VESUVIUS PLC

1 March 2018

Results for the year ended 31 December 2017

Strong full year performance across all Regions and Business Units

Vesuvius plc, a global leader in molten metal flow engineering, announces its preliminary audited results for year ended 31 December 2017.

Financial summary

	2017 (£m)	2016 (£m)	Year-on-year change	Underlying change[1]
Revenue	1,683.9	1,401.4	20.2%	*12.5%*
Trading Profit[3]	165.5	133.3	24.2%	*16.1%*
Return on Sales[3]	*9.8%*	*9.5%*	+30bps	*+30bps*
Operating Profit	109.7	92.9	18.1%	
Headline Profit Before Tax[3]	152.9	119.8	27.6%	
Profit Before Tax	97.1	79.4	22.3%	
Profit[2]	44.4	63.2	-29.7%	
Headline Earnings[3]	110.1	82.1	34.1%	
Headline EPS[3] (pence)	40.7	30.4	33.9%	
Statutory EPS (pence)	14.1	21.1	-33.2%	
Operating cash flow[3]	171.5	125.0	37.2%	
Net Debt	274.3	320.3	-14.4%	
Dividend (pence)	18.0p	16.55p	8.8%	

[1] Underlying basis is at constant currency and excludes separately reported items and the impact of acquisitions
[2] Year-on-year reduction in profit as a result of higher charges within separately reported items
[3] For definitions of non-GAAP measures, refer to Note 16 in the financial statements

Key Points

- Reported 2017 revenue up 20.2% and underlying revenue and trading profit up 12.5% and 16.1% respectively
- Global steel production up 5.3% in 2017 and positive momentum in the majority of Foundry end markets
- Accelerating momentum in China with 9.2% underlying sales growth – Vesuvius is benefiting from growing demand for our higher quality products
- Major progress made in mitigating both temporary headwinds of Flow Control EMEA intercompany supply and significant raw material cost inflation. £14.4m headwind in 2017 will substantially unwind in 2018
- Restructuring savings of £16.2m achieved in 2017 and total targeted savings from the existing restructuring programme, mainly in Flow Control, increased from £55m to £60m
- Launch of a completely new restructuring programme targeting £15m of annual savings by 2020 in our other businesses
- Cash conversion of 104% and Working Capital / Revenues improved to 24.9% at year-end 2017, from 26.6% in 2016
- Strong balance sheet with Net Debt / 2017 EBITDA at 1.3x
- Full year dividend increased 8.8% to 18.0 pence per share. Final dividend of 12.5 pence per share to be paid on 25 May 2018

Patrick André, Chief Executive of Vesuvius, commented:

"I am pleased to report that Vesuvius has achieved a strong set of results in 2017, delivering our highest Trading Profit since we became an independent company in 2012. We benefitted from positive growth in both our steel and foundry end markets and also significantly increased the sales penetration of our value-creating solutions. We continued the timely delivery of our previously announced restructuring programme, mainly in Flow Control, and are announcing today a completely new programme focused on Advanced Refractories, Foundry and Group corporate functions, targeting £15m in savings by 2020. Looking forward, we are focused on accelerating the realisation of our core strategic objectives of delivering long-term sustainable and profitable growth."

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Vesuvius management will make a presentation to analysts and investors on 1 March at 10.30 (GMT) at Grocers Hall, Princes Street, London EC2R 8AD. For those unable to attend in person, an audio webcast and conference call will also be available (UK participant dial in +44(0)33 0336 9105; US participant dial in +1 323 794 2551; confirmation code 5596276). This presentation will be broadcast live on Vesuvius' website, http://investors.vesuvius.com/investor-relations and an archive version of the presentation will be available on the website later that day.

About Vesuvius plc

Vesuvius is a global leader in molten metal flow engineering principally serving the steel and foundry industries.

We develop innovative and customised solutions, often used in extremely demanding industrial environments, which enable our customers to improve their manufacturing processes, enhance product quality and reduce costs. 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 low-cost 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 he or she is recognised, developed and properly rewarded.

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.

Statements in this announcement that are not historical facts are hereby identified as "forward looking statements". 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 and involve a number of known and unknown risks, uncertainties and other factors 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.

You should not place undue reliance on such forward looking statements which speak only as of the date on which they are made. Except as required by the Rules of the UK Listing Authority and the London Stock Exchange and applicable law, Vesuvius undertakes no obligation to update publicly or revise any forward looking statements, whether as a result of new information, future events or otherwise. In light of these risks, uncertainties and assumptions, the forward looking events discussed in this announcement might not occur.

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Vesuvius plc

Results for the year ended 31 December 2017

Vesuvius continued to make further strategic and operational progress in 2017 in line with our objectives and strategy. We benefited in the year from 5.3% year-on-year growth in global steel production (as reported by the World Steel Association). However, steel production growth in the world excluding China was supported by a significant decrease in Chinese steel exports, which may not repeat in 2018. We also experienced positive momentum in the majority of Foundry end markets, with particular strength in heavy trucks and a recovery in mining equipment as well as construction and agricultural equipment after several years of weakness.

We successfully grew sales in excess of underlying market growth in our key developing markets of China, India, South America, Mexico and EEMEA (Eastern Europe, Middle-East and Africa), supported by increased customer interest in our value-creating solutions. Our performance in China was especially encouraging with 9.2% underlying revenue growth. We benefitted from the trend in China towards higher quality steel requiring higher quality products and value creating solutions.

Even in the relatively mature regions of Europe and the US, we delivered revenue growth in excess of underlying markets, achieving revenue growth of 7.6% and 8.0%, respectively. This outperformance was supported by increased penetration of our value-creating solutions; new product launches, especially in Foundry; and an increased focus on strategic customers.

£m	**2017 Reported**	**Acquisition/ Disposals**	**2017 Underlying**	2016 Reported	Currency	Acquisitions/ Disposals	2016 Underlying	Reported % change	Underlying % change
Revenue	**1,683.9**	**(5.5)**	**1,678.4**	1,401.4	90.6	-	1,492.0	+20.2%	+12.5%
Trading Profit	**165.5**	**(0.2)**	**165.3**	133.3	9.1	-	142.4	+24.2%	+16.1%
Return on Sales %	**9.8%**	**-**	**9.8%**	9.5%	-	-	9.5%	+30bps	+30bps

Group trading performance

Group revenue was £1,683.9m, an increase of 20.2% versus 2016 on a reported basis. Underlying Group revenue, adjusted for the effects of acquisitions and currency translation, increased by 12.5%. Trading profit for the full year was £165.5m, up 24.2% on a reported basis (2016: £133.3m) and up 16.1% on an underlying basis. Return on sales increased by 30 basis points on a reported basis and 30 basis points on an underlying basis to 9.8% in 2017 (2016: 9.5%).

Our financial performance would have been even stronger in 2017 if we had not been impacted by the temporary headwinds of increased intercompany imports to satisfy higher demand experienced by Flow Control in EMEA and significant raw material cost inflation. These headwinds were mostly mitigated by year-end and should continue to unwind in 2018, unless additional raw material price increases were to materialise.

Strategic progress

Our strategy remains centred around five key execution priorities, designed to ensure the achievement of our core strategic objectives of delivering long-term, sustainable and profitable growth. Each of these execution priorities saw significant progress in 2017:

- **Reinforce our technology leadership**
  - R&D spend in 2017 of £33.2m, representing c.2.0% of total revenues, significantly higher than most competitors
  - New R&D centre in India inaugurated in November 2017, reinforcing our presence in this key market
- **Increase penetration of our value-creating solutions**
  - The growth of sales in our Steel and Foundry divisions outperformed underlying market growth in most areas, confirming the mounting interest of customers in our advanced solutions
- **Capture growth in developing markets**
  - Underlying revenue growth especially strong in China (+ 9.2%), India (+6.2%), South America (+17.5%), Mexico (+7.1%) and Eastern Europe, Middle East and Africa (+37.0%)
- **Improve cost leadership and margins**
  - £16.2m restructuring savings achieved in 2017, exceeding expectations and targeted savings from the existing restructuring programme, mainly in Flow Control, increased from £55m to £60m
  - Launch of a completely new restructuring programme targeting £15m of recurring savings by 2020
- **Develop our Technical Services offering**
  - Global revenue from our Technical Services offering reached £88m in 2017, up 14% from 2016

- Strategic investment in Sapotech Oy, a Finnish technology company offering optical surface defect detection services for the continuous casting process

Temporary headwinds impacting 2017 results

Some of the key raw materials used by our Steel and Foundry Divisions experienced significant price increases in 2017, particularly during the second half of the year. The speed of these increases was such that it was not immediately possible to fully recover the increased costs through the sales price of our finished products, as we were bound by contractual obligations with some customers. This situation improved towards the end of 2017 due to prices stabilising for several key raw materials and major progress being made in recovering cost inflation through higher selling prices. Whilst the price of magnesite, the largest contributor to raw material price inflation in 2017, has now stabilised, the price of other raw materials such as bauxite, silicon carbide and zirconia are still on an upward trend. As a result, the process of price adjustment will continue into 2018, until realised cost increases have been fully recovered.

Additionally, the very strong growth of our Flow Control sales in EMEA temporarily exceeded the capacity of our manufacturing plants in the region, requiring the import of products from our facilities in Asia and NAFTA, incurring additional freight, export duty and overtime costs. Measures were immediately taken to increase the capacity of the Flow Control EMEA plants and this ramp-up is now complete, substituting imports from non-EMEA plants.

The total negative impact of these headwinds on 2017 Trading Profit was £14.4m (£7.6m Flow Control EMEA, £6.8m raw material inflation). These headwinds were mostly mitigated by year-end and should continue to unwind in 2018, unless additional raw material price increases were to materialise.

Foreign exchange

Average exchange rates of Sterling to US Dollar and Euro fell by 5.1% and 6.8% respectively between full year 2016 and 2017. This currency translation effect provided a trading profit benefit for the Group of approximately £9.1m for the year.

All things being equal, based on the average exchange rates in January 2018, and were month end January rates to persist for the remainder of 2018, this would have decreased our 2017 Trading Profit by approximately 2.9% (£4.7m).

Restructuring

We continued to make good progress in implementing our previously announced restructuring programme, mainly in Flow Control, with £16.2m savings delivered in 2017, which was ahead of expectations. The total savings delivered since launching the programme are now £43.2m. The total expected savings from this programme are increased to £60m by 2020 from the previously announced £55m. Total costs are increased to £75m from the previously announced £70m. The whole of the £75m has already been accounted for at the end of 2017.

We launched a completely new restructuring programme at the end of 2017 targeting the Foundry Division in Europe and NAFTA, the Advanced Refractories Business Unit in Europe, and Group corporate functions. This new programme is targeting £15m of recurring savings by 2020 at a cost of £16.0m, of which £4.8m has already been accounted for at the end of 2017. £5m in capital expenditure will also be necessary to support the implementation of this programme.

In parallel to these restructuring programmes, Vesuvius is reinforcing its focus on operational excellence and continuous improvement in its manufacturing operations.

Working Capital

We made significant progress in our efforts to reduce working capital, with Working Capital/Revenues of 24.9% at year-end 2017, versus 26.6% in 2016. Trade working capital increased by just £12.2m on a constant currency basis in 2017 despite constant currency revenue growth of £191.9m. Looking at the key components of trade working capital, debtor days were a major area of success, falling 5% year on year, supported in particular by marked improvements in China.

Financial position

Our Net Debt/EBITDA ratio has improved from 1.8x at year end 2016 to 1.3x at 31 December 2017, a reduction of £46.0m from £320.3m at the end of 2016, as a result of good cash generation. The main drivers of the decrease were the impact of strong cash conversion partially offset by higher restructuring costs and tax payments.

As announced on 14 December 2017, we raised €100 million with the completion of a US Private Placement for the repayment of existing indebtedness. Vesuvius' annual interest costs will decline by approximately £1.8m as a result of this refinancing.

During the year, we also extended the term of our Revolving Credit Facility by two years until 2022 and our liquidity including cash and undrawn credit lines currently totals £360.8m.

The weighted average maturity of Vesuvius' committed debt facilities now stands at approximately six years, versus approximately four years at year end 2016.

Impact of US tax changes

The US Tax Cuts and Jobs Act ('TCJA') enacted in late December made significant changes to the US tax system. A lower tax rate in the US, and a move closer to a territorial system of taxation, will be positive for our US business from a longer-term perspective.

A combination of the reduction in the Federal tax rate from 35% to 21%, the repatriation tolling charge and other provisions of TCJA caused a £25.7m reduction in our US deferred tax asset which, together with other normal movements and foreign exchange revaluation, reduced from £65.9m at the end of 2016 to £32.6m at the end of 2017. However, this write-down did not impact our Headline earnings after tax, as the change in the asset is reflected through separately reported items.

Although still subject to clarification as to how some of the provisions will work, we estimate that the short/medium-term impact will result in an increase to the effective tax rate on our Headline profits before share of profits of joint ventures and separately reported items of c.0.7% in 2018, and c.1.2% in 2019.

We expect the Group's effective tax rate for 2018 onwards to be between 27% and 28%, including the expected adverse impact of US tax reform, reflecting the tax benefit of initiatives being taken.

Board and senior management

As previously announced, Patrick André was appointed Chief Executive and Executive Director of Vesuvius plc with effect from 1 September 2017. Patrick replaced François Wanecq, who retired from the Board of Directors on 31 August 2017. On 1 October 2017, Roel van der Sluis, previously President, Vesuvius North Asia, assumed the position of President, Steel Flow Control for the Group, succeeding Patrick André.

On 3 April 2017, Holly Koeppel joined the Board as an Independent Non-executive Director. She serves on the Audit, Remuneration and Nomination Committees.

Quality, health and safety

Vesuvius places great emphasis on the importance of quality, health and safety in the workplace and in the communities in which we operate. Reliability in quality and delivery is vital to our customers as they use Vesuvius' products in critical areas of their own processes. The level of risk attached to a catastrophic failure is often such that, for people and equipment, no compromise can be accepted. Our Lost Time Injury Frequency Rate has declined from 1.7 LTIs per million hours worked in 2016 to 1.6 LTIs in 2017, and we have seen a marked reduction of our LTI Severity rate from 75 to 63 Lost Days per million hours worked.

A new safety management organisation, updating responsibility and accountability for the management of safety across the Group was established at the end of 2017 and will be fully implemented in the first half of 2018.

Dividend

The Board is proposing a final dividend of 12.5 pence per share (2016: 11.40 pence per share), a 9.6% increase on the final dividend paid in 2016. This will result in a total dividend for the year of 18.0 pence per share (2016: 16.55 pence per share) and represents a 8.8% increase to the full year dividend. The Board remains committed to delivering long-term dividend growth, provided that this is supported by underlying earnings, cash flows and is justified in the context of capital expenditure requirements and the prevailing market outlook. If approved at the Annual General Meeting on 10 May 2018, the final dividend will be paid on 25 May 2018 to shareholders on the register at the close of business on 13 April 2018. The last date for receipt of elections from shareholders for the Vesuvius Dividend Reinvestment Plan will be 3 May 2018.

Outlook

Our main Steel and Foundry markets remain positively oriented at the beginning of 2018. However, we expect a lower growth rate of steel production outside China in 2018 compared to 2017, as the significant decrease in Chinese steel exports which occurred in 2017 may not repeat in 2018. Our self-help and manufacturing optimisation programme will continue to develop and expand in 2018. The temporary raw material and product supply headwinds that impacted our 2017 results have now been mostly mitigated and will substantially unwind during the year, subject to any further raw material cost increases. We remain confident in our ability to further improve working capital management and generate strong operating cash flow. For these reasons, the Board is confident that in comparison to 2017, further strong progress will be made in 2018.

Operational Review

Vesuvius comprises two divisions, Steel and Foundry. The Steel division operates as three business lines, Steel Flow Control, Advanced Refractories and Digital Services.

Steel Division

According to the World Steel Association, global steel production in 2017 increased 5.3% compared with 2016. The majority of major steel producing countries were up year-on-year. Steel volume growth in the developed markets of Europe (EU28) and the United States was up 4.1% and 4.0%, respectively. The growth momentum also continued in our key strategic growth markets of China (+5.7%), India (+6.2%), Brazil (+9.9%) and Mexico (+6.3%).

Revenue in Vesuvius' Steel Division increased by 21.9% on a reported basis. On an underlying basis, Steel Division revenue was up 14.1%. This higher growth rate relative to global steel production is a result of higher penetration supported by increased customer interest in the value-creating solutions offered by Vesuvius which enable our customers to improve their manufacturing efficiency whilst at the same time raising the quality of their finished products. We were particularly pleased with our accelerating momentum in China where we benefited from the trend towards higher quality steel requiring higher quality products and value creating solutions.

On a reported basis, our trading profit improved 26.8% year on year. On an underlying basis, trading profit increased 18.9%, with return on sales increasing by 40bps.

Steel Division	**2017 (£m)**	**2016 (£m)**	**Change (%)**	**Underlying change**
Steel Flow Control Revenue	605.9	506.4	19.7%	*11.8%*
Advanced Refractories Revenue	499.1	398.8	25.2%	*17.4%*
Digital Services Revenue	43.7	36.9	18.4%	*8.9%*
Total Steel Revenue	**1,148.7**	**942.0**	**21.9%**	***14.1%***
Total Steel Trading Profit	**100.4**	**79.2**	**26.8%**	***18.9%***
Total Steel Return on Sales	***8.7%***	***8.4%***	**+30bps**	***+40bps***

Steel Flow Control

Steel Flow Control supplies the stoppers and tubes used to channel and control the flow of molten steel from ladle to tundish and from tundish to mould; slide gate refractories for ladles and tundishes; slide gate systems; tundish and mould fluxes; and control devices to monitor and regulate steel flow into the mould. These products have been designed to resist extreme thermomechanical stress and corrosive environments. The majority of these products are consumed during the process of making steel and, consequently, demand is primarily linked to steel production volumes. Continuing innovation allows us to offer enriched solutions that create additional value in our customers' processes.

Steel Flow Control Revenue	**2017 (£m)**	**2016 (£m)**	**Change (%)**	**Underlying change**
Americas	201.7	168.5	19.7%	*8.8%*
Europe, Middle East & Africa (EMEA)	240.1	193.6	24.0%	*17.5%*
Asia-Pacific	164.1	144.3	13.7%	*7.8%*
Total Steel Flow Control Revenue	**605.9**	**506.4**	**19.7%**	***11.8%***

Year-on-year, underlying revenue in Steel Flow Control increased 11.8%. All regions outperformed underlying steel volume growth and EMEA was our fastest growing region in 2017, with underlying revenues up 17.5%.

In the Americas, Steel Flow Control's underlying revenues increased 8.8%, against a 5.9% increase in steel production volumes. As discussed in our H1 2017 results, our outperformance relative to steel production is due to market share gains in North America. In the US in particular, our market share is continuing to recover from the low point of the second half of 2015 when we were impacted by customer closures and volume losses due to market pricing pressure.

Steel production in EMEA increased 4.9%, and Vesuvius outperformed the market with underlying revenue up 17.5%, reflecting market share gains. A significant proportion of the increase in sales was provided by imports into EMEA from our plants located in China, India and Mexico, with significant additional freight, export duty and overtime costs. Measures were immediately taken to increase the capacity of the Flow Control EMEA plants and this ramp-up is now complete, substituting imports from non-EMEA plants.

Underlying revenue increased by 7.8% in Asia-Pacific, compared to a 5.7% increase in steel production volume in the region. Revenues increased faster than the steel market in the key regional markets of China, India and South Korea.

In December 2017, we finalised a strategic investment in Sapotech Oy, a Finnish technology company developing optical defect detection services for the continuous casting process.

Advanced Refractories

Products of the Advanced Refractories business line include specialist refractory materials for lining steelmaking vessels such as blast furnaces, ladles and tundishes, which are subject to extreme temperatures, corrosion and abrasion. These materials are in the form of powder mixes, which are spray-applied or cast onto the vessel to be lined ("monolithics") and refractory shapes (e.g. bricks, pads and dams). Vesuvius is one of the world's largest manufacturers of monolithic refractory linings. Advanced Refractories delivers installation technologies, products adapted to fit customers' processes and effective and efficient logistics services. These factors are combined with significant R&D, a deep knowledge of customers' processes and project management capability to deliver market-leading solutions for customers.

Advanced Refractories Revenue	**2017 (£m)**	**2016 (£m)**	**Change (%)**	**Underlying change**
Americas	152.8	132.6	15.2%	*8.6%*
Europe, Middle East & Africa (EMEA)	236.2	172.2	37.2%	*28.4%*
Asia-Pacific	110.1	94.0	17.1%	*9.4%*
Total Advanced Refractories Revenue	**499.1**	**398.8**	**25.2%**	***17.4%***

Year-on-year, revenue in Advanced Refractories increased 25.2% to £499.1m on a reported basis, whilst underlying revenue increased 17.4%. This outperformance relative to steel volume growth was supported by increased customer interest in our value-creating solutions and the successful launch of new products such as our Supergard^{TM} Tundish line, which is a patented tundish lining for improving steel quality. We also benefited from customers seeking to diversify their supplier base in response to recent consolidation.

We achieved attractive underlying revenue growth in each of our key regions with the Americas up 8.6%, EMEA up 28.4% and Asia-Pacific up 9.4%. The particularly high growth level in EMEA was due to significant progress regaining market share in Europe despite competitive market conditions.

Advanced Refractories was the business unit most impacted by raw material price rises during 2017, with H2 2017 being the period most affected. We are pleased to report that we have made major progress in recovering this cost inflation through higher selling prices. This process of price adjustment will continue into 2018, until realised cost increases have been fully recovered.

Digital Services

Digital Services offers digitalised solutions to our customers to make their underlying processes more efficient and reliable. Digital Services complements existing product lines by providing new services to our existing customers. Digital Services focuses on the capture and interpretation of key manufacturing data, complementing Vesuvius' strong presence and expertise in molten metal engineering to create new technologies and integrate them into expert process management systems.

Digital Services Revenue	2017 (£m)	2016 (£m)	Change (%)	Underlying change
Americas	26.8	21.8	22.9%	*11.9%*
Europe, Middle East & Africa (EMEA)	14.5	14.1	2.8%	*-3.9%*
Asia-Pacific	2.4	1.1	142.6%	*140.0%*
Total Digital Services Revenue	**43.7**	**36.9**	**18.4%**	***8.9%***

Digital Services generated revenues of £43.7m, an increase of 18.4% year-on-year on a reported basis. On an underlying basis, revenues increased 9.0%. This reflects market share gains in North America and India, and we also experienced significant success in South America as a result of increased penetration of our sensors and probes business.

In our Process Metrix lasers business, we had a record year of sales with shipments up over 50% versus 2016. Avemis, our mould level sensors and continuous temperature measurement products, also had a strong year with revenues up c.30% year on year.

Foundry Division

Vesuvius' Foundry division, trading as Foseco, is a world leader in the supply of consumable products, solutions and associated services related to the foundry industry. The foundry process is highly sequential and is critically dependent on consistency of product quality and productivity optimisation. The Foundry division's products, solutions and use of advanced computer simulation techniques allow foundries to reduce defects and hence reduce labour-intensive fettling and machining, minimise metal usage requirements, influence the metal solidification process and automate moulding and casting, thus reducing cost, energy usage and mould size. The conditioning of molten metal, the nature of the mould used and, especially, the design of the way metal flows into the mould are key parameters in a foundry, determining both the quality of the finished castings and the labour, energy and metal usage efficiency of the foundry. Vesuvius' products and associated services to foundries improve these parameters.

Foundry Division	2017 (£m)	2016 (£m)	Change (%)	Underlying change
Foundry Revenue	535.2	459.4	16.5%	*9.3%*
Foundry Trading Profit	65.1	54.1	20.3%	*12.0%*
Foundry Return on Sales	***12.2%***	***11.8%***	**+40bps**	***+30bps***

There was positive momentum in the majority of Foundry end markets during 2017, with particular strength in heavy trucks and a recovery in mining equipment as well as construction and agricultural equipment after several years of weakness.

Revenue in the Foundry division increased 16.5% to £535.2m in 2017 on a reported basis, whilst underlying revenue increased by 9.3%. Trading profit improved by 12.0% on an underlying basis. Our 2017 performance benefited materially from our commitment to technological leadership through investment in R&D, which resulted in 13 new product launches during the year. These new product launches supported revenue growth across Foundry's highest margin product lines – feeding systems, filters and coatings. Trading Profit also benefited from the ongoing organisational restructuring in North America, which is focused on delivering a flatter, leaner structure.

Foundry Revenue	2017 (£m)	2016 (£m)	Change (%)	Underlying change
Americas	111.2	92.5	20.2%	*11.2%*
Europe, Middle East & Africa (EMEA)	238.9	205.8	16.1%	*8.8%*
Asia-Pacific	185.1	161.1	14.9%	*8.8%*
Total Foundry Revenue	**535.2**	**459.4**	**16.5%**	***9.3%***

In the Americas, underlying revenue increased 11.2% despite weakness in the light vehicle and rail sectors in North America and the closure of a number of customer plants in the steel foundry sector. This was offset by growth in heavy trucks as well as increases in iron casting output related to construction and agricultural equipment. We were successful in gaining market share as a result of new product introductions and we experienced significant success in Brazil growing our feeding systems, filters and non-ferrous metal treatment revenues.

Underlying revenue in EMEA increased 8.8% year-on-year as a result of growth across the majority of foundry end markets with particular strength in heavy trucks as well as high growth in the non-ferrous market. We were also successful in increasing our penetration due to new product introductions.

In Asia-Pacific, underlying revenue increased by 8.8%, with sales increasing in all major markets. Our revenues in China were up c.13%, due to significant growth in heavy truck production as well as our success developing a strong local sales force and marketing organisation. In India, our revenues were up c.5%, despite our prioritisation of working capital management and customer credit risk, mainly due to growth in light vehicle production as well as strength in construction and agricultural equipment and mining equipment.

Financial Review

The following review considers a number of our financial KPIs and sets out other relevant financial information.

Basis of Preparation

We have continued to adopt a columnar presentation format for our accounts separately identifying headline performance results, as we consider that this gives a better view of the underlying results of the ongoing business.

Dividend

The Board has recommended a final dividend of 12.5 pence per share to be paid on 25 May 2018 to shareholders on the register at 13 April 2018. When added to the 2017 interim dividend of 5.50 pence per share paid on 17 September 2017, this represents a full-year dividend of 18.0 pence per share.

It remains the Board's intention to deliver long-term dividend growth, provided this is supported by underlying earnings, cash flows, capital expenditure requirements and the prevailing market outlook.

Key Performance Indicators

We have identified a number of KPIs against which we have consistently reported since demerger. As with prior years, we measure our results 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 businesses acquired in both the current year and prior years

Therefore, for 2017, we have:

- Retranslated 2016 results at the FX rates used in calculating the 2017 results
- Removed the results of our mould and tundish flux business in Brazil, Mastercodi, which was acquired in 2016

KPI: R&D Spend

We believe that our market-leading product technology and services deliver fundamental value to our customers and that the primary mechanism to deliver that value is to invest significantly in research and development. In 2017, we spent £33.2m (2016: £28.6m) on R&D activities, which represents 2.0% of our revenue (2016: 2.0%).

KPI: Underlying revenue growth

Reported revenue for 2016 was £1,401.4m, which after FX translation effects and removing the impact of acquired businesses, equates to £1,492.0m on an underlying basis. The reported revenue in 2017 of £1,683.9m, when adjusted for acquisitions made, is £1,678.4m on an underlying basis, which is an increase of 12.5% year-on-year. The growth has been as a result of stronger end-market demand and business gains during the period, particularly in EMEA and NAFTA.

KPI: Trading profit and return on sales

We continue to measure underlying trading profit of the Group as well as trading profit as a percentage of sales, which we refer to as our Return on Sales or RoS.

Trading profit of £165.5m increased by 16.1% on an underlying basis versus last year whilst RoS on a constant currency basis was 9.8%, a 30bps improvement over 2016. The improved trading profit is due in part to the higher revenue, along with the ongoing delivery of benefits from the restructuring programme.

The Steel Division recorded RoS of 8.7% this year, an increase from 8.4% in 2016, despite the additional costs incurred in importing non-European based product into EMEA as well as the substantial increases in raw material costs experienced in Advanced Refractories. Foundry reported a 12.2% RoS, another improvement over the prior year (2016: 11.8%) with production efficiency gains and operating expense reductions offsetting raw material cost increases that started to impact results in the second half.

KPI: Headline PBT and Headline EPS

Headline profit before tax (PBT) and headline earnings per share (EPS) are used to measure the underlying financial performance of the Group. The main difference between trading profit and PBT is net finance costs.

Net finance costs in 2017 of £13.9m were £0.6m below 2016. The reduction in finance costs was largely due to lower net debt levels that triggered a more favourable interest cost on the Company's revolving credit facility. During the year this facility was successfully extended for a further two years to 2022 and $110m of the US Private Placement programme ('USPP') was redeemed and replaced by a Euro-denominated USPP of the same value but on more favourable terms.

Our Headline PBT was £152.9m, 27.6% higher than last year on a reported basis. Including amortisation (£19.5m) and the restructuring charges (£36.3m), our PBT of £97.1m was 22.3% higher than 2016. Headline EPS at 40.7p is 33.9% higher than 2016.

KPI: Free cash flow and working capital

Fundamental to ensuring that we have adequate capital to execute our corporate strategy is converting our profits into cash, partly through strict management of our working capital. Free cash flow from continuing operations was £93.1m for the year, which is all the more pleasing against a backdrop of revenue growth that inevitably requires some cash investment in working capital. Free cash flow from continuing operations in 2017 was £31.7m higher than last year on a reported basis because of the better working capital performance partially offset by higher cash restructuring costs. Our cash conversion in 2017 improved to 104% (2016: 94%).

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 2017 was 24.9% (2016: 26.6%), measured on a 12-month moving average basis. In absolute terms on a constant currency basis, trade working capital increased by £12.2m, well below the increase in sales and with an improved inventory and creditor position leading to an improvement as a percentage of sales.

£m	**2017 Trading profit**			2016 Trading profit				% change	
	As reported	Acquisition /Disposals	Underlying	As reported	Currency	Acquisition /Disposals	Underlying	Reported	Underlying
Steel	**100.4**	**(0.2)**	**100.2**	79.2	5.1	–	84.3	26.8%	18.9%
Foundry	**65.1**	**–**	**65.1**	54.1	4.0	–	58.1	20.3%	12.0%
Total Group	**165.5**	**(0.2)**	**165.3**	133.3	9.1	–	142.4	24.2%	16.1%

Operating cash flow and cash conversion

	2017 £m	2016 £m
Cash generated from continuing operations	**176.6**	130.2
Add: Outflows relating to restructuring charges	**27.3**	16.8
Add: Net retirement benefit obligations	**4.8**	7.7
Less: Capital expenditure	**(39.0)**	(31.3)
Add: Proceeds from the sale of property, plant and equipment	**1.8**	1.6
Operating cash flow	**171.5**	125.0
Trading profit	**165.5**	133.3
Cash conversion	**104%**	94%

KPI: Return on net assets (RONA)

RONA is our principal measure of capital efficiency. We do not exclude the results of businesses acquired and disposed from this calculation, as capital efficiency is an important consideration in our portfolio decisions. It is calculated by dividing trading profit plus our share of profits from joint ventures by our average operating assets (property, plant and equipment, and trade working capital).

As with most of our KPIs, we measure this on a 12-month moving average basis at constant currency to ensure that we focus on sustainable underlying improvements. Our RONA for 2017 was 24.2% (2016: 21.1%).

KPI: Interest cover and net debt

As at 31 December 2017, the Group had committed borrowing facilities of £563.4m (2016: £576.9m), of which £153.7m was undrawn (2016: £158.3m). The revolving credit facility term was extended to 2022 and $110m of the USPP was redeemed and replaced with a Euro-denominated USPP at better rates.

Net debt at 31 December 2017 was £274.3m, a £46.0m decrease from 2016, as a result of our good cash generation. The main drivers of the decrease were the impact of strong cash conversion partially offset by higher restructuring costs and tax payments.

The Group's debt facilities have two financial covenants: the ratios of net debt to EBITDA (maximum three times limit) and EBITDA to interest (minimum four times limit). These ratios are monitored regularly to ensure that the Group has sufficient financing available to run the business and fund future growth. At the end of 2017, the net debt to EBITDA ratio was 1.3x, an improvement over last year (2016: 1.8x) and EBITDA to interest was 15.8x (2016: 13.4x).

Financial Risk Factors

The Group undertakes regular risk reviews and as, a minimum, a full risk assessment process twice a year. As in previous years this included input from the Board in both the assessment of risk and the proposed mitigation. As referred to in our Principal Risks and Uncertainties and Viability Statement, we consider the main financial risks faced by the Group as being demand volatility and the impact of financial uncertainty, leading to reduced revenue and profit as well as potential customer default, and a lack of liquidity, brought on by market volatility. Important but lesser risk exists in interest rate movements and cost inflation but neither is expected to have a material impact on the business after considering the controls we have in place.

Our key mitigation of demand volatility is to manage the Group's exposure through balancing our portfolio of business geographically and by end-market and to invest in product innovation. We do so through targeted capital investment in new and growing businesses and a combination of capital and human resource in emerging markets. The second main financial risk of a lack of liquidity is mitigated by financing using both the bank and private placement markets. The Group also seeks to avoid a concentration of debt maturities in any one period to spread its refinancing risk. The Group's undrawn committed bank facilities at 31 December 2017 were £153.7m. Counterparty risk and customer default are mitigated by our relatively widespread customer base – with no customer being greater than 10% of revenue – and credit control procedures.

Restructuring

We continued to make good progress in implementing our previously announced restructuring programme, mainly in Flow Control, with £16.2m savings delivered in 2017, which was ahead of expectations. The total savings delivered since launching the programme are now £43.2m. In 2017, we reported £36.3m of restructuring costs (2016: £28.5m) that were predominantly made up of redundancy and plant closure costs, along with related consulting fees. These costs included the final costs related to the previously announced restructuring plan as well as £4.8m of costs related to a completely new restructuring plan launched at the end of 2017, targeting the Foundry Division in Europe and NAFTA, the Advanced Refractories Business Unit in Europe, and Group corporate functions. The cash costs in 2017 were £27.3m (2016: £16.8m). We are carrying a restructuring provision forward into 2018 of £22.9m.

Taxation

A key measure of tax performance is the effective tax rate, which the Group calculates 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 (2017: £151.6m, 2016: £118.8m). The Group's effective tax rate, based on the income tax costs associated with headline performance of £36.4m (2016: £31.4m), was 24.0% in 2017 (2016: 26.4%). This was lower than expected due largely to better profit performance in countries where we had tax losses, the impact of the weakening of the peso on our Mexican tax position and the release of provisions due to favourable tax litigation outcomes.

The Group's effective tax rate is sensitive to changes in the geographic mix of profits and level of profits, and reflects a combination of higher rates in certain jurisdictions such as India, Mexico, Germany and Belgium, nil effective rates in the UK and US due to the availability of unutilised tax losses, and rates that lie somewhere in between.

Other key factors impacting the sustainability of the Group's effective tax rate are set out in Note 10.6 to the Group Financial Statements.

The income tax charge on separately reported items of £18.0m (2016: £5.0m credit) comprises £6.0m non-cash deferred tax movements relating to the amortisation of a deferred tax liability arising from the 2008 acquisition of Foseco plc (2016: £3.7m), £4.3m tax credits relating to restructuring charges (2016: £3.8m), and a net reduction in the deferred tax asset previously recognised in respect of US tax losses and certain other temporary differences of £28.3m (2016: £2.1m) largely caused by US tax reform enacted in late December 2017 in the form of the US Tax Cuts and Jobs Act ('TCJA'). A combination of the reduction in the US Federal tax rate from 35% to 21%, the repatriation tolling charge and other provisions of TCJA caused a £25.7m reduction in our US deferred tax asset which, together with other normal movements and foreign exchange revaluation, reduced from £65.9m at the end of 2016 to £32.6m at the end of 2017. However, this write-down did not impact our Headline earnings after tax, as the change in the asset was reflected through separately reported items.

Based on our initial interpretation, the Base Erosion and Anti-Abuse Tax provisions introduced by the Act may increase the Group's effective tax rate by approximately 0.7% in 2018 and 1.2% in 2019.

We expect the Group's effective tax rate from 2018 onwards to be between 27% and 28%, including the expected adverse impact of US tax reform, reflecting the tax benefit of initiatives being taken.

The net income tax charge recognised directly in the Group Statement of Comprehensive Income of £3.1m (2016: £0.7m) comprises a £2.4m charge (2016: £0.7m charge) in respect of deferred tax on pension obligations and £0.7m (2016: £nil) UK tax in respect of foreign exchange differences arising on hedged positions.

Capital expenditure

Capital expenditure in 2017 of £44.3m (2016: £35.2m) comprised £34.0m in the Steel division (2016: £23.7m) and £10.3m in the Foundry division (2016: £11.5m). Capital expenditure on revenue-generating customer installation assets, primarily in Steel, has been increased to £10.7m (2016: £6.5m).

Pensions

The Group has a limited number of historical defined benefit plans mainly in the UK, US, Germany and Belgium. The main plans in the UK and US are largely closed to further benefit accruals and 56.5% of the liabilities in the UK have already been insured. The total net deficit attributed to these defined benefit obligations at the end of December 2017 was £16.5m (2016: £29.4m), representing an improvement of £12.9m. The key movements giving rise to this were increases of £1.8m to the deficit arising out of changes to actuarial assumptions (attributable to increasing discount rates; updated mortality assumptions and pension membership data) and additional accrual and administrative expenditure paid for the year (£6.8m); offset by reductions to the deficit of £10.2m from asset returns and cash contributions of £11.6m.

The majority of the ongoing pension plans are defined contribution plans, where our only obligation is to make contributions, with no further commitments on the level of post-retirement benefits. During 2017, cash contributions of £12.6m (2016: £10.8m) were made into the defined contribution plans and charged to trading profit.

Principal Risks and Uncertainties

Risk Management

The Board is responsible for setting the Group's risk appetite and ensuring that appropriate risk management systems are in place. The Group undertakes a continuous process of risk identification and review, which includes both a top-down and bottom-up process, independently gathering views on risk from each business unit, and from operational, functional and senior executive management, and the Board of Directors. Building on the process conducted in 2016, where a clean sheet review of the Group's principal risks was undertaken, the Group's assessment of principal risks has been reviewed and considered against a further group of emerging risks and uncertainties identified through our 2017 Board process.

Risk Mitigation

The risks identified are actively managed in order to mitigate exposure. Senior management 'owners' are identified for each principal risk to manage the mitigations of that specific risk and contribute to the analysis of its likelihood and materiality. This is reported to the Board. The risks are analysed in the context of our business structure which gives protection against a number of principal risks we face with diversified currencies, a widespread customer base, local production matching the diversity of our markets and intensive training of our employees. Additionally, we seek to mitigate risk through contractual measures. Where cost-effective, the risk is transferred to insurers.

Board Monitoring

The Board defines the Group's risk appetite, considering the nature and extent of the principal risks that the Group should take. The Board's oversight of principal risks also involves a Board review of the processes by which the Group manages those risks, establishing a clear understanding at Board level of the individuals and groups in the business formally responsible for the management of specific risks.

Principal Risks

The risks identified are those the Board considers to be the most relevant to the Group in relation to their potential impact on the achievement of its strategic objectives. All of the risks 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. These risks are not the only ones that the Group will face. Some risks are not yet known and some currently not deemed to be material could become so.

Changes to Risk in 2017

The Board believes that there has been no material change to the Group's principal risks and uncertainties during the year. However, the Board reflected on the implications of certain emerging 'macro' trends during the year. These included the increase in automation in manufacturing as a competitive disruption and the potential for negative implications for the business from the Brexit process, the outcome of which remains unclear, but which is not expected to be material in the context of the Group. The Board also discussed the risks that could arise from a failure by the Group to foster the correct culture for success. In addition to these wider trends, the Board focused on identified risks where issues had arisen during the year – the interruption of supply of quality raw materials, the related challenges of instigating price increases as input costs go up, the more protectionist approach being implemented in certain major markets, and the potential for financial instability and worldwide recession. Finally, the Board continued its oversight of cyber issues as an emerging risk. The Board's view on each of these issues was integrated into management discussions on risk and factored into the approach the Group takes to successful mitigation. The risks and uncertainties are summarised below:

Risk and context	Potential impact	Mitigation
Demand volatility *Vesuvius' expectations of future trading are based upon an assessment of end-market conditions, which are subject to some uncertainty. Vesuvius' end-markets are historically somewhat cyclical in nature.*	• Unplanned drop in demand and/or revenue due to reduced production • Margin reduction • Customer failure leading to increased bad debts • Loss of market share to competition • Cost pressures at customers leading to use of cheaper solutions	• Geographic diversification of revenues • 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 & Globalisation *Local, national or regional political requirements conflict with the quality and efficiency delivered by scale and standardisation.*	• 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 or taxation • 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
Financial uncertainty *Fluctuations in the value of currencies, interest rates, or rates of inflation may adversely impact the Group's financial position or results of operations. Availability of sufficient capital is critical to allow Vesuvius to deliver its business plan.*	• Customer and other counterparty default • Restricted access to capital hampering ability to fund growth • Reduction in earnings from increased interest charges • Reduced market liquidity and increased cost of capital	• Capital allocation discipline • Capital structuring, including fixed rate borrowing and matching of debt to cash flow earnings currency • Alignment of cost structure with revenue where possible • Effective planning of the debt refinancing profile to avoid exposure to short-term market disruptions
Complex and changing regulatory environment *Vesuvius is subject to worldwide legal and regulatory regimes, some of which impose extra-jurisdictional obligations on companies and are continually updated.*	• Revenue reduction from reduced end-market access • Disruption of supply chain and route to market • Increased internal control processes • Increased frequency of regulatory investigations • Reputational damage	• Globally disseminated Code of Conduct highlighting ethical approach to business • Worldwide confidential Speak-up procedure • Compliance programmes and training across the Group • Independent Internal Audit function • Experienced Internal Legal function
Business interruption *The Group is subject to operational risks including natural catastrophe, terrorist action, fire / explosion, environmental regulation,*	• Loss of a major plant temporarily or permanently impairing our ability to serve our customers • Damage to or restriction in ability to use assets • Denial of access to critical systems of control processes	• Diversified manufacturing footprint. • Disaster recovery planning • Business continuity planning with strategic maintenance of excess capacity • Physical and IT control systems security, access and training

Risk and context	Potential impact	Mitigation
industrial actions, supply chain issues and cyber risk.	• Disruption of manufacturing processes • Inability to source critical raw materials	• 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
Failure to secure Innovation *Not maintaining and/or developing the necessary sustainable differentiation in products, systems and services by driving innovative solutions. Competitive advantage derived from proprietary intellectual property is lost through inadequate protection.*	• 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 across the Group, deployed via our R&D centres • Stage gate process from innovation to commercialisation to foster innovation and increase alignment with strategy • Programmes of Manufacturing and Process Excellence • Quality programme, focused on quality and consistency • Stringent intellectual property registration and defence
Attracting talent and performance management *Failure to attract sufficient new talent to the Group based on industry perception and competition. Failure to maintain and develop a talent pipeline and internal succession options for middle and senior management positions.*	• Organisational culture of high performance is not achieved • Staff turnover in growing countries 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 elucidated values to underpin business culture
Quality, Health & Safety *Vesuvius works in highly challenging manufacturing environments, providing products, systems and services that are mission critical and for which reliability is paramount.*	• Injury to staff and contractors • Product or application failures lead to adverse financial impact or loss of reputation as technology leader • Health & safety breach, manufacturing downtime or damage to infrastructure from incident at customer plant • Customer claims from product quality issues	• Active safety programmes, with ongoing wide-ranging monitoring and safety training • 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 department controlling third party contracting

Group Income Statement

For the year ended 31 December 2017

	Notes	2017 [(1)] Headline performance £m	2017 [(1)] Separately reported items £m	2017 Total £m	2016 [(1)] Headline performance £m	2016 [(1)] Separately reported items £m	2016 Total £m
Continuing operations							
Revenue	2	**1,683.9**	**-**	**1,683.9**	1,401.4	-	1,401.4
Manufacturing costs		**(1,219.8)**	**-**	**(1,219.8)**	(1,018.6)	-	(1,018.6)
Administration, selling and distribution costs		**(298.6)**	**-**	**(298.6)**	(249.5)	-	(249.5)
Trading profit	2	**165.5**	**-**	**165.5**	133.3	-	133.3
Amortisation of acquired intangible assets		**-**	**(19.5)**	**(19.5)**	-	(17.1)	(17.1)
Restructuring charges	3	**-**	**(36.3)**	**(36.3)**	-	(28.5)	(28.5)
Gain on employee benefit plan	10	**-**	**-**	**-**	-	5.2	5.2
Operating profit/(loss)		**165.5**	**(55.8)**	**109.7**	133.3	(40.4)	92.9
Finance expense		**(17.5)**	**-**	**(17.5)**	(17.4)	-	(17.4)
Finance income		**3.6**	**-**	**3.6**	2.9	-	2.9
Net finance costs	4	**(13.9)**	**-**	**(13.9)**	(14.5)	-	(14.5)
Share of post-tax income of joint ventures		**1.3**	**-**	**1.3**	1.0	-	1.0
Profit/(loss) before tax		**152.9**	**(55.8)**	**97.1**	119.8	(40.4)	79.4
Income tax (charge)/credits	5	**(36.4)**	**(18.0)**	**(54.4)**	(31.4)	5.0	(26.4)
Profit/(loss) from:							
Continuing operations		**116.5**	**(73.8)**	**42.7**	88.4	(35.4)	53.0
Discontinued operations	13	**-**	**1.7**	**1.7**	-	10.2	10.2
Profit/(loss)		**116.5**	**(72.1)**	**44.4**	88.4	(25.2)	63.2
Profit/(loss) attributable to:							
Owners of the parent		**110.1**	**(72.1)**	**38.0**	82.1	(25.2)	56.9
Non-controlling interests		**6.4**	**-**	**6.4**	6.3	-	6.3
Profit/(loss)		**116.5**	**(72.1)**	**44.4**	88.4	(25.2)	63.2
Earnings per share — pence	6						
Continuing operations — basic				**13.4**			17.3
— diluted				**13.4**			17.3
Total operations — basic				**14.1**			21.1
— diluted				**14.0**			21.0

(1) Headline performance is defined in Note 16.1 and separately reported items are defined in Note 1.5.

Group Statement of Comprehensive Income

For the year ended 31 December 2017

	2017 **£m**	2016 £m
Profit	**44.4**	63.2
Items that will not subsequently be reclassified to income statement:		
Remeasurement of defined benefit assets/liabilities	**8.4**	9.5
Income tax relating to items not reclassified	**(2.4)**	(0.7)
Items that may subsequently be reclassified to income statement:		
Exchange differences on translation of the net assets of foreign operations	**(38.3)**	207.7
Exchange differences on translation of net investment hedges	**9.8**	(41.6)
Income tax relating to items that may be reclassified	**(0.7)**	-
Other comprehensive (loss)/income, net of income tax	**(23.2)**	174.9
Total comprehensive income	**21.2**	238.1
Total comprehensive income attributable to:		
Owners of the parent	**15.3**	226.2
Non-controlling interests	**5.9**	11.9
Total comprehensive income	**21.2**	238.1
Total comprehensive income attributable to owners of the parent arises from:		
Continuing operations	**13.6**	216.0
Discontinued operations	**1.7**	10.2
Total comprehensive income attributable to owners of the parent	**15.3**	226.2

Group Statement of Cash Flows

For the year ended 31 December 2017

	Notes	2017 £m	2016 £m
Cash flows from operating activities			
Cash generated from operations	9	**175.8**	130.2
Interest paid		**(15.6)**	(14.5)
Interest received		**3.5**	2.4
Net interest paid		**(12.1)**	(12.1)
Income taxes paid		**(38.2)**	(34.2)
Net cash inflow from operating activities		**125.5**	83.9
Cash flows from investing activities			
Capital expenditure		**(39.0)**	(31.3)
Proceeds from the sale of property, plant and equipment		**1.8**	1.6
Acquisition of subsidiaries and joint ventures, net of cash acquired		**-**	(7.7)
Dividends received from joint ventures		**1.7**	2.0
Net cash outflow from investing activities		**(35.5)**	(35.4)
Net cash inflow before financing activities		**90.0**	48.5
Cash flows from financing activities			
Proceeds from borrowings	8	**103.5**	(26.3)
Repayment of borrowings	8	**(92.2)**	25.7
Borrowing facility arrangement costs	8	**(1.0)**	-
Settlement of forward foreign exchange contracts		**(10.4)**	20.6
Dividends paid to equity shareholders	7	**(45.6)**	(43.9)
Dividends paid to non-controlling shareholders		**(2.5)**	(2.5)
Net cash outflow from financing activities		**(48.2)**	(25.0)
Net increase in cash and cash equivalents	8	**41.8**	23.5
Cash and cash equivalents at 1 January		**101.0**	67.0
Effect of exchange rate fluctuations on cash and cash equivalents	8	**(2.8)**	10.5
Cash and cash equivalents at 31 December		**140.0**	101.0
Free cash flow from continuing operations (Note 16.10)			
Net cash inflow from operating activities		**126.3**	83.9
Net retirement benefit obligations		**4.8**	7.7
Capital expenditure		**(39.0)**	(31.3)
Proceeds from the sale of property, plant and equipment		**1.8**	1.6
Dividends received from joint ventures		**1.7**	2.0
Dividends paid to non-controlling shareholders		**(2.5)**	(2.5)
Free cash flow from continuing operations	16	**93.1**	61.4
Discontinued operations		**(0.8)**	-
Free cash flow	16	**92.3**	61.4

Group Balance Sheet

As at 31 December 2017

	Notes	2017 £m	2016* £m
Assets			
Property, plant and equipment		**311.3**	323.6
Intangible assets		**743.0**	781.9
Employee benefits - net surpluses	10	**92.4**	78.8
Interests in joint ventures and associates		**17.5**	18.0
Investments		**1.4**	2.6
Income tax recoverable		**0.4**	1.0
Deferred tax assets		**61.0**	92.1
Other receivables		**30.9**	30.4
Derivative financial instruments	15	**0.2**	-
Total non-current assets		**1,258.1**	1,328.4
Cash and short-term deposits	8	**161.9**	144.4
Inventories		**222.8**	207.7
Trade and other receivables		**422.2**	394.1
Income tax recoverable		**5.2**	3.9
Derivative financial instruments	15	**0.1**	-
Total current assets		**812.2**	750.1
Total assets		**2,070.3**	2,078.5
Equity			
Issued share capital		**27.8**	27.8
Retained earnings		**2,370.3**	2,370.0
Other reserves		**(1,369.4)**	(1,341.4)
Equity attributable to the owners of the parent		**1,028.7**	1,056.4
Non-controlling interests		**45.4**	42.1
Total equity		**1,074.1**	1,098.5
Liabilities			
Interest-bearing borrowings	8	**410.5**	330.8
Employee benefits - net liabilities	10	**108.9**	108.2
Other payables		**17.3**	16.5
Provisions	14	**34.4**	39.9
Deferred tax liabilities		**42.7**	48.6
Total non-current liabilities		**613.8**	544.0
Interest-bearing borrowings	8	**25.7**	133.9
Trade and other payables		**292.6**	239.7
Income tax payable		**34.3**	34.9
Provisions	14	**29.8**	26.6
Derivative financial instruments	15	**-**	0.9
Total current liabilities		**382.4**	436.0
Total liabilities		**996.2**	980.0
Total equity and liabilities		**2,070.3**	2,078.5

*Restated as a result of a change in accounting policy and the recording of a provision for which a related asset exists (Note 14).

Group Statement of Changes in Equity

For the year ended 31 December 2017

	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 2016	**27.8**	**(1,501.9)**	**2,346.5**	**872.4**	**32.7**	**905.1**
Profit	**-**	**-**	**56.9**	**56.9**	**6.3**	**63.2**
Remeasurement of defined benefit liabilities/assets	-	-	9.5	9.5	-	9.5
Income tax relating to items not reclassified	-	-	(0.7)	(0.7)	-	(0.7)
Exchange differences on translation of the net assets of foreign operations	-	202.1	-	202.1	5.6	207.7
Exchange differences on translation of net investment hedges	-	(41.6)	-	(41.6)	-	(41.6)
Other comprehensive income, net of income tax	**-**	**160.5**	**8.8**	**169.3**	**5.6**	**174.9**
Total comprehensive income	**-**	**160.5**	**65.7**	**226.2**	**11.9**	**238.1**
Recognition of share-based payments	-	-	1.7	1.7	-	1.7
Dividends paid (Note 7)	-	-	(43.9)	(43.9)	(2.5)	(46.4)
Total transactions with owners	**-**	**-**	**(42.2)**	**(42.2)**	**(2.5)**	**(44.7)**
As at 1 January 2017	**27.8**	**(1,341.4)**	**2,370.0**	**1,056.4**	**42.1**	**1,098.5**
Profit	**-**	**-**	**38.0**	**38.0**	**6.4**	**44.4**
Remeasurement of defined benefit liabilities/assets	-	-	8.4	8.4	-	8.4
Income tax relating to items not reclassified	-	-	(2.4)	(2.4)	-	(2.4)
Exchange differences on translation of the net assets of foreign operations	-	(37.8)	-	(37.8)	(0.5)	(38.3)
Exchange differences on translation of net investment hedges		9.8	-	9.8	-	9.8
Income tax relating to items that may be reclassified	-	-	(0.7)	(0.7)	-	(0.7)
Other comprehensive income/(loss), net of income tax	**-**	(28.0)	5.3	(22.7)	(0.5)	(23.2)
Total comprehensive income (loss)	**-**	**(28.0)**	**43.3**	**15.3**	**5.9**	**21.2**
Recognition of share-based payments	-	-	2.6	2.6	-	2.6
Dividends paid (Note 7)	-	-	(45.6)	(45.6)	(2.6)	(48.2)
Total transactions with owners	**-**	**-**	**(43.0)**	**(43.0)**	**(2.6)**	**(45.6)**
As at 31 December 2017	**27.8**	**(1,369.4)**	**2,370.3**	**1,028.7**	**45.4**	**1,074.1**

Notes to the Financial Statements (continued)

1 Basis of preparation

1.1 Basis of accounting

The Group Financial Statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union and with the Companies Act 2006 applicable to companies reporting under IFRS. The financial statements have been prepared under the historical cost convention, with the exception of defined benefit pension plans, certain provisions, available-for-sale investments and derivative financial instruments.

1.2 Basis of consolidation

The Group Financial Statements of the Group 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.

1.3 Going concern

The Directors have prepared cash flow forecasts for the Group for a period in excess of 12 months from the date of approval of the 2017 financial statements. These forecasts reflect an assessment of current and future end-market conditions and their impact on the Group's future trading performance. 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 accounts. Accordingly, they continue to adopt a going concern basis in preparing the financial statements of the Group and the Company.

Notes to the Financial Statements (continued)

1.4 Functional and presentation 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"

IAS 1 Presentation of Financial Statements encourages the disclosure of additional line items and the reordering of items presented on the face of the income statement when appropriate for a proper understanding of the entity's financial performance. The Company has adopted a columnar presentation for its Group Income Statement, to separately identify headline performance results (as defined in Note 16), as the Directors consider that this gives a better view of the underlying results of the ongoing business. As part of this presentation format, the Company 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 both in a better understanding of the financial performance achieved and in making projections of future results.

Both materiality and the nature and function 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, initial recognition and subsequent increase, decrease and amortisation of US deferred tax assets, together with items always reported separately, 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 exceptional items and items reported separately. 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. Restructuring charges are excluded from the trading results of the Group due to the material nature of these non-recurring transformational initiatives. 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.

1.6 New and revised IFRS

Certain new accounting standards and interpretations have been published that are not mandatory for 31 December 2017 reporting periods and have not been early adopted by the Group. The Group's assessment of the impact of these new standards and interpretations is set out below. Other new or amended standards or interpretations are not expected to have a significant impact on the Group Financial Statements.

IFRS 9 Financial Instruments

IFRS 9 Financial Instruments (effective from 1 January 2018, for the year ending 2018) addresses the classification, measurement and derecognition of financial instruments, introduces new rules for hedge accounting and a new impairment model for financial assets. It replaces IAS 39 Financial Instruments guidance and comprehensive updates have been made to IFRS 7 Financial Instrument: Disclosure and IAS 32 Financial Instruments: Presentation. The Group will apply IFRS 9 and the updated IFRS 7 disclosure requirements from their effective date.

The impact assessment performed by the Group included a review of the classification and measurement of financial instruments; the impairment of financial assets and the Group hedging policy which resulted in the following conclusions:

- The Group reviewed the classification and measurement of each of its financial instruments. Although, the classification of instruments is altered under IFRS 9, this does not result in any changes to the measurement approach apart from the impairment of trade receivables which is addressed below;
- The new impairment model for financial assets requires the recognition of impairment provisions based on expected credit losses ("ECL") rather than only incurred credit losses as is the case under IAS 39. The Group will apply the simplified approach to its trade receivables as per the scope exception in IFRS 9 in which all loss allowances for trade receivables will be measured at initial recognition and throughout its life at an amount equal to lifetime ECL. This is consistent with the nature of the Group's trade receivables as they do not include

a significant financing component. Based on the assessments undertaken to date, the Group does not expect a material movement in the loss allowance for trade debtors.

- The new hedge accounting rules will align the accounting for hedging instruments more closely with the Group's risk management practices. The Group has confirmed that its current net investment hedge relationship will qualify as a continuing hedge upon the adoption of IFRS 9.

Based on our assessment of the adoption of IFRS 9, the Group does not believe there will be a material impact on its Group Financial Statements. From 1 January 2018 onwards, the Group will amend its financial instruments and hedging accounting policies to reflect IFRS 9 terminology and prepare the appropriate disclosures regarding the classification and measurement of financial instruments, impairment of financial assets and hedging.

IFRS 15 Revenue from Contracts with Customers

IFRS 15 Revenue from Contracts with Customers (effective after 1 January 2018, for the year ending 2018) establishes a comprehensive framework for determining whether, how much and when revenue is recognised. It replaces existing revenue recognition guidance, including IAS 18 Revenue, IAS 11 Construction Contracts and IFRIC 13 Customer Loyalty Programmes. The Group will apply IFRS 15 from its effective date.

The impact assessment performed by the Group included a review of revenue streams and customer contracts to identify distinct performance obligations and the appropriate method for allocating the transaction price. Based on our assessment of the adoption of IFRS 15, the Group does not believe there will be a material impact on its Group Financial Statements. During 2018, the Group will revise the revenue recognition policy to reflect IFRS 15 terminology, prepare the additional disclosures for the Group Financial Statements and continue to review contracts across all Segments. The Group will continue to disaggregate revenue over Steel and Foundry in the Segmental Analysis note (Note 2).

IFRS 16 Leases

IFRS 16 Leases (effective from 1 January 2019, for the year ending 2019), replaces the existing guidance in IAS 17 Leases. IFRS 16 provides a single lessee accounting model, requiring lessees to recognise assets and liabilities for all leases unless the lease term is 12 months or less or the underlying asset has a low value. The present value of the Group's operating lease payments as defined under the new standard will be shown as lease liabilities on the balance sheet and included in net debt. There are a number of differences between the two definitions; for example, where there is an option to extend the lease, payments for the extension period will be included in the IFRS 16 liability if the Group is reasonably certain that it will exercise the option, but are not included as commitments under IAS 17.

The Group is currently assessing the potential impact on its Group Financial Statements resulting from the application of IFRS 16.

IFRIC 23 Uncertainty over income tax treatments

IFRIC 23 Uncertainty over income tax treatments (effective from 1 January 2019, for the year ending 2019, not yet endorsed), clarifies how to recognise and measure deferred and current income tax assets and liabilities where there is uncertainty over tax treatment under IAS 12. The Group is currently assessing the potential impact on its Group Financial Statements resulting from the application of IFRIC 23.

IFRIC Interpretation – Interest and Penalties on Tax

Previously, the common understanding and interpretation of IAS 12 allowed a company to include in its tax charges, liabilities and provisions any associated delayed settlement interest and penalties. Vesuvius followed this approach. The recent clarification by the IFRS Interpretations Committee (previously the International Financial Reporting Interpretations Committee, IFRIC), however, is that a company should include in its tax charges, liabilities and provisions only items meeting the strict definition of taxes under IAS 12. It confirmed that items not meeting that definition should be reported in accordance with IAS 37. Vesuvius has accordingly changed its accounting policy to include interest and penalties on tax in trade and other payables in accordance with IAS 37. This has resulted in a change to its Group Balance Sheet as at 31 December 2016 to reclassify £7.0m from its liabilities and provisions previously reported as tax to trade

Notes to the Financial Statements (continued)

and other payables. The effect of this change on its 2016 performance statements is immaterial and no restatement is therefore required to be made.

2 Segment information

Operating segments for continuing operations

Operating segments are reported in a manner consistent with the internal reporting provided to the Executive Directors of the Board, who make the key operating decisions and are responsible for allocating resources and assessing performance of the operating segments. Reflecting the Group's management and internal reporting structure, segmental information is presented in respect of the two main business segments: Steel and Foundry. The Steel segment aggregates the Flow Control, Advanced Refractories and Digital Services divisions which are subject to a similar risk profile and return.

Segment revenue represents revenue from external customers (inter-segment revenue is not material). Trading profit includes items directly attributable to a segment as well as those items that can be allocated on a reasonable basis.

2.1 Income statement

	2017		
	Steel £m	Foundry £m	Continuing operations £m
Segment revenue	**1,148.7**	**535.2**	**1,683.9**
Segment EBITDA	**128.9**	**80.3**	**209.2**
Segment depreciation	**(28.5)**	**(15.2)**	**(43.7)**
Segment trading profit	**100.4**	**65.1**	**165.5**
Return on sales margin	*8.7%*	*12.2%*	*9.8%*
Amortisation of acquired intangible assets			**(19.5)**
Restructuring charges			**(36.3)**
Operating profit			**109.7**
Net finance costs			**(13.9)**
Share of post-tax profit of joint ventures			**1.3**
Profit before tax			**97.1**
Capital expenditure additions	**34.0**	**10.3**	**44.3**

Notes to the Financial Statements (continued)

2.1 Income statement (continued)

	2016		
	Steel £m	Foundry £m	Continuing operations £m
Segment revenue	942.0	459.4	1,401.4
Segment EBITDA	107.0	68.6	175.6
Segment depreciation	(27.8)	(14.5)	(42.3)
Segment trading profit	79.2	54.1	133.3
Return on sales margin	*8.4%*	*11.8%*	*9.5%*
Amortisation of acquired intangible assets			(17.1)
Restructuring charges			(28.5)
Gain on employee benefit plan			5.2
Operating profit			92.9
Net finance costs			(14.5)
Share of post-tax profit of joint ventures			1.0
Profit before tax			79.4
Capital expenditure additions	23.7	11.5	35.2

3 Restructuring charges

The 2017 restructuring charges were £36.3m (2016: £28.5m). The Group-wide restructuring programme initiated in 2015 continued, resulting in charges of £36.3m (2016: £28.5m) reflecting redundancy costs of £22.8m (2016: £21.4m), plant closure costs of £0.5m (2016: £4.2m), consultancy fees of £6.8m (2016: £2.0m), an inventory/asset write-off of £5.5m (2016: £0.9m) and travel of £0.7m (2016: £nil).

The net tax credit attributable to the total restructuring charges was £4.3m (2016: £3.8m).

Cash costs of £27.3m (2016: £16.8m) (Note 9) were incurred in the year in respect of the restructuring programme leaving provisions made but unspent of £22.9m (Note 14) as at 31 December 2017 (2016: £18.5m), of which £2.7m (2016: £2.7m) relates to future costs in respect of leases expiring between one and six years.

Notes to the Financial Statements (continued)

4 Net finance costs

Total net finance costs for the period of £13.9m is analysed in the table below.

	2017 £m	2016 £m
Interest payable on borrowings		
Loans, overdrafts and factoring arrangements	**15.9**	15.1
Obligations under finance leases	**0.2**	0.2
Amortisation of capitalised borrowing costs	**0.6**	0.5
Total interest payable on borrowings	**16.7**	15.8
Interest on net retirement benefits obligations	**0.6**	1.3
Adjustments to discounts on provisions and other liabilities	**0.2**	(0.2)
Adjustments to discounts on receivables	**(0.1)**	0.3
Finance income	**(3.5)**	(2.7)
Total net finance costs	**13.9**	14.5

5 Income tax

The Group's effective tax rate, based on the income tax costs associated with headline performance of £36.4m (2016: £31.4m), was 24.0% (2016: 26.4%).

The Group's total income tax costs include a charge of £18.0m (2016: £5.0m credit) relating to separately reported items comprising: a credit of £4.3m (2016: £3.8m credit) in relation to restructuring charges; a credit of £6.0m (2016: £3.7m credit) relating to the amortisation of intangible assets; a charge of £28.3m (2016: £2.1m charge) in respect of the recognition of US temporary differences and a net charge of £nil (2016: £0.4m charge) relating to the gain on employee benefit plan. The net income tax charge reflected in the Group Statement of Comprehensive Income in the year amounted to £3.1m (2016: £0.7m), £2.4m of which related to tax on net actuarial gains and losses on employee benefits plans. In addition, £0.7m (2016: £nil) related to UK tax in respect of foreign exchange differences arising on hedged positions.

The US Tax Cuts and Jobs Act ('TCJA') enacted in the US in December 2017 has had a material impact on the value of the deferred tax asset the Group recognises in the US. It has reduced the asset by $33.1m (£25.7m), of which $31.5m (£24.5m) is charged to the Group Income Statement and $1.6m (£1.2m) is charged to the Group Statement of Comprehensive Income, as it relates to the effect of the change in the US Federal rate of tax on the value of the deferred tax asset on pension deficits recognised in that statement.

Notes to the 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, of £36.3m (2016: £46.7m), being the profit for the year of £42.7m (2016: £53.0m) less non-controlling interests of £6.4m (2016: £6.3m); basic and diluted EPS from total operations are based on the profit attributable to owners of the parent of £38.0m (2016: £56.9m); headline and diluted headline EPS are based upon headline profit from continuing operations attributable to owners of the parent of £110.1m (2016: £82.1m). The table below reconciles these different profit measures.

	2017 £m	2016 £m
Profit attributable to owners of the parent	**36.3**	46.7
Adjustments for separately reported items:		
Amortisation of intangible assets	**19.5**	17.1
Restructuring charges	**36.3**	28.5
Gain on employee benefit plan	**-**	(5.2)
Income tax charge/(credit)	**18.0**	(5.0)
Headline profit attributable to owners of the parent	**110.1**	82.1

6.2 Weighted average number of shares

	2017 millions	2016 millions
For calculating basic and headline EPS	**270.3**	269.9
Adjustment for dilutive potential ordinary shares	**1.3**	0.8
For calculating diluted and diluted headline EPS	**271.6**	270.7

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.

Notes to the Financial Statements (continued)

6.3 Per share amounts

		Continuing operations pence	Discontinued operations pence	2017 total pence	Continuing operations pence	Discontinued operations pence	2016 total pence
Earnings per share	- basic	**13.4**	**0.7**	**14.1**	17.3	3.8	21.1
	- headline	**40.7**			30.4		
	- diluted	**13.4**	**0.6**	**14.0**	17.3	3.7	21.0
	- diluted headline	**40.5**			30.3		

7 Dividends

	2017 £m	2016 £m
Amounts recognised as dividends and paid to equity holders during the period		
Final dividend for the year ended 31 December 2015 of 11.125p per ordinary share	**-**	30.0
Interim dividend for the year ended 31 December 2016 of 5.15p per ordinary share	**-**	13.9
Final dividend for the year ended 31 December 2016 of 11.40p per ordinary share	**30.8**	-
Interim dividend for the year ended 31 December 2017 of 5.50p per ordinary share	**14.8**	-
	45.6	43.9

A final dividend for the year ended 31 December 2016 of £30.8m (2015: £30.0m), equivalent to 11.40 pence (2015: 11.125 pence) per ordinary share, was paid in May 2017 (May 2016) and an interim dividend for the year ended 31 December 2017 of £14.8m (2016: £13.9m), equivalent to 5.50 pence (2016: 5.15 pence) per ordinary share, was paid in September 2017 (September 2016).

A proposed final dividend for the year ended 31 December 2017 of £33.8m, equivalent to 12.5 pence per ordinary share, is subject to approval by shareholders at the Company's Annual General Meeting and has not been included as a liability in these financial statements. If approved by shareholders, the dividend will be paid on 25 May 2018 to ordinary shareholders on the register at 13 April 2018.

Notes to the Financial Statements (continued)

8 Reconciliation of movement in net debt

	Balance as at 1 Jan 2017 £m	Foreign exchange adjustments £m	Borrowing facility costs capitalised £m	Non-cash movements £m	Cash flow £m	Balance as at 31 Dec 2017 £m
Cash and cash equivalents						
Cash at bank and in hand	**144.4**	**(4.5)**	**-**	**-**	**22.0**	**161.9**
Bank overdrafts	**(43.4)**	**1.7**	**-**	**-**	**19.8**	**(21.9)**
	101.0	**2.8**	**-**	**-**	**41.8**	**140.0**
Borrowings, excluding bank overdrafts						
Current	**(91.1)**	**4.1**	**-**	**-**	**82.7**	**(4.3)**
Non-current	**(331.9)**	**12.8**	**-**	**-**	**(93.0)**	**(412.1)**
	(423.0)	**16.9**	**-**	**-**	**(10.3)**	**(416.4)**
Capitalised borrowing costs	**1.7**	**-**	**1.0**	**(0.6)**	**-**	**2.1**
Net debt	**(320.3)**	**14.1**	**1.0**	**(0.6)**	**31.5**	**(274.3)**

In December 2017 the US dollar portion of the US Private Placement ('USPP') debt of $100m matured. This debt was replaced with a Euro-denominated USPP comprising two €50m tranches. These were issued with maturity dates of 2027 and 2029 respectively. Furthermore, an option was exercised to extend the maturity date of the £300m syndicated bank facility from June 2020 to June 2022.

9 Cash generated from operations

	Continuing operations £m	Discontinued operations £m	2017 total £m	Continuing Operations £m	Discontinued Operations £m	2016 total £m
Operating profit	**109.7**	**1.7**	**111.4**	92.9	1.2	94.1
Adjustments for:						
Amortisation of intangible assets	**19.5**	**-**	**19.5**	17.1	-	17.1
Restructuring charges	**36.3**	**-**	**36.3**	28.5	-	28.5
Gains relating to employee benefit plans	**-**	**-**	**-**	(5.2)	-	(5.2)
Depreciation	**43.7**	**-**	**43.7**	42.3	-	42.3
EBITDA (Note 16.12)	**209.2**	**1.7**	**210.9**	175.6	1.2	176.8
Net increase in inventories	**(19.4)**	**-**	**(19.4)**	(8.9)	-	(8.9)
Net increase in trade receivables	**(36.9)**	**-**	**(36.9)**	(18.6)	-	(18.6)
Net increase in trade payables	**44.1**	**-**	**44.1**	14.5	-	14.5
Net decrease/(increase) in other working capital	**11.7**	**(2.5)**	**9.2**	(7.9)	(1.2)	(9.1)
Outflow related to restructuring charges	**(27.3)**	**-**	**(27.3)**	(16.8)	-	(16.8)
Net retirement benefit obligations	**(4.8)**	**-**	**(4.8)**	(7.7)	-	(7.7)
Cash generated from operations	**176.6**	**(0.8)**	**175.8**	130.2	-	130.2

Notes to the Financial Statements (continued)

10 Employee benefits

The net employee benefits balance as at 31 December 2017 of £16.5m (2016: £29.4m) in respect of the Group's defined benefit retirement plans and other post-retirement benefits plans, results from an actuarial valuation of the Group's defined benefit pension and other post-retirement obligations as at that date. As analysed in the following table, the net balance comprised net surpluses (assets) of £92.4m (2016: £78.8m), relating largely to the Group's main defined benefit pension plan in the UK, together with net liabilities (deficits) of £108.9m (2016: £108.2m).

	2017 £m	2016 £m
Employee benefits — net surpluses		
UK defined benefit pension plans	**91.4**	78.6
ROW defined benefit pension plans	**1.0**	0.2
Net surpluses	**92.4**	78.8
Employee benefits — net liabilities		
UK defined benefit pension plans	**(1.9)**	(1.9)
US defined benefit pension plans	**(32.2)**	(37.7)
Germany defined benefit pension plans	**(49.4)**	(45.3)
ROW defined benefit pension plans	**(18.9)**	(16.4)
Other post-retirement benefit plans	**(6.5)**	(6.9)
Net liabilities	**(108.9)**	(108.2)
Total liabilities	**(16.5)**	(29.4)

Notes to the Financial Statements (continued)

10 Employee benefits (continued)

The total net charge of £7.4m (2016: £2.8m) recognised in the Group Income Statement in respect of the Group's defined benefit pension plans and other post-retirement benefits plans is recognised in the following lines.

		2017 £m	2016 £m
In arriving at trading profit (as defined in Note 16)	— within other manufacturing costs	**2.4**	2.0
	— within administration, selling and distribution costs	**4.4**	4.4
In arriving at profit before tax	— within restructuring charges	**-**	0.3
	— gain on employee benefit plan	**-**	(5.2)
	— within net finance costs	**0.6**	1.3
Total net charge		**7.4**	2.8

11 Contingent liabilities

Guarantees given by the Group under property leases of operations disposed of amounted to £1.1m (2016: £1.6m).

Vesuvius has extensive international operations and is subject to various legal and regulatory regimes, including those covering taxation and environmental matters. Several of Vesuvius' subsidiaries are parties to legal proceedings, certain of which are insured claims arising in the ordinary course of the operations of the company involved, and the Directors are aware of a number of issues which are, or may be, the subject of dispute with tax authorities. Provisions are made for the expected amounts payable in respect of known or probable costs resulting both from legal or other regulatory requirements, or from third-party claims.

Certain of Vesuvius' subsidiaries are subject to 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. A number of lawsuits have been withdrawn, dismissed or settled and 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.

12 Related parties

All transactions with related parties are conducted on an arm's length basis and in accordance with normal business terms. Transactions between related parties that are Group subsidiaries are eliminated on consolidation.

Notes to the Financial Statements (continued)

13 Discontinued operations

Discontinued operations income during 2017 of £1.7m related to a release of provisions no longer required. Discontinued operations income during 2016 of £10.2m comprised a £9.0m tax credit relating to the release of a provision for possible China taxes and a £1.2m release of provisions no longer required.

	2017 £m	2016 £m
Other income	1.7	10.2
Profit before tax — attributable to owners of the parent	1.7	10.2
Earnings per share — pence		
Basic	0.7	3.8
Diluted	0.6	3.7

14 Provisions

	Disposal and closure costs £m	Restructuring charges £m	Other £m	Total £m
As at 1 January 2017 *	**41.1**	**18.5**	**6.9**	**66.5**
Exchange adjustments	**(2.6)**	**0.3**	**(0.4)**	**(2.7)**
Charge to Group Income Statement	**-**	**36.3**	**11.7**	**48.0**
Unused amounts released to Group Income Statement	**(1.7)**	**-**	**-**	**(1.7)**
Adjustment to discount	**0.1**	**0.1**	**-**	**0.2**
Cash spend	**(1.9)**	**(27.3)**	**(11.9)**	**(41.1)**
Transferred to other balance sheet accounts	**-**	**(5.0)**	**-**	**(5.0)**
As at 31 December 2017	**35.0**	**22.9**	**6.3**	**64.2**

*The opening balance has been restated by £7.9m to present a provision for which an associated insurance asset exists.

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 Analysis of derivative financial instruments

	2017		2016	
	Assets £m	**Liabilities £m**	Assets £m	Liabilities £m
Derivatives not designated for hedge accounting purposes	**0.3**	**-**	-	(0.9)
Total derivative financial instruments	**0.3**	**-**	-	(0.9)

All of the fair values shown in the table above are classified under IFRS 13 Fair Value Measurement 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 of the derivative assets and liabilities reported in the table above will mature within a year of the balance sheet date. The method for determining the hierarchy and fair value is consistent with that used at year-end, as disclosed in Note 20 of 2017 Annual Report.

Loan notes, included in interest-bearing loans and borrowings, are measured at amortised cost using the effective interest rate method. The carrying value of the loan notes and other current and non-current assets and liabilities are deemed to equate to fair value as at 31 December 2017.

Notes to the Financial Statements (continued)

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 KPI's 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 and therefore may not be directly comparable to similar measures presented by other companies.

16.1 Headline

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.

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

Trading profit 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 Effective tax rate (ETR)

The Group's 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 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 of the Group Financial Statements.

16.8 Operating cash flow

Operating cash flow is cash generated from continuing operations before restructuring and additional pension funding contributions but after deducting capital expenditure net of asset disposals. It is used in calculating the Group's cash conversion. A reconciliation of cash generated from operations to operating cash flow can be found in the Financial Review in the 2017 Annual Report.

Notes to the Financial Statements (continued)

16.9 Cash conversion

Cash conversion is calculated as 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 the Financial Review in the 2017 Annual Report.

16.10 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, but before additional funding contributions to Group pension plans. It is one of the Group's key performance indicators 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.

16.11 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 year, at constant currency. Average trade working capital (comprising inventories, trade receivables and trade payables) is calculated as the average of the 12 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.

16.12 Earnings before interest, tax, depreciation and amortisation ('EBITDA')

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 EBITDA ratios. A reconciliation of EBITDA is included in Note 9.

16.13 Net interest

Net interest is calculated as interest payable on borrowings less interest receivable, excluding any item separately reported. It is used in the calculation of the Group's interest cover ratio.

16.14 Interest cover

Interest cover is the ratio of EBITDA to net interest. 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.

16.15 Net debt

Net debt comprises the net total of current and non-current interest-bearing borrowings and cash and short-term deposits. 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.

16.16 Net debt to EBITDA

Net debt to EBITDA is the ratio of net debt at the year-end to EBITDA for that year. 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.

Notes to the Financial Statements (continued)

16.17 Return on net assets ('RONA')

RONA is calculated as trading profit plus share of post-tax profit of joint ventures, divided by average net operating assets, at constant currency (being the average over the previous 12 months of property, plant and equipment, trade working capital and other operating receivables and payables). It is one of the Group's key performance indicators and is used to assess the financial performance and asset management of the Group and is one of the measures used in monitoring the Group's capital.

16.18 Constant currency

Figures presented at constant currency represent 2016 amounts retranslated to average 2017 exchange rates.

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**		
	2017	2016	Change	**2017**	2016	Change
US Dollar	**1.29**	1.36	(5.1)%	**1.35**	1.23	9.8%
Euro	**1.14**	1.22	(6.6)%	**1.13**	1.17	(3.4)%
Chinese Renminbi	**8.70**	9.00	(3.3)%	**8.79**	8.56	2.7%
Japanese Yen	**144.44**	147.62	(2.2)%	**152.24**	144.17	5.6%
Brazilian Real	**4.09**	4.75	(13.9)%	**4.48**	4.01	11.7%
Indian Rupee	**83.83**	91.13	(8.0)%	**86.25**	83.82	2.9%
South African Rand	**17.15**	20.00	(14.3)%	**16.70**	16.94	(1.4)%

Alternative performance measures – Supplementary information

5-year history at constant currency

	2013	2014	2015	2016	2017
Revenue (£m)	**1,596.0**	**1,643.3**	**1,546.3**	**1,492.0**	**1,683.9**
Steel	1,087.1	1,123.9	1,044.2	1,002.2	1,148.7
Foundry	508.9	519.4	502.1	489.8	535.2
Trading Profit (£m)	**149.3**	**167.3**	**146.1**	**142.4**	**165.5**
Steel	96.8	113.6	91.8	84.3	100.4
Foundry	52.5	53.7	54.3	58.1	65.1
Return on Sales	**9.4%**	**10.2%**	**9.5%**	**9.5%**	**9.8%**
Steel	8.9%	10.1%	8.8%	8.4%	8.7%
Foundry	10.3%	10.3%	10.8%	11.9%	12.2%