-Group transactions, balances, income and expenses are eliminated on consolidation.

Non-controlling interests in the net assets of consolidated subsidiaries are identified separately from the Group's interest therein. Non-controlling interests consist of the amount of those interests at the date of the original business combination together with the non-controlling interests' share of profit or loss and each component of other comprehensive income, and dividends since the date of the combination. Total comprehensive income is attributed to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Notes to the Group Financial Statements (continued)

1.3 Going concern

The Group's available committed liquidity stood at £488m at year-end 2023, down from £494m at year-end 2022. The Directors have prepared cash flow forecasts for the Group for the period to 30 June 2025. These forecasts reflect an assessment of current and future end market conditions, which are expected to be challenging in 2024 and to recover thereafter (as set out in the "outlook" statement in this document) and their impact on the Group's future trading performance.

The Directors have also considered a severe but plausible downside scenario, based on an assumed volume decline and loss of profitability over the period. This downside scenario assumes:

- a reduction in trading profit by 35%, equating to £70m in both 2024 and 2025 relative to 2023. This is through an assumed decline in revenue of 4% and a reduction in the Return on Sales margin by 3.3%, from 10.4% to 7.1 %, and;
- working capital as a percentage of sales deteriorating by 0.6% compared to 2023.

The Group has two covenants; net debt/EBITDA (under 3.25x) and an interest cover requirement of at least 4.0x. In this downside scenario, the forecasts show that the Group's maximum net debt/EBITDA (pre-IFRS 16 in-line with the covenant calculation) does not exceed 1.6x, compared to a leverage covenant of 3.25x, and the minimum interest cover reached is 18x compared to a covenant minimum of 4x.

The forecasts show that the Group will be able to operate within the current committed debt facilities and show continued compliance with the Company's financial covenants. On the basis of the exercise described above and the Group's available committed debt facilities, the Directors consider that the Group and the Company have adequate resources to continue in operational existence for a period of at least 12 months from the date of signing of these financial statements and that there is no material uncertainty in respect of going concern. Accordingly, they continue to adopt a going concern basis in preparing the financial statements of the Group and the Company.

1.4 Functional and presentational currency

The financial statements are presented in millions of pounds sterling, which is the functional currency of the Company, and rounded to one decimal place.

1.5 Disclosure of "separately reported items"

Columnar presentation
The Group has adopted a columnar presentation for its Group Income Statement, to separately identify headline performance results, as the Directors consider that this gives a useful view of the core results of the ongoing business. As part of this presentation format, the Group has adopted a policy of disclosing separately on the face of its Group Income Statement, within the column entitled 'Separately reported items', the effect of any components of financial performance for which the Directors consider separate disclosure would assist users both in a useful understanding of the financial performance achieved for a given year and in making projections of future results.

Separately reported items
Both materiality and the nature of the components of income and expense are considered in deciding upon such presentation. Such items may include, inter alia, the financial effect of exceptional items which occur infrequently, such as major restructuring activity (which may require more than one year to complete), significant movement in the Group's deferred tax balances, such as that caused by the material recognition of previously unrecognised deferred tax assets, items reported separately for consistency, such as amortisation charges relating to acquired intangible assets, profits or losses arising on the disposal of continuing or discontinued operations and the taxation impact of the aforementioned items reported separately.

Notes to the Group Financial Statements (continued)

1.6 Disclosure of “separately reported items” (continued)

The amortisation charge in respect of intangible assets recognised on business combinations is excluded from the trading results of the Group since they are non-cash charges and are not considered reflective of the core trading performance of the Group. In its adoption of this policy, the Company applies an even-handed approach to both gains and losses and aims to be both consistent and clear in its accounting and disclosure of such items.

2 Segment information

Operating segments for continuing operations

The Group’s operating segments are determined taking into consideration how the Group’s components are reported to the Group’s Chief Executive Officer, who make the key operating decisions and are responsible for allocating resources and assessing performance of the component. Taking into account the Group’s management and internal reporting structure, the operating segments are Steel Flow Control, Steel Advanced Refractories, Steel Sensors & Probes and Foundry division. The principal activities of each of these segments are described in the Operational Review.

Steel Flow Control, Steel Advanced Refractories and Steel Sensors & Probes operating segments are aggregated into the Steel reportable segment. In determining that aggregation is appropriate, judgement is applied which takes into account the economic characteristics of these operating segments which include a similar nature of products, customers, production processes and margins.

Revenue from contracts with customers

Revenue comprises the fair value of the consideration received or receivable for goods supplied and services rendered to customers after deducting rebates, discounts and value-added taxes, and after eliminating sales within the Group. Revenue from contracts with customers is recognised when control of the goods or services are transferred to the customer, upon the completion of specified performance obligations, at an amount that reflects the considerations to which the Group expects to be entitled to in exchange for these consumable products and associated services.

Notes to the Group Financial Statements (continued)

Income statement

	2023					
	Flow Control	Advanced Refractories	Sensors & Probes	**Steel**	**Foundry**	**Total**
				£m	**£m**	**£m**
Segment revenue	793.0	567.9	39.1	**1,400.0**	**529.8**	**1,929.8**
at a point in time				**1,396.6**	**529.8**	**1,926.4**
Over time				**3.4**	**-**	**3.4**
Segment adjusted EBITDA *				**187.9**	**70.3**	**258.2**
Segment depreciation and amortisation				**(40.3)**	**(17.5)**	**(57.8)**
Segment trading profit				**147.6**	**52.8**	**200.4**
Return on sales margin				10.5%	10.0%	10.4%
Amortisation of acquired intangible assets						**(10.3)**
Operating profit						190.1
Net finance costs						(11.6)
Share of post-tax profit of joint ventures						0.9
Profit before tax						179.4
Capital expenditure additions				93.2	32.1	125.3
Inventory				239.5	51.5	291.0
Trade debtors				267.6	89.3	356.9
Trade creditors				(177.7)	(58.7)	(236.4)

	2022					
	Flow Control	Advanced Refractories	Sensors & Probes	**Steel**	**Foundry**	**Total**
				£m	**£m**	**£m**
Segment revenue	810.9	645.3	40.2	**1,496.4**	**551.0**	**2,047.4**
at a point in time				**1,493.7**	**551.0**	**2,044.7**
Over time				**2.7**	**-**	**2.7**
Segment adjusted EBITDA *				**210.6**	**72.1**	**282.7**
Segment depreciation				**(37.9)**	**(17.6)**	**(55.5)**
Segment trading profit				**172.7**	**54.5**	**227.2**
Return on sales margin				*11.5%*	*9.9%*	*11.1%*
Amortisation of acquired intangible assets						**(10.4)**
Operating profit						**216.8**
Net finance costs						**(11.4)**
Share of post-tax profit of joint ventures						**1.2**
Profit before tax						**206.6**
Capital expenditure additions				85.2	18.7	103.9
Inventory				259.6	56.4	316.0
Trade debtors				288.0	92.8	380.8
Trade creditors				(177.2)	(62.3)	(239.5)

* Adjusted EBITDA is defined in note 16.13

3 Restructuring charges

There were no restructuring charges in 2023 (2022: £nil).

Cash costs of £0.8m (2022: £1.5m) (Note 14) were incurred in the year in respect of previously announced restructuring programmes, leaving provisions made but unspent of £2.4m (Note 14) as at 31 December 2023 (2022: £3.6m).

4 Net finance costs

	2023 £m	2022 £m
Interest payable on borrowings		
Loans, overdrafts and factoring arrangements	**20.1**	15.4
Interest on lease liabilities	**2.4**	1.9
Amortisation of capitalised borrowing costs	**1.0**	1.0
Total interest payable on borrowings	**23.5**	18.3
Interest on net retirement benefits obligations	**2.3**	1.4
Adjustments to discounts on provisions and other liabilities	**2.4**	1.1
Adjustments to discounts on receivables	**(1.3)**	(0.6)
Finance income	**(15.3)**	(8.8)
Total net finance costs	**11.6**	11.4

Within the table above, total finance costs are £28.2m (2022: £20.8m) and total finance income is £16.6m (2022: £9.4m).

5 Income tax

The Group's headline effective tax rate, based on the income tax costs associated with headline performance of £51.9m (2022: £57.2m), was 27.5% (2022: 26.5%).

The Group's total income tax costs include a credit on separately reported items of £3.1m (2022: £39.1m), comprising a credit of £2.7m (2022: £2.7m credit) relating to the amortisation of intangible assets, a credit of £0.4m (2022: £nil) relating to the recognition of a deferred tax asset relating to France and Italy intangible assets and a credit of £nil (2022: £36.4m) relating to the recognition of previously unrecognised deferred tax assets.

The net tax charge reflected in the Group Statement of Comprehensive Income in the year amounted to £2.0m (2022: £8.2m), comprising: A £2.0m charge (2022: £6.7m) in respect of tax on net actuarial gains and losses on the employee benefits and a charge of £nil (2022: £1.5m) in respect of deferred tax rate changes.

Notes to the Group Financial Statements (continued)

6 Earnings per share ("EPS")

6.1 Earnings for EPS

Basic and diluted EPS from continuing operations are based upon the profit attributable to owners of the parent, as reported in the Group Income Statement. The table below reconciles these different profit measures.

	2023 **£m**	2022 £m
Profit attributable to owners of the parent	**118.5**	181.1
Adjustments for separately reported items:		
Amortisation of intangible assets	**10.3**	10.4
Restructuring charges	**-**	-
Vacant site remediation costs	**-**	-
GMP equalisation charge	**-**	-
Income tax (credit)/charge	**(3.1)**	(39.1)
Headline profit attributable to owners of the parent	**125.7**	152.4

6.2 Weighted average number of shares

	2023 **millions**	2022 millions
For calculating basic and headline EPS	**269.1**	269.6
Adjustment for dilutive potential ordinary shares	**3.0**	1.9
For calculating diluted and diluted headline EPS	**272.1**	271.5

For the purposes of calculating diluted and diluted headline EPS, the weighted average number of ordinary shares is adjusted to include the weighted average number of ordinary shares that would be issued on the conversion of all potentially dilutive ordinary shares expected to vest, relating to the Company's share-based payment plans. Potential ordinary shares are only treated as dilutive when their conversion to ordinary shares would decrease EPS or increase loss per share.

6.3 Per share amounts

		2023 **pence**	2022 pence
Earnings per share	- reported basic	**44.0**	67.2
	- reported diluted	**43.6**	66.7
	- headline basic	**46.7**	56.5
	- headline diluted	**46.2**	56.1

Notes to the Group Financial Statements (continued)

7 Dividends

	2023 £m	2022 £m
Amounts recognised as dividends and paid to equity holders during the period		
Final dividend for the year ended 31 December 2021 of 15.0p per ordinary share	-	40.5
Interim dividend for the year ended 31 December 2022 of 6.5p per ordinary share	-	17.6
Final dividend for the year ended 31 December 2022 of 15.75p per ordinary share	**42.4**	-
Interim dividend for the year ended 31 December 2023 of 6.8p per ordinary share	**18.3**	-
	60.7	58.1

A proposed final dividend for the year ended 31 December 2023 of £43.3m (2022: £42.3m), equivalent to 16.20 pence (2022: 15.75 pence) per ordinary share (TDIM: VSVS and ISIN: GB00B82YXW83), is subject to approval by shareholders at the Company's Annual General Meeting on 15 May 2024 and has not been included as a liability in these financial statements. If approved by shareholders, the dividend will be paid on 31 May 2024 to holders of ordinary shares on the register on 19 April 2024. The ordinary shares will be quoted ex-dividend on 18 April 2024. Any shareholder wishing to participate in the Vesuvius Dividend Reinvestment Plan needs to have submitted their election to do so by 9 May 2024.

8 Reconciliation of movement in net debt

	Balance as at 1 Jan 2023 £m	Foreign exchange adjustments £m	Fair value gains/ (losses)	Non-cash movements[1] £m	Cash flow £m	Balance as at 31 Dec 2023 £m
Cash and cash equivalents						
Cash at bank and in hand	**184.2**	**(21.1)**	-	-	**1.1**	**164.2**
Bank overdrafts	**(4.4)**	**0.1**	-	-	**0.9**	**(3.4)**
	179.8	**(21.0)**	-	-	**2.0**	**160.8**
Borrowings, excluding bank overdrafts	**(440.2)**	**11.9**	-	**(33.6)**	**61.3**	**(400.6)**
Capitalised borrowing costs	**2.7**	-	-	**(0.9)**	-	**1.8**
Derivative financial instruments	**2.7**	-	**(2.2)**	-	-	**0.5**
Net debt	**(255.0)**	**(9.1)**	**(2.2)**	**(34.5)**	**63.3**	**(237.5)**

(1) £31.2m of new leases were entered into during the year.

Notes to the Group Financial Statements (continued)

Reconciliation of movement in net debt (continued)

	Balance as at 1 Jan 2022 £m	Foreign exchange adjustments £m	Fair value gains/ (losses)	Non-cash movements[1] £m	Cash flow £m	Balance as at 31 Dec 2022 £m
Cash and cash equivalents						
Cash at bank and in hand	**169.1**	**0.1**	**-**	**-**	**15.0**	**184.2**
Bank overdrafts	**(6.7)**	**(0.3)**	**-**	**-**	**2.6**	**(4.4)**
	162.4	**(0.2)**	**-**	**-**	**17.6**	**179.8**
Borrowings, excluding bank overdrafts	**(440.3)**	**(25.4)**	**-**	**(11.5)**	**37.0**	**(440.2)**
Capitalised borrowing costs	**3.3**	**-**	**-**	**(0.6)**	**-**	**2.7**
Derivative financial instruments	**(2.5)**	**-**	**5.2**	**-**	**-**	**2.7**
Net debt	**(277.1)**	**(25.6)**	**5.2**	**(12.1)**	**54.6**	**(255.0)**

(1) £11.5m of new leases were entered into during the year.

9 Cash generated from operations

	2023 £m	2022 £m
Operating profit	**190.1**	216.8
Adjustments for:		
Amortisation of intangible assets	**10.3**	10.4
Restructuring charges	**-**	-
Vacant site remediation costs	**-**	-
Trading Profit	**200.4**	227.2
(Profit)/Loss on disposal of non-current assets	(2.5)	(0.1)
Depreciation and amortisation	57.8	55.5
Defined benefit retirement plans net charge	5.2	5.6
Net decrease/(increase) in inventories	9.9	2.2
Net increase in trade receivables	2.6	(9.2)
Net (decrease)/increase in trade payables	8.3	(28.0)
Net decrease/(increase) in other working capital	(0.5)	24.7
Outflow related to restructuring charges	(0.8)	(1.5)
Defined benefit retirement plans cash outflows	(7.4)	(6.3)
Vacant site remediation costs paid	(1.0)	(1.8)
Cash generated from operations	**272.0**	268.3

10 Employee benefits

The net employee benefits liability as at 31 December 2023 was £46.3m (2022: £56.1m) derived from an actuarial valuation of the Group's defined benefit pension and other post-retirement obligations as at that date.

All the liabilities in the UK were insured following a buy-in agreement with Pension Insurance Corporation plc ("PIC") in 2021. This buy-in agreement secured an insurance asset from PIC that matches the remaining pension liabilities of the UK Plan, with the result that the Company no longer bears any investment, longevity, interest rate or inflation risks in respect of the UK Plan.

As disclosed in note 26 of the 2023 Annual Report and Financial Statements, the above amounts may materially change in the next 12 months if there is a change in assumptions.

	2023 **£m**	2022 £m
Employee benefits — net surpluses		
UK defined benefit pension plans	**32.5**	24.5
ROW defined benefit pension plans	**2.1**	1.7
Net surpluses	**34.6**	26.2
Employee benefits — net liabilities		
UK defined benefit pension plans	**(1.1)**	(1.1)
US defined benefit pension plans	**(18.2)**	(22.5)
Germany defined benefit pension plans	**(41.3)**	(38.4)
ROW defined benefit pension plans	**(10.4)**	(10.9)
Other post-retirement benefit plans	**(9.9)**	(9.4)
Net liabilities	**(80.9)**	(82.3)
Total liabilities	**(46.3)**	(56.1)

The expense recognised in the Group Income Statement in respect of the Group's defined benefit retirement plans and other post-retirement benefit plans is shown below.

		2023 **£m**	2022 £m
In arriving at trading profit	— within other manufacturing costs	**1.3**	1.7
(as defined in Note 16)	— within administration, selling and distribution costs	**3.9**	3.9
In arriving at profit before tax	— within net finance costs	**2.3**	1.4
Total net charge		**7.5**	7.0

11 Contingent liabilities

Vesuvius has extensive international operations and is subject to various legal and regulatory regimes, including those covering taxation and environmental matters.

Certain of Vesuvius' subsidiaries are subject to legacy matter lawsuits, predominantly in the US, relating to a small number of products containing asbestos manufactured prior to the acquisition of those subsidiaries by Vesuvius. These suits usually also name many other product manufacturers. To date, Vesuvius is not aware of there being any liability verdicts against any of these subsidiaries. Each year a number of these lawsuits are withdrawn, dismissed or settled. The amount paid, including costs, in relation to this litigation has not had a material adverse effect on Vesuvius' financial position or results of operations.

As the settlement of many of the obligations for which reserve is made is subject to legal or other regulatory process, the timing and amount of the associated outflows is subject to some uncertainty (see Note 30 of the 2021 Annual Report and Financial Statements for further information). The amount paid, including costs in relation to this litigation, has not had a material effect on Vesuvius' financial position or results of operations in the current period.

12 Related parties

The nature of related party transactions in 2023 are in line with those transactions disclosed in Note 33 of the 2023 Annual Report and Financial Statements. All transactions with related parties are conducted on an arm's length basis and in accordance with normal business terms. Transactions with joint ventures and associates are consistent with those disclosed in Note 34 of the 2023 Annual Report and Financial Statements. Transactions between related parties that are Group subsidiaries are eliminated on consolidation.

Transactions with joint ventures and associates	**2023 £m**	2022 £m
Sales to joint ventures	**4.3**	5.3
Purchases from joint ventures	**30.1**	32.3
Purchases from associates	-	-
Dividends received from joint ventures	**1.0**	1.3
Trade payables owed to joint ventures	**10.3**	6.7
Trade receivables from joint ventures	**1.0**	0.7

13 Acquisitions and divestments

There were no acquisitions or divestments in the period.

Notes to the Group Financial Statements (continued)

14 Provisions

	Disposal and closure costs £m	Restructuring charges £m	Other £m	Total £m
As at 1 January 2022	**41.7**	**5.0**	**4.0**	**50.7**
Exchange adjustments	5.0	0.6	0.3	5.9
Charge to Group Income Statement – trading profit	16.7	-	11.4	28.1
Adjustment to discount	1.1	-	-	1.1
Cash spend	(6.8)	(1.5)	(10.3)	(18.6)
Transferred (to)/from other balance sheet accounts	-	(0.5)	-	(0.5)
As at 31 December 2022	**57.7**	**3.6**	**5.4**	**66.7**

	Disposal and closure costs £m	Restructuring charges £m	Other £m	Total £m
As at 1 January 2023	**57.7**	**3.6**	**5.4**	**66.7**
Exchange adjustments	(2.6)	(0.1)	(0.1)	(2.8)
Charge to Group Income Statement – trading profit	1.5	(0.3)	7.3	8.5
Adjustment to discount	2.3	-	-	2.3
Cash spend	(7.0)	(0.8)	(8.3)	(16.1)
As at 31 December 2023	**51.9**	**2.4**	**4.3**	**58.6**

In assessing the probable costs and realisation certainty of provisions, or related assets, reasonable assumptions are made. Changes to the assumptions used could significantly alter the Directors' assessment of the value, timing or certainty of the costs or related amounts.

15 Financial instruments

The Group's financial assets and liabilities are measured as appropriate either at amortised cost or at fair value through other comprehensive income or at fair value through profit and loss.

IFRS 13 Fair Value Measurement requires classification of financial instruments within a hierarchy that prioritises the inputs to fair value measurement. The three levels of the fair value hierarchy are:

Level 1 – Unadjusted quoted prices in active markets for identical assets or liabilities;
Level 2 – Inputs other than quoted prices that are observable for the asset or liability, either directly or indirectly;
Level 3 – Inputs that are not based on observable market data.

Notes to the Group Financial Statements (continued)

Financial instruments (continued)

The following table summarises Vesuvius' financial instruments measured at fair value, and shows the level within the fair value hierarchy in which the financial instruments have been classified:

	2023		2022	
	Assets	**Liabilities**	Assets	Liabilities
	£m	**£m**	£m	£m
Investments (Level 2)	**0.3**	**-**	0.5	-
Derivatives not designated for hedge accounting purposes (level 2)	**-**	**(0.1)**	0.1	(0.1)
Derivatives designated for hedge accounting purposes (level 2)	**0.6**	**-**	2.7	-

All of the derivative financial instruments not designated for hedge accounting purposes reported in the table above will mature within a year of the balance sheet date. There were no transfers between fair value hierarchies during the period. The method for determining the hierarchy and for valuing the financial instruments is consistent with that disclosed in Note 24 of the 2023 Annual Report and Financial Statements. Fair value disclosures have not been made in respect of other financial assets and liabilities on the basis that the carrying amount is deemed to be a reasonable approximation of fair value.

The Group's Treasury department, acting in accordance with policies approved by the Board, is principally responsible for managing the financial risks faced by the Group. The Group's activities expose it to a variety of financial risks, the most significant of which are market risk and liquidity risk. The condensed financial statements do not include all financial risk management information and disclosures required in the annual financial statements; they should be read in conjunction with the Group's 2023 Annual Report and Financial Statements, in which further details of these financial risks were disclosed in Note 24. There have been no changes in the risk management policies since year-end.

In 2020, the Group executed a US$86m cross-currency interest rate swap (CCIRS). The effect of this is to convert the $86m Private Placement Notes issued in 2020 into €76.6m. US dollar cash flows under the CCIRS exactly mirror those of the Private Placement Notes and the maturity date of the CCIRS matches the repayment date of the Notes. The CCIRS would by default be revalued through the Income Statement; however, as it is in a designated hedging relationship, it is revalued through other comprehensive income. The US dollar exposure is designated as a cash flow hedge of the Private Placement Notes and the euro exposure is designated as a net investment hedge of the Group's foreign operations. The CCIRS is presented as a non-current asset or liability as it is expected to be settled more than 12 months after the end of the reporting period.

With the exception of the CCIRS, the fair value of derivatives outstanding at the year-end has been booked through the Income Statement in 2023. All of the fair values shown in the table above are classified under IFRS 13 as Level 2 measurements which have been calculated using quoted prices from active markets, where similar contracts are traded and the quotes reflect actual transactions in similar instruments. All the derivative assets and liabilities not designated for hedge accounting purposes reported above will mature in 2024.

As at 31 December 2023, €246.0m (2022: €246.0m) and $30.0m (2022: $60.0m) of borrowings were designated as hedges of net investments in €246.0m (2022: €246.0m) and $30.0m (2022: $60.0m) worth of overseas foreign operations. In addition, the €76.6m (2022: €76.6m) CCIRS liability has been designated as a net investment hedge of a further €76.6m (2022: €76.6m) worth of overseas foreign operations. As the value of the borrowings and the CCIRS liability exactly matches the designated hedged portion of the net investments, the relevant hedge ratio is 1:1. The net investment hedges are therefore highly effective. It is noted that hedge ineffectiveness would arise in the event there were insufficient euro-denominated overseas foreign operations to be matched against the €76.6m CCIRS liability.

Financial instruments (continued)

As at 31 December 2023, the Group had $116.0m (2022: $146.0m), €198.0m (2022: €198.0m) and £28.0m (2022: £28.0m) of US Private Placement Loan Notes (USPP) outstanding, which carry a fixed rate of interest, representing 82% (2022: 81%) of the Group's total borrowings outstanding at that date. The Group had £20.0m (2022: £33.0m) and €48.0m (2022: €48.0m) short-term drawdowns in relation to its committed bank facilities, which carry floating rates of interest, representing 18% (2022: 19%) of the Group's total borrowings outstanding at 31 December 2023. Maturities of the corresponding USPP Notes were disclosed in Note 24 to the 2023 Annual Report and Financial Statements.

The currency and interest rate profile of the Group's borrowings is detailed in the tables below.

	Fixed rate £m	**Floating rate £m**	**Total £m**
Sterling	**28.0**	**21.5**	**49.5**
US dollar	**91.1**	**0.1**	**91.2**
Euro	**171.7**	**43.4**	**215.1**
Capitalised arrangement fees	**(0.7)**	**(1.1)**	**(1.8)**
As at 31 December 2023	**290.1**	**63.9**	**354.0**
Sterling	28.0	33.3	61.3
US dollar	120.7	1.9	122.6
Euro	175.2	44.8	220.0
Capitalised arrangement fees	(0.9)	(1.8)	(2.7)
As at 31 December 2022	323.0	78.2	401.2

In May 2023, the Group exercised its option to request a one-year extension to the maturity of the £38.5m component of its £385m committed bank facility not previously extended. Following the request 100% of the £385m facility now matures in August 2026. At the time of the extension the reference to USD LIBOR was replaced with reference to SOFR.

In 2023, the Group did not hold any borrowings for which the interest payable referenced LIBOR benchmarks.

As at 31 December 2023, the Group had committed borrowing facilities of £685.8m (2022: £721.9m), of which £333.4m (2022: £322.5m) were undrawn. 100% of these undrawn facilities expire in 2026. The Group's borrowing requirements are met by USPP, a committed syndicated bank facility of £385.0m (2022: £385.0m) and a bilateral bank facility of £10.0m (2022: £13.0m) which is fully collateralised against a portion of the Group's cash balance in China.

Notes to the Group Financial Statements (continued)

Financial instruments (continued)

The maturity analysis of the Group's non-derivative financial liabilities is shown in the tables below.

As at 31 December 2023	**Within one year £m**	**Between 1-2 years £m**	**Between 2-5 years £m**	**Over 5 years £m**	**Total contractual cash flows £m**	**Carrying amount**
Trade payables	**236.4**	**-**	**-**	**-**	**236.4**	**236.4**
Loans & overdrafts	**22.3**	**68.0**	**196.9**	**103.9**	**391.1**	**355.8**
Lease liabilities	**13.5**	**12.2**	**17.0**	**19.4**	**62.1**	**48.2**
Capitalised arrangement fees	**-**	**-**	**-**	**-**	**-**	**(1.8)**
Derivative liability	**0.1**	**-**	**-**	**-**	**0.1**	**0.1**
Total financial liabilities	**272.3**	**80.2**	**213.9**	**123.3**	**689.7**	**638.7**

As at 31 December 2022	Within one year £m	Between 1-2 years £m	Between 2-5 years £m	Over 5 years £m	Total contractual cash flows £m	Carrying amount
Trade payables	239.5	-	-	-	239.5	239.5
Loans & overdrafts	52.6	9.2	255.3	133.4	450.5	403.9
Lease liabilities	12.3	9.2	13.2	13.5	48.2	40.8
Capitalised arrangement fees	-	-	-	-	-	(2.7)
Derivative liability	0.1	-	-	-	0.1	0.1
Total financial liabilities	304.5	18.4	268.5	146.9	738.3	681.6

16 Alternative performance measures

The Company uses a number of alternative performance measures (APMs) in addition to those reported in accordance with IFRS. The Directors believe that these APMs, listed below, are important when assessing the underlying financial and operating performance of the Group and its divisions, providing management with key insights and metrics in support of the ongoing management of the Group's performance and cash flow. A number of these align with KPIs and other key metrics used in the business and therefore are considered useful to also disclose to the users of the financial statements. The following APMs do **not** have standardised meaning prescribed by IFRS as adopted by the EU and therefore may not be directly comparable with similar measures presented by other companies.

16.1 Headline performance

Headline performance, reported separately on the face of the Group Income Statement, is from continuing operations and before items reported separately on the face of the Group Income Statement.

16.2 Underlying revenue, underlying trading profit and underlying return on sales

Underlying revenue, underlying trading profit and underlying return on sales are the headline equivalents of these measures after adjustments to exclude the effects of changes in exchange rates, business acquisitions and disposals. Reconciliations of underlying revenue and underlying trading profit can be found in the Financial Summary. Underlying revenue growth is one of the Group's key performance indicators and provides an important measure of organic growth of Group businesses between reporting periods, by eliminating the impact of exchange rates, acquisitions, disposals and significant business closures.

Notes to the Group Financial Statements (continued)

16.3 Return on sales ('ROS')

ROS is calculated as trading profit divided by revenue. It is one of the Group's key performance indicators and is used to assess the trading performance of Group businesses. A reconciliation of ROS is included in Note 2.

16.4 Trading profit/adjusted EBITA

Trading profit/adjusted EBITA is defined as operating profit before separately reported items. It is one of the Group's key performance indicators and is used to assess the trading performance of Group businesses. It is also used as one of the targets against which the annual bonuses of certain employees are measured.

16.5 Headline profit before tax

Headline profit before tax is calculated as the net total of trading profit, plus the Group's share of post-tax profit of joint ventures and total net finance costs associated with headline performance. It is one of the Group's key performance indicators and is used to assess the financial performance of the Group as a whole.

16.6 Headline effective tax rate ('ETR')

The Group's headline ETR is calculated on the income tax costs associated with headline performance, divided by headline profit before tax and before the Group's share of post-tax profit of joint ventures.

16.7 Headline earnings

Headline earnings is profit after tax before separately reported items attributable to owners of the parent.

16.8 Headline earnings per share

Headline earnings per share is calculated by dividing headline profit before tax less associated income tax costs, attributable to owners of the parent by the weighted average number of ordinary shares in issue during the year. It is one of the Group's key performance indicators and is used to assess the underlying earnings performance of the Group as a whole. It is also used as one of the targets against which the annual bonuses of certain employees are measured. Headline earnings per share is disclosed in Note 6.

16.9 Adjusted operating cash flow

Adjusted operating cash flow is cash generated from operations before restructuring and vacant site remediation costs but after deducting capital expenditure net of asset disposals. It is used in calculating the Group's cash conversion.

	2023	2022
	£m	£m
Cash generated from operations	**272.0**	268.3
Add: Outflows relating to restructuring charges	**0.8**	1.5
Less: Capital expenditure	**(92.6)**	(89.2)
Add: Vacant site remediation costs	**1.0**	1.8
Add: Proceeds from the sale of property, plant and equipment	**5.4**	3.1
Adjusted operating cash flow	**186.6**	185.5
Trading Profit	**200.4**	227.2
Cash Conversion	**93%**	82%

Notes to the Group Financial Statements (continued)

16.10 Cash conversion

Cash conversion is calculated as adjusted operating cash flow divided by trading profit. It is useful for measuring the rate at which cash is generated from trading profit. It is also used as one of the targets against which the annual bonuses of certain employees are measured. The calculation of cash conversion is detailed in Note 16.9 above

16.11 Free cash flow

Free cash flow is defined as net cash flow from operating activities after net outlays for the purchase and sale of property, plant and equipment, dividends from joint ventures and dividends paid to non-controlling shareholders. It is one of the Group's KPIs and is used to assess the underlying cash generation of the Group and is one of the measures used in monitoring the Group's capital. A reconciliation of free cash flow is included underneath the Group Statement of Cash Flows.

16.12 Average trade working capital to sales ratio

The average trade working capital to sales ratio is calculated as the percentage of average trade working capital balances to the total revenue for the previous 12 months, at constant currency. Average trade working capital (comprising inventories, trade receivables and trade payables) is calculated as the average of the 13 previous month-end balances. It is one of the Group's key performance indicators and is useful for measuring the level of working capital used in the business and is one of the measures used in monitoring the Group's capital.

	2023	2022
	£m	£m
Average trade working capital	**451.8**	487.3
Total revenue	**1,929.8**	2,047.4
Average trade working capital to sales ratio	**23.4%**	23.8%

16.13 Adjusted earnings before interest, tax, depreciation and amortisation (adjusted EBITDA)

Adjusted EBITDA is calculated as the total of trading profit before depreciation and amortisation of non-acquired intangibles charges. It is used in the calculation of the Group's interest cover and net debt to adjusted EBITDA ratios. A reconciliation of adjusted EBITDA is included in Note 2.

16.14 Net interest payable on borrowings

Net interest payable on borrowings is calculated as total interest payable on borrowings less finance income, excluding interest on net retirement benefit obligations, adjustments to discounts and any item separately reported. It is used in the calculation of the Group's interest cover ratio.

	2023	2022
	£m	£m
Total interest payable on borrowings (note 4)	**23.5**	18.3
Finance income (note 4)	**(15.3)**	(8.8)
Net interest payable on borrowings	**8.2**	9.5

Notes to the Group Financial Statements (continued)

16.15 Interest cover

Interest cover is the ratio of adjusted EBITDA to net interest payable on borrowings for the last 12 months. It is one of the Group's key performance indicators and is used to assess the financial position of the Group and its ability to fund future growth. This measure is also a component of the Group's covenant calculations.

	2023	2022
	£m	£m
Adjusted EBITDA (note 2)	**258.2**	282.7
Net interest payable on borrowings	**8.2**	9.5
Interest cover	**31.5x**	29.8x

16.16 Net debt

Net debt comprises the net total of current and non-current interest-bearing borrowings (including IFRS16 lease liabilities), cash and short-term deposits and derivative financial instruments. Net debt is a measure of the Group's net indebtedness to banks and other external financial institutions. A reconciliation of the movement in net debt is included in Note 8.

16.17 Net debt to adjusted EBITDA

Net debt to adjusted EBITDA is the ratio of net debt at the year-end to adjusted EBITDA for the last 12 months. It is one of the Group's key performance indicators and is used to assess the financial position of the Group and its ability to fund future growth and is one of the measures used in monitoring the Group's capital.

	2023	2022
	£m	£m
Net debt (note 8)	**237.5**	255.0
Adjusted EBITDA (note 2)	**258.2**	282.7
Net debt to adjusted EBITDA	**0.9x**	0.9x

16.18 Return on invested capital (ROIC)

The Group has adopted ROIC as its key measure of return from the Group's invested capital. The RONA performance measure has been replaced with ROIC which provides a more complete measure of Vesuvius's returns. ROIC is calculated as trading profit less amortisation of acquired intangibles plus share of post-tax profit of joint ventures and associates for the previous 12 months after tax, divided by the average (being the average of the opening and closing balance sheet) invested capital (defined as: total assets excluding cash plus non-interest-bearing liabilities), at the average foreign exchange rate for the year.

	2023	2022
	£m	£m
Average invested capital	**1,558.5**	1,503.6
Trading profit (note 16.4)	200.4	227.2
Amortisation of acquired intangible assets	(10.3)	(10.4)
Share of post-tax profit from joint ventures and associates	0.9	1.2
Tax on trading profit and amortisation of acquired intangible assets	(52.3)	(57.5)
	138.7	160.5
ROIC	**8.9%**	10.7%

16.19 Constant currency

Figures presented at constant currency represent 2022 amounts retranslated at average 2023 exchange rates.

16.20 Liquidity

Liquidity is the Group's cash and short term deposits plus undrawn committed debt facilities less cash used as collateral on loans.

	2023	2022
	£m	£m
Cash	**164.2**	184.2
Undrawn committed debt facilities	**333.4**	322.5
Cash used as collateral on loans	**(10.0)**	(13.0)
Gross up of cash in notional pools	**-**	(0.1)
Liquidity	**487.6**	493.6

16.21 Last twelve months ('LTM')

Some results are presented or calculated using data from the last twelve months from the reference date.

17 Exchange rates

The Group reports its results in pounds sterling. A substantial portion of the Group's revenue and profits are denominated in currencies other than pounds sterling. It is the Group's policy to translate the income statements and cash flow statements of its overseas operations into pounds sterling using average exchange rates for the year reported (except when the use of average rates does not approximate the exchange rate at the date of the transaction, in which case the transaction rate is used) and to translate balance sheets using year-end rates. The principal exchange rates used were as follows:

	Income and expense Average rates			**Assets and liabilities Year-end rates**		
	2023	**2022**	**Change**	**2023**	**2022**	**Change**
US Dollar	1.24	1.24	**(0.0%)**	1.27	1.21	**5.0%**
Euro	1.15	1.17	**(1.7%)**	1.15	1.13	**1.8%**
Chinese Renminbi	8.82	8.31	**6.1%**	9.07	8.37	**8.4%**
Japanese Yen	174.87	161.86	**8.0%**	179.56	158.60	**13.2%**
Brazilian Real	6.21	6.38	**(2.7%)**	6.18	6.39	**(3.3%)**
Indian Rupee	102.68	96.99	**5.9%**	105.89	100.06	**5.8%**
South African Rand	22.95	20.16	**13.8%**	23.27	20.57	**13.1%**