VESUVIUS PLC

29 July 2016

Half Year Results for the six months ended 30 June 2016

First half progress in a marginally firmer trading environment

Vesuvius plc, a global leader in molten metal flow engineering, announces its results for the six months ended 30 June 2016.

Financial summary

	H1 2016 (£m)	H1 2015 (£m)	Change (%)	Underlying change[1]	H2 2015 (£m)	Change (%)	Underlying change[1]
Revenue	**668.3**	702.6	-4.9%	-7.5%	619.4	7.9%	1.5%
Trading Profit[2]	**59.1**	70.4	-16.0%	-16.5%	53.6	10.3%	2.5%
Return on Sales	**8.8%**	10.0%	-120bps	-100bps	8.7%	10bps	10bps
Headline Earnings[3]	**34.4**	43.3	-20.6%	-21.1%	32.4	6.3%	-1.1%
Headline EPS[3] (pence)	**12.8**	16.0	-20.0%	-21.1%	12.0	6.5%	-1.0%
Interim Dividend	**5.15p**	5.15p	-	-			
Net debt	**310.3**	296.0	4.8%				
Statutory Profit	**27.8**	37.9					
Statutory EPS (pence)	**9.1**	13.0					

Key Points:

- Revenue, profit and return on sales in line with expectations
- Global steel and foundry markets showing signs of stabilisation; albeit mixed and at weak levels
- Improvement in revenue and margins compared to H2 2015
- Restructuring programme delivered £7.1m cost savings in H1 2016 vs 2015 cost base
- Total annual restructuring programme benefits increased to £25m by the end of 2017 at a total cost of £35m
- Improved debtor provision coverage of £3.7m
- Strong cash performance, with cash conversion of 111%
- Maintained interim dividend of 5.15 pence per share to be paid on 23 September 2016

François Wanecq, Chief Executive of Vesuvius, commented:

"We have delivered an encouraging result in the first half of 2016, with an improvement in financial performance relative to the second half of 2015. This reflects the strength of our market position and progress in implementing our self-help initiatives and ongoing restructuring programme. Our end markets in steel and foundry are showing signs of stabilisation, although we expect them to remain at relatively weak levels for the remainder of the year.

Based on our strategic and operational progress in the first half, and assuming current exchange rates continue for the rest of the year, our full year expectations remain unchanged. We remain confident in our ability to capitalise on any recovery in our addressable markets in the medium term."

For further information, please contact:

Shareholder/analyst enquiries:

Vesuvius plc	François Wanecq, Chief Executive	+44 (0) 207 822 0000
	Guy Young, Chief Financial Officer	+44 (0) 207 822 0000
	Virginia Skroski, Investor Relations Manager	+44 (0) 207 822 0016

(1) Underlying basis is at constant currency and excludes separately reported items and the impact of acquisitions
(2) For definitions of non-GAAP measures, refer to the notes in the financial statements
(3) Headline results refer to continuing operations and exclude separately reported items

Media enquiries:
MHP Communications John Olsen/ Jamie Ricketts/ Ollie Hoare +44 (0) 203 128 8100

Vesuvius management will make a presentation to analysts and investors on 29 July 2016 at 10.30am (BST) at Bank of America Merrill Lynch, 2 King Edward Street, London EC1A 1HQ. For those unable to attend in person, an audio webcast and conference call will also be available (UK participant dial in +44(0)20 3364 5721; US participant dial in +1 646 254 3362; confirmation code 7676096). 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 energy consumption. 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.

Vesuvius plc, 165 Fleet Street, London EC4A 2AE

Registered in England and Wales No. 8217766

www.vesuvius.com

Vesuvius plc

Half Year Results for the six months ended 30 June 2016

During the first half of 2016, Vesuvius continued to make further strategic and operational progress.

Group trading performance

Group revenue from our continuing operations was £668.3m, a reduction of 4.9% compared to the first half of 2015 on a reported basis. Underlying Group revenue, adjusted for the effects of acquisitions and currency translation differences, decreased by 7.5% compared to the same period last year. Trading profit for the half year was £59.1m, down 16.5% on an underlying basis and down 16.0% on a reported basis (H1 2015: £70.4m). Return on sales decreased by 120 basis points on a reported basis (100 basis points on an underlying basis) to 8.8% in the first half of 2016 (H1 2015: 10.0%).

Given that end markets are still weaker than they were in the first half of 2015 the decreases detailed above were expected. However, a comparison to the second half of 2015, which is more comparable from a market perspective, shows sales were up 7.9% (1.5% on an underlying basis) and trading profit increased 10.3% (2.5% on an underlying basis). On a reported basis, the results were assisted by a weaker Pound Sterling. On an underlying basis, the performance indicates a halt to the declines seen in 2015 and supports the view that markets have started to stabilise. Our margins have also continued to benefit from the restructuring programme.

Restructuring

We continue to make good progress in delivering our self-help and restructuring plan. Actions taken in the first six months of this year include the recent announcement of the planned closure of the European Flow Control site plant in Ostrawa, Czech Republic, and of our sales office in Lugano, Switzerland. Furthermore, we announced in July that we will begin discussions with the Ostend Works Council and unions on a proposal for a restructuring plan in Ostend, Belgium.

An additional £5m of restructuring benefit has been identified. To date, this brings total annualised cost savings to £25m, which we expect to be delivered by the end of 2017. This will be at a cost of a total exceptional restructuring charge of around £35m over 2015 to 2017, an increase of £5m over the expected total costs as announced in March.

Foreign Exchange

The weakening of Pound Sterling versus both the US Dollar and the Euro has had a dual effect: it has resulted in a positive foreign exchange variance when translating income but has increased the translated amount of debt held in currencies other than Pound Sterling.

The adverse impact of any potential ongoing weaker Pound Sterling on Vesuvius is limited as a result of our relatively low exposure to UK revenue (<5% of group total). Our US Dollar and Euro debt will continue to be exposed to the weaker Pound Sterling but we are naturally hedged against our asset base and cash flow generation.

Strategic progress

The previously defined strategy of the Group to deliver profitable growth remains unchanged and we have continued to deliver in 2016 on our five stated strategic priorities:

- reinforcing our technology and innovation leadership positions;
- enlarging our addressable markets through the increasing penetration of existing and new value-creating solutions;
- leveraging our strong positions in developing markets to capture the growth opportunities that they represent;
- improving our cost leadership and our margins; and
- building organically, and through acquisition, an increasingly comprehensive technical services offering.

Health and safety

Vesuvius places great emphasis on the importance of health and safety in the workplace and in the communities in which we operate. Safety is of paramount importance as our employees often operate in harsh environments. We continue to work hard at reducing incident severity and developing robust standards and practices aimed at improving the safety and health of our people in all that they do. Having made good progress in reducing lost time incidents in 2015, in the first half of 2016, we saw this number decline further. We continue to focus our efforts to build on the progress made last year.

Board and senior management

As announced in March, Patrick Andre has assumed the role of President, Flow Control. We also continue to further strengthen our senior management team through internal promotion, today announcing that Alexander Laugier-Werth has been appointed to the role of President, Technical Services, following Luis Reyes's move within the company. Alexander was previously Vice President, Operations Foundry. In his new role, Alexander joins our Group Executive Committee.

Result of Statutory Audit Tender

Following the completion of a formal tender process for the statutory audit contract, PriceWaterhouseCoopers LLP will be appointed as external auditor for Vesuvius plc for the year ending 31 December 2017, replacing KPMG LLP. KPMG LLPwill audit the Group's accounts for the year ending 31 December 2016. Shareholder approval to confirm the appointment of PriceWaterhouseCoopers LLP will be sought at the Vesuvius plc Annual General Meeting in 2017.

Dividend

The Board has recommended an interim dividend of 5.15 pence per share (H1 2015: 5.15 pence per share). This dividend will be paid on 23 September 2016 to shareholders on the register at the close of business on 12 August 2016. Any shareholder wishing to participate in the Vesuvius Dividend Reinvestment Plan ("DRIP") needs to have submitted their election to do so by 2 September 2016. The Board intends to deliver long-term dividend growth provided that this is supported by underlying earnings, cash flows, capital expenditure requirements and the prevailing market outlook.

Outlook

Our end markets in steel and foundry are showing signs of stabilisation, although we expect them to continue at relatively weak levels for the remainder of the year. Notwithstanding this, we delivered an improvement in our financial performance relative to the second half of 2015, reflecting the strength of our market position and the ongoing improvement in implementing our self-help actions.

Based on our strategic and operational progress in the first half, and assuming current exchange rates continue for the rest of the year, our full year expectations remain unchanged. We remain confident in our ability to capitalise on any recovery in our addressable markets in the medium term.

We will also continue to focus on identifying acquisitions to reinforce our growth opportunities during the rest of the year, whilst retaining a strong balance sheet in order to maintain financial flexibility.

Operational Review

Our business comprises two divisions, Steel and Foundry, with the Steel division operated as three business lines, Steel Flow Control, Advanced Refractories and Technical Services.

Steel Division

Compared to H1 2015

According to the World Steel Association, global steel production decreased by approximately 1.6% in the first half of the year compared to the first half of 2015. Increases in production of 2.7% in India and 0.2% in the US were offset by declines in production in China of 0.6%, Japan of 1.1% and Russia of 1.3%.

Revenue in the Steel division declined by 9.6% on an underlying basis over the same period as markets with higher penetration of sales per ton of steel, like North America and Europe, were hardest hit and a number of key customers were idled or shut.

Compared to H2 2015

Compared with H2 2015, global steel production increased by 2.0% over the period, with six of the top 10 steel producing countries reporting increases, most notably in China (2.1%), India (5.0%) and the US (3.1%). Over the same period Steel division revenue increased 5.2% as markets showed signs of stabilisation in the second quarter. On an underlying basis, Steel Division revenue was broadly stable. This reflects a depressed demand in Q1 and an improvement in Q2.

Trading profit was impacted in part by the reduction in revenue as noted above as well as an increase of £3.7m in our bad debt provision mainly due to difficult steel market conditions in China.

Steel Division	H1 2016 (£m)	H1 2015 (£m)	Change (%)	Underlying change[1]	H2 2015 (£m)	Change (%)	Underlying change[1]
Steel Flow Control Revenue	**240.8**	**257.8**	*-6.6%*	*-8.7%*	**229.5**	*4.9%*	*-1.1%*
Advanced Refractories Revenue	**185.3**	**203.5**	*-8.9%*	*-10.3%*	**175.2**	*5.7%*	*0.2%*
Technical Services Revenue	**17.1**	**15.1**	*13.1%*	*-17.3%*	**16.6**	*3.0%*	*-4.0%*
Total Steel Revenue	**443.1**	**476.3**	*-7.0%*	*-9.6%*	**421.3**	*5.2%*	*-0.7%*
Total Steel Trading Profit	**33.2**	**44.5**	*-25.3%*	*-24.8%*	**35.0**	*-5.2%*	*-10.9%*
Total Steel Return on Sales	**7.5%**	**9.3%**	*-180 bps*	*-160 bps*	**8.3%**	*-80 bps*	*-90 bps*

Steel Flow Control

Steel Flow Control supplies products used to channel and control the flow of molten steel from ladle to tundish and from tundish to mould; slide gate refractories for furnaces, 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	H1 2016 (£m)	H1 2015 (£m)	Change (%)	Underlying change[1]	H2 2015 (£m)	Change (%)	Underlying change[1]
Americas	**80.7**	**88.0**	*-8.3%*	*-8.8%*	**78.7**	*2.6%*	*-3.1%*
Europe, Middle East & Africa (EMEA)	**92.8**	**103.3**	*-10.2%*	*-13.6%*	**84.9**	*9.3%*	*2.3%*
Asia-Pacific	**67.3**	**66.5**	*1.2%*	*-1.0%*	**65.9**	*2.1%*	*-3.0%*
Total Steel Flow Control Revenue	**240.8**	**257.8**	*-6.6%*	*-8.7%*	**229.5**	*4.9%*	*-1.1%*

Compared to H1 2015

Revenue in Steel Flow Control was down 8.7% year-on-year to £240.8m on an underlying basis mostly due to the Americas and EMEA. This reduction exceeded the overall weakening in steel production as a result of the factors highlighted below.

In the Americas, Flow Control underlying revenue declined 8.8% to £80.7m against a 4.4% reduction in crude steel production volumes. This mostly reflects subdued demand from the heavy equipment, agricultural and energy sectors. Conversely, construction is improving and the automotive sector continues to perform well in the region. South American steel production experienced sharp declines over the period.

In EMEA, underlying revenue decreased by 13.6% to £92.8m, whilst crude steel production volume declined by 3.4%, reflecting closures in 2015 of customers where Vesuvius had high penetration rates - most notably in the UK - and sales timing differences in the Middle East.

Underlying revenue declined by 1.0% in Asia-Pacific compared to a 0.7% decline in crude steel production volume in the region. This reflects slightly lower sales in China linked with our desire to improve customer payment terms and lower sales in Taiwan and South East Asia due to steel production decline. This was partly compensated by higher sales in India, both year-on-year and compared to H2 2015, linked with steel production increases and new business gains.

Compared to H2 2015

Compared with H2 2015, underlying revenue in Steel Flow Control was down 1.1%. In EMEA, underlying revenue was up 2.3%. However, this was offset by lower revenues in the Americas (3.1%) and in Asia-Pacific (3.0%). Within Asia-Pacific revenue in India was up by 4.4% but was offset by declines experienced in North Asia, China and South East Asia.

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	**H1 2016 (£m)**	**H1 2015 (£m)**	**Change (%)**	**Underlying change[1]**	**H2 2015 (£m)**	**Change (%)**	**Underlying change[1]**
Americas	**62.3**	**70.9**	*-12.1%*	*-15.1%*	**58.4**	*6.7%*	*-0.1%*
Europe, Middle East & Africa (EMEA)	**81.6**	**90.3**	*-9.7%*	*-9.9%*	**74.6**	*9.5%*	*4.8%*
Asia-Pacific	**41.4**	**42.3**	*-2.0%*	*-2.6%*	**42.3**	*-2.2%*	*-7.5%*
Total Advanced Refractories Revenue	**185.3**	**203.5**	*-8.9%*	*-10.3%*	**175.2**	*5.7%*	*0.2%*

Compared to H1 2015

Year-on-year, overall revenue in Advanced Refractories decreased 10.3% to £185.3m on an underlying basis, due to the comparatively poorer global market conditions experienced in 2016. Underlying revenue in the mature markets of EMEA and the Americas moved in tandem with the steel output in the region declining 9.9% and 15.1% respectively. In contrast, revenue in India experienced a 16.2% increase year-on-year.

Compared to H2 2015

In comparison to the second half of 2015 revenue remained flat thereby arresting the slide that we experienced in the second half. Revenue in EMEA grew by 4.8% on an underlying basis, whilst revenue in the Americas remained flat. Underlying revenue in India continued to grow at 1.8%. Revenue in the rest of South East Asia and Oceania declined by 10.9% due to the slow down experienced in the industrial production market segment and ongoing pressure from Chinese imports on steel production in the region.

Technical Services

Technical Services is a new business line for the Group which complements existing product lines with new services to our existing customers. Technical Services focuses on the capture of key manufacturing data, combining this with Vesuvius' strong presence and expertise in metal casting to create new technologies and integrate them into expert process management systems.

Technical Services Revenue	H1 2016 (£m)	H1 2015 (£m)	Change (%)	Underlying change(1)	H2 2015 (£m)	Change (%)	Underlying change(1)
Americas	**9.8**	**12.5**	*-21.3%*	*-22.2%*	***10.3***	*-4.1%*	*-10.5%*
Europe, Middle East & Africa (EMEA)	**6.9**	**2.3**	*197.1%*	*48.9%*	***6.0***	*16.6%*	*8.5%*
Asia-Pacific	**0.4**	**0.3**	*52.8%*	*79.7%*	***0.4***	*8.3%*	*3.6%*
Total Technical Services Revenue	**17.1**	**15.1**	*13.1%*	*-17.3%*	***16.6***	*3.0%*	*-4.0%*

Compared to H1 2015

In the first half of the year, Technical Services generated revenues of £17.1m (H1 2015: £15.1m). On an underlying basis however revenues fell by 17.3% when adjusting for acquisitions. This predominantly reflects the drop in steel manufacturing activity in South America in line with the macroeconomic difficulties experienced in that region and currency evolution.

As a new business line, the key challenge in its first year of operation was to establish a presence independent from our other businesses, and to integrate new acquisitions, while starting to develop complementary solutions for our customers. This reflects our customers' demand for the delivery of solutions that will enable further integration and automation of their production processes. The acquisition of Sidermes SpA in May 2015, combined with the previous acquisition of Avemis, SERT, ECIL Met Tec, Process Metrix, has significantly enhanced our technical services capabilities.

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 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 provides products and associated services to foundries that improve these parameters.

Foundry Division	H1 2016 (£m)	H1 2015 (£m)	Change (%)	Underlying change(1)	H2 2015 (£m)	Change (%)	Underlying change(1)
Foundry Revenue	**225.2**	**226.3**	*-0.5%*	*-3.1%*	***198.1***	*13.7%*	*5.9%*
Foundry Trading Profit	**25.9**	**25.9**	*0.0%*	*-2.6%*	***18.6***	*39.5%*	*27.0%*
Foundry Return on Sales	**11.5%**	**11.5%**	*0 bps*	*10 bps*	***9.4%***	*210 bps*	*190 bps*

The worldwide foundry market continues to be adversely affected by difficulties within the railway, agriculture, construction and mining industries, as a result of the general decline in commodity and precious metal prices. This has reduced investment and activity worldwide, including a reduction in demand in the valuable steel casting market for the extractive industries. However, year-on-year light vehicle production increased by 2% globally and worldwide heavy truck output increased 7%, primarily from increases in India and China. Some jurisdictions have also faced challenges from political and economic instability.

Foundry Revenue	H1 2016 (£m)	H1 2015 (£m)	Change (%)	Underlying change(1)	H2 2015 (£m)	Change (%)	Underlying change(1)
Americas	**45.0**	**48.9**	*-8.0%*	*-8.2%*	***40.8***	*10.1%*	*2.4%*
Europe, Middle East & Africa (EMEA)	**106.1**	**104.7**	*1.4%*	*-2.4%*	***89.5***	*18.5%*	*10.7%*
Asia-Pacific	**74.1**	**72.7**	*2.0%*	*-0.8%*	***67.7***	*9.4%*	*1.7%*
Total Foundry Revenue	**225.2**	**226.3**	*-0.5%*	*-3.1%*	***198.1***	*13.7%*	*5.9%*

Compared to H1 2015

Underlying revenue in the Foundry division decreased year-on-year by 3.1% to £225.2m. Despite the difficult market conditions trading margins held up well at 11.5%, 10 basis points ahead of H1 2015 on an underlying basis.

The Americas were particularly hard hit with US market weakness (heavy truck, agriculture, construction and mining industries) adding to a very difficult market in South America dominated by Brazilian economic contraction and political instability, partially offset by growth in Mexico.

Revenue in EMEA was down 2.4% on an underlying basis as increases of 4% in light vehicle production and 6% heavy truck production were offset by reductions in mining, construction, railroad and wind mill castings. Western Europe was most impacted by the reduced activity levels partially offset by good growth in Central Europe.

In Asia-Pacific, underlying revenue in China fell 7.1% due to reduced mining activity. A solid performance was again seen in India with underlying revenue up 14.3% year-on-year, benefitting from increased light vehicle and truck production, up 7% and 32% respectively. Despite tough market conditions in South East Asia foundry sales were up 7%.

Compared to H2 2015

Underlying revenue increased by 5.9% and trading profit increased significantly by 27.0%. This increase in activity and market share, together with some seasonality, increased trading margin by 210 basis points on a reported basis. Underlying revenue in key regions increased compared to the second half, most notably in EMEA by 10.7%, and the Americas and Asia-Pacific by 2.4% and 1.7% respectively. End markets remain mixed with rail and mining in particular not having shown signs of improvement. Heavy and light vehicle production has held up better although it varies by region.

The significant increase in trading profit was due to improved gross margins and flat operating expenditure, both of which have benefited from ongoing cost reductions.

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. In the first half of 2016 the most significant elements of separately reported items included restructuring charges associated with the programme launched in 2015.

Headline profit before tax (PBT) and earnings per share (EPS)

Details relating to revenue, trading profit and return on sales are provided in the Financial Summary and Operating Review in this release. Net finance costs for the half year 2016 of £7.9m were marginally lower than last year at £8.0m. Lower interest payable and higher interest income was partially offset by a larger charge for unwinding the discounted provisions.

Headline PBT, including our share of the losses from joint ventures of £0.4m (H1 2015: £0.5m) is £50.8m (H1 2015: £61.9m), 17.9% behind last year. Including amortisation, the exceptional restructuring charge of £5.3m and the £1.0m gain on settlement of an employee benefit plan, our PBT falls to £38.2m (H1 2015: £51.4m).

Headline EPS at 12.8 pence per share is lower than 16.0 pence at H1 2015.

Return on Net Operating Assets

RONA is our principal measure of capital efficiency. As with most of our KPIs, we measure this on a 12-month moving average basis at constant currency to ensure we focus on sustainable underlying improvements. Our RONA for the first half of 2016 fell to 19.4% (H2 2015: 21.1%), driven by the lower profits over the trailing 12-month period.

Free Cash Flow and Working Capital

Trade working capital as a percentage of sales as at June 2016 was 26.6% (H1 2015: 25.5%), measured on a 12-month moving average basis. This is marginally higher than the 2015 year-end indicator of 26.3%. The key contributing factor remains the increased developing market sales profile and in particular an increase in receivables in China.

Operating cash flow was £65.8m, up £6.6m from £59.2m in H1 2015. This represented a cash conversion ratio of 111% up on the H1 2015 ratio of 84%. This improvement in operating cash flow was primarily driven by capital expenditure being managed below depreciation.

Free cash flow of £33.3m (H1 2015: £26.2m) is after £10.2m of cash costs related to restructuring activities. Excluding these one-off items, the free cash flow from continuing operations was £43.7m, which is a healthy 66% of operating cash flow generation.

Interest Cover and Net Debt

Net debt as at 30 June 2016 was £310.3m, a £18.7m increase since 31 December 2015. The main driver of the increase was the impact of the weaker Pound Sterling, which gave rise to a foreign exchange impact of £20.8m. Absent this translation difference net debt would have decreased to £289.5m.

The Group has committed borrowing facilities of £558.0m (H1 2015: £518.7m, H2 2015: £532.4m), of which £163.7m were undrawn (H1 2015: £170.8m, H2 2015: £181.1m). Under the terms of the revolving credit facility (taken out in June 2015) the Group has the option until the end of 2016 to increase the amount of committed funds by up to £200m either from the existing bank group or by introducing additional banks on the same lending terms. This provides us with sufficient debt capacity for the short term.

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 the Group has sufficient financing available to run the business and fund future growth. At the half year, the net debt to EBITDA ratio was 2.0x, an increase on the H1 2015 position of 1.6x, and EBITDA to interest was 11.5x, versus the 14.0x at H1 2015. As detailed above, the gearing has been adversely impacted by the movement in foreign exchange.

Restructuring

As noted previously, the Group continued with the restructuring programme that was launched in 2015 in response to the declines in the majority of our end-markets. Costs incurred year to date of £5.3m were predominantly on redundancy (£4.9m) and consultancy (£0.4m).

Capital Expenditure

Capital expenditure in the half year 2016 of £9.4m (H1 2015: £15.4m) comprised £6.7m in the Steel division (H1 2015: £11.3m) and £2.7m in the Foundry division (H1 2015: £4.1m). The reduction is in recognition of weaker end-markets and preserves cash as profits have reduced.

Pensions

The Group has a limited number of historical defined benefit plans mainly in the UK, USA, Germany and Belgium. The main plans in UK and US are largely closed to further benefit accruals and 57% of the liabilities in UK have already been insured. The total net deficit attributed to these defined benefit obligations at the end of June 2016 was £54.2m (December 2015: £35.3m), an increase of £18.9m, which reflected an increase in the surplus in the UK plan, offset by increased deficits in all other plans. This is mainly due to:

- a net increase of £10.0m in pension obligations due to changes to actuarial assumptions and returns on assets;
- exchange rate movements of £12.2m;
- these were partially offset by settlements and contributions.

The majority of the ongoing pension schemes are defined contribution plans, where our only obligation is to make contributions with no further commitments on the level of post-retirement benefits. Year to date £5.3m (H1 2015: £5.5m) of pension contributions were made into the plans and charged to trading profit.

Taxation

The Group's effective tax rate, based on the income tax costs associated with headline performance of £13.1m (H1 2015: £15.9m), was 25.5% in the first half of 2016 (H1 2015: 25.5%).

The Group's total income tax costs include a credit of £2.7m (H1 2015: £2.4m) relating to separately reported items comprising: a credit of £0.8m (H1 2015: £0.5m) in relation to restructuring charges; and a credit of £1.9m (H1 2015: £1.9m) relating to the amortisation of acquired intangible assets.

Tax charged in the Group statement of comprehensive income during the half year amounted to £1.4m (H1 2015: £0.7m credit), which related to net actuarial gains on the UK employee benefit plan and settlements on one of the German plans.

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 2016 interim 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 Company have adequate resources to continue in operational existence for a period of 12 months from the date of approval of the 2016 interim financial statements. Accordingly, they continue to adopt a going concern basis in preparing the financial statements of the Group and the Company.

Principal Risks and Uncertainties

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 achievement of its strategic objectives. All of the risks set out 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.

Risk Management

Risks are actively managed in order to mitigate exposure and, where cost effective, the risk is transferred to insurers. The process for risk identification includes both 'top down' and 'bottom up' processes, which allow operational, functional, senior executive and Board members' views on risk to be independently gathered to identify principal risks. Once identified, the senior management 'owners' for each principal risk update the mitigations of that specific risk and contribute to the analysis of likelihood and materiality. This is reported to the Board. We have also built a business structure that gives protection against the 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. During 2015, the Group further developed its processes for business continuity planning, conducting workshops across the Group's major sites and across all business lines. At 2015 year end, the Group's risks were also analysed in the context of viability, examining both financial and economic trend risks and significant event risks.

Board Monitoring

Vesuvius operates a continuous process for identifying and evaluating significant risks, with regular reports made to the Board on the processes by which these are managed and mitigated. Thus, the Board exercises its ultimate responsibility for the Group's risk management, by analysing major issues that have arisen, considering how risks have changed over time, and assessing whether they are being effectively managed.

Changes to Risk in 2016

There are a number of potential risks and uncertainties which could have a material impact on the Group's performance over the remaining six months of the financial year and could cause actual results to differ materially from expected and historical results. The directors do not consider that the principal risks and uncertainties have changed since the publication of the annual report for the year ended 31 December 2015. Whilst the underlying risks have not changed, the risk previously referred to as "Loss of a Major Site" is now named "Business continuity" to reflect the broad basis from which a production interruption could arise. The risks and uncertainties are summarised below:

Risk	Potential Impact	Mitigation/ Management
Demand volatility	• Unplanned drop in demand and revenue • Failure of one or more customers leading to debtor bankruptcy	• Prudent balance sheet management to maintain robust financial position • Strong internal reporting and monitoring of external data to identify economic trends • Flexible cost base to react quickly to end-market conditions • No one customer exceeds 10% of revenue • Robust credit control processes
Protectionism	• Loss of business from enforced preference of local suppliers • Imposition of increased import duties	• Local manufacturing operations in 26 countries • Robust internal tax policies and strict transfer pricing rules

	• Increased tax burden or changes to rules and enforcement • Local competitors promoted overseas by government to government action	• Strong internal control of inter-Company trading • Maintenance of quality and innovation leadership differentiating Vesuvius and mitigating government intervention in supplier selection
Product liability and loss of business reputation	• Claims from third parties resulting from use of potentially hazardous materials • Customer claims and loss of business from product quality issues • Product or application failures not promptly addressed may create an adverse financial impact and damage our reputation as a technology leader • Incident at customer plant resulting in significant health and safety breach and/or customer downtime	• Active monitoring of HSE issues • Stringent quality control standards systematically implemented in manufacturing • Experienced legal team used to negotiating appropriate contractual protections • Active quality management programme in place with full root cause analysis for customer complaints and follow up • Robust product qualification process in place for raw materials • Active monitoring of customers' improvement requests • Appropriate insurance cover obtained
Regulatory compliance	• Financial loss through failure to comply with appropriate regulations • Business disruption from investigations • Reputational damage	• Widely disseminated Code of Conduct and supporting policies which highlight the Group's ethical approach to business • Speak-up procedure implemented across the Group • Ongoing training and review of policy effectiveness
Protection of leading technologies	• Loss of business through new technology developed by others • Failure to adapt solutions to meet changing customer needs • Revenue lost through ineffective protection of intellectual property	• Market-leading research and development team with significant investment in R&D, and use of structured development methodologies • Patent protection sought when new developments are made • Stringent defence of patents and other intellectual property • Control of access to intellectual property through IT controls and physical security
Financial uncertainty	• Inability to raise sufficient capital to fund growth of business • Reduction in earnings from increased interest charges • Weakness in foreign currencies leading to reduced profitability	• Long-term capital structure planning to secure availability of capital at acceptable costs • Substantial proportion of debt capital secured at fixed rates of interest • International presence reduces the Group's reliance on any one currency • Hedging of transactional foreign exchange exposure when necessary • Alignment of cost structure with revenue where possible • The Group adopts appropriate functional currencies for its operations in some countries to reduce translational foreign exchange risks

Business continuity	• Loss of revenue resulting from inability to supply customers on loss of production facilities	• Geographically diversified manufacturing footprint • Maintenance of excess capacity to allow plants to meet peak demands • Enhanced Business Continuity planning undertaken • Appropriate business interruption insurance cover maintained
Ability to source critical raw materials	• Manufacturing interruption from failure of a key supplier, or the loss of availability of a source of critical raw materials	• Strategic stocks of certain materials are retained • Number of single-sourced materials reduced through expanding supplier base • Development of new products and research on substitution of raw materials
Retention of staff	• Insufficient high-quality staff to run base business and generate growth through innovation • Availability of suitable talent in the pipeline to offer internal succession options for senior positions including the Group Executive Committee and Executive Directors	• Contacts with universities to identify and develop talent • Internal programme to attract and develop high potential staff from emerging markets through cross border exchange programmes • Extensive internal courses run by experienced staff to transfer knowledge in a structured manner • Building career trajectories for technical staff to show potential and reduce attrition • Group Talent Management Director driving assessment of internal talent at the middle and senior management levels, identifying gaps and implementing development programmes to provide suitable succession options
Technical Services strategy implementation	• Inability to leverage the benefits of newly acquired entities • Financial control and reporting risk of newly acquired entities	• Proactive approach to identify targets in line with the business strategy • Central structure in place to support the integration and active collaboration between the business units

Directors' responsibility statement

We confirm that to the best of our knowledge:

(a) The condensed financial statements have been prepared in accordance with IAS 34*, Interim Financial Reporting*, as adopted by the EU; and

(b) This half-yearly financial report includes a fair review of the information required by:

- DTR 4.2.7R of the *Disclosure and Transparency Rules*, being an indication of important events that have occurred during the first six months of the financial year and their impact on the condensed set of financial statements; and a description of the principal risks and uncertainties for the remaining six months of the financial year; and
- DTR 4.2.8R of the *Disclosure and Transparency Rules*, being related parties' transactions that have taken place in the first six months of the current financial year and that have materially affected the financial position or the performance of the Group during that period; and any changes in the related parties' transactions described in the last annual report that could do so.

On behalf of the Board

Guy Young
Chief Financial Officer
29 July 2016

Vesuvius plc Board of Directors:

John McDonough CBE, Chairman

François Wanecq, Chief Executive

Guy Young, Chief Financial Officer

Douglas Hurt, Non-executive Director, Senior Independent Director and Chairman of the Audit Committee

Nelda Connors, Non-executive Director

Jane Hinkley, Non-executive Director and Chairman of the Remuneration Committee

Christer Gardell, Non-executive Director

Hock Goh, Non-executive Director

Independent review report to Vesuvius plc

Introduction

We have been engaged by the Company to review the condensed set of financial statements in the half-yearly financial report for the six months ended 30 June 2016 which comprises the condensed Group income statement, the condensed Group statement of comprehensive income, the condensed Group statement of cash flows, the condensed Group balance sheet, the condensed Group statement of changes in equity and the related explanatory notes. We have read the other information contained in the half-yearly financial report and considered whether it contains any apparent misstatements or material inconsistencies with the information in the condensed set of financial statements.

This report is made solely to the Company in accordance with the terms of our engagement to assist the Company in meeting the requirements of the Disclosure and Transparency Rules ("the DTR") of the UK's Financial Conduct Authority ("the UK FCA"). Our review has been undertaken so that we might state to the Company those matters we are required to state to it in this report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company for our review work, for this report, or for the conclusions we have reached.

Directors' responsibilities

The half-yearly financial report is the responsibility of, and has been approved by the directors. The directors are responsible for preparing the half-yearly financial report in accordance with the DTR of the UK FCA.

As disclosed in note 1, the annual financial statements of the Group are prepared in accordance with IFRS as adopted by the EU. The condensed set of financial statements included in this half-yearly financial report has been prepared in accordance with IAS 34, *Interim Financial Reporting* as adopted by the EU.

Our responsibility

Our responsibility is to express to the Company a conclusion on the condensed set of financial statements in the half-yearly financial report based on our review.

Scope of review

We conducted our review in accordance with International Standard on Review Engagements (UK and Ireland) 2410, *Review of Interim Financial Information Performed by the Independent Auditor of the Entity* issued by the Auditing Practices Board for use in the UK. A review of interim financial information consists of making enquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with International Standards on Auditing (UK and Ireland) and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Conclusion

Based on our review, nothing has come to our attention that causes us to believe that the condensed set of financial statements in the half-yearly financial report for the six months ended 30 June 2016 is not prepared, in all material respects, in accordance with IAS 34 as adopted by the EU and the DTR of the UK FCA.

Paul Korolkiewicz

for and on behalf of KPMG LLP
Chartered Accountants
15 Canada Square
London, E14 5GL

29 July 2016

Condensed Group Income Statement

For the six months ended 30 June 2016

		Half year 2016			Half year 2015			Full year 2015		
				Unaudited			Unaudited			
		Headline Performance	Separately reported items	Half year 2016	Headline performance	Separately reported items	Half year 2015	Headline Performance	Separately reported items	Full year 2015
	Notes	£m	£m	£m	£m	£m	£m	£m	£m	£m
Continuing operations										
Revenue	2	**668.3**	**-**	**668.3**	702.6	-	702.6	1,322.0	-	1,322.0
Manufacturing costs		**(485.2)**	**-**	**(485.2)**	(512.5)	-	(512.5)	(968.9)	-	(968.9)
Administration, selling and distribution costs		**(124.0)**	**-**	**(124.0)**	(119.7)	-	(119.7)	(229.1)	-	(229.1)
Trading profit	2	**59.1**	**-**	**59.1**	70.4	-	70.4	124.0	-	124.0
Amortisation of acquired intangible assets		**-**	**(8.3)**	**(8.3)**	-	(8.3)	(8.3)	-	(16.6)	(16.6)
Restructuring charges	3	**-**	**(5.3)**	**(5.3)**	-	(2.2)	(2.2)	-	(14.6)	(14.6)
Gain on employee benefit plan	11	**-**	**1.0**	**1.0**	-	-	-	-	-	-
Operating profit/(loss)	2	**59.1**	**(12.6)**	**46.5**	70.4	(10.5)	59.9	124.0	(31.2)	92.8
Net finance costs	4	**(7.9)**	**-**	**(7.9)**	(8.0)	-	(8.0)	(15.4)	-	(15.4)
Share of post-tax (loss) of joint ventures		**(0.4)**	**-**	**(0.4)**	(0.5)	-	(0.5)	-	-	-
Profit/(loss) before tax		**50.8**	**(12.6)**	**38.2**	61.9	(10.5)	51.4	108.6	(31.2)	77.4
Income tax (charge)/credits	5	**(13.1)**	**2.7**	**(10.4)**	(15.9)	2.4	(13.5)	(27.7)	2.9	(24.8)
Profit/(loss) from continuing operations		**37.7**	**(9.9)**	**27.8**	46.0	(8.1)	37.9	80.9	(28.3)	52.6
Discontinued operations		**-**	**-**	**-**	-	-	-	-	1.4	1.4
Profit/(loss)		**37.7**	**(9.9)**	**27.8**	46.0	(8.1)	37.9	80.9	(26.9)	54.0
Profit attributable to:										
Owners of the parent		**34.4**	**(9.9)**	**24.5**	43.3	(8.1)	35.2	75.7	(26.9)	48.8
Non-controlling interests		**3.3**	**-**	**3.3**	2.7	-	2.7	5.2	-	5.2
Profit/(loss)		**37.7**	**(9.9)**	**27.8**	46.0	(8.1)	37.9	80.9	(26.9)	54.0
Earnings per share (pence)	6									
Continuing operations:										
Basic				**9.1**			13.0			17.6
Diluted				**9.1**			13.0			17.5
Total operations:										
Basic				**9.1**			13.0			18.1
Diluted				**9.1**			13.0			18.1

Condensed Group Statement of Comprehensive Income/(Loss)

For the six months ended 30 June 2016

	Note	Unaudited Half year 2016 £m	Unaudited Half year 2015 £m	Full year 2015 £m
Profit		**27.8**	37.9	54.0
Other comprehensive income/(loss), net of income tax:				
Items that will not be subsequently reclassified to income statement:				
Remeasurement of defined benefit liabilities/assets		**(9.9)**	3.4	13.0
Income tax relating to items not reclassified	5	**1.4**	(0.7)	1.6
Items that will not be subsequently reclassified to income statement		**(8.5)**	2.7	14.6
Items that may be subsequently reclassified to income statement:				
Exchange differences on translation of the net assets of foreign operations		**146.7**	(48.6)	(29.3)
Exchange translation differences arising on net investment hedges		**(27.1)**	0.7	(6.1)
Change in fair value of cash flow hedges		**-**	-	-
Change in fair value of available-for-sale investments		**-**	-	-
Items that may be subsequently reclassified to income statement		**119.6**	(47.9)	(35.4)
Other comprehensive income/(loss), net of income tax		**111.1**	(45.2)	(20.8)
Total comprehensive income/(loss)		**138.9**	(7.3)	33.2
Total comprehensive income/(loss) attributable to:				
Owners of the parent		**132.4**	(9.1)	28.2
Non-controlling interests		**6.5**	1.8	5.0
Total comprehensive income/(loss)		**138.9**	(7.3)	33.2

Condensed Group Statement of Cash Flows

For the six months ended 30 June 2016

	Notes	**Unaudited Half year 2016 £m**	Unaudited Half year 2015 £m	Full year 2015 £m
Cash flows from operating activities				
Cash generated from operations	10	**63.0**	66.8	140.0
Net interest paid		**(5.8)**	(7.0)	(13.6)
Income taxes paid		**(16.3)**	(16.2)	(31.8)
Net cash inflow from operating activities		**40.9**	43.6	94.6
Cash flows from investing activities				
Capital expenditure		**(9.1)**	(17.9)	(38.1)
Proceeds from the sale of property, plant and equipment		**0.7**	0.5	1.1
Proceeds from sale of investments		**-**	-	0.3
Acquisition of subsidiaries and joint ventures, net of cash acquired		**-**	(24.5)	(25.1)
Dividends received from joint ventures		**0.9**	-	-
Other investing outflows		**-**	(1.3)	(1.6)
Net cash (outflow) from investing activities		**(7.5)**	(43.2)	(63.4)
Net cash inflow before financing activities		**33.4**	0.4	31.2
Cash flows from financing activities				
Proceeds from borrowings		**4.9**	54.8	44.7
Settlement of forward foreign exchange contracts		**10.4**	(1.6)	3.9
Purchase of own shares		**-**	(5.2)	(5.2)
Borrowing facility arrangement costs		**-**	(1.2)	(1.4)
Dividends paid to equity shareholders	7	**(30.0)**	(30.1)	(43.9)
Dividends paid to non-controlling shareholders		**(0.9)**	(0.9)	(2.2)
Net cash (outflow)/inflow from financing activities		**(15.6)**	15.8	(4.1)
Net increase in cash and cash equivalents	9	**17.8**	16.2	27.1
Cash and cash equivalents at beginning of period		**67.0**	38.5	38.5
Effect of exchange rate fluctuations on cash and cash equivalents		**6.7**	(0.3)	1.4
Cash and cash equivalents at end of period		**91.5**	54.4	67.0

	Unaudited Half year 2016 £m	Unaudited Half year 2015 £m	Full year 2015 £m
Free cash flow from continuing operations			
Net cash inflow from operating activities	**40.9**	50.9	100.8
Additional funding contributions into Group pension plans	**1.0**	1.0	3.7
Capital expenditure	**(9.1)**	(17.9)	(38.1)
Proceeds from the sale of property, plant and equipment	**0.7**	0.5	1.1
Dividends received from joint ventures	**0.9**	-	-
Dividends paid to non-controlling shareholders	**(0.9)**	(0.9)	(2.2)
Free cash flow from continuing operations	**33.5**	33.6	65.3
Discontinued operations	**(0.2)**	(7.4)	(6.2)
Free cash flow	**33.3**	26.2	59.1

Condensed Group Balance Sheet

As at 30 June 2016

	Notes	Unaudited Half year 2016 £m	Unaudited Half year* 2015 £m	Full year* 2015 £m
Assets				
Property, plant and equipment		**309.8**	278.7	285.3
Intangible assets		**755.4**	678.1	684.6
Employee benefits - net surpluses	11	**65.5**	49.5	59.9
Interests in joint ventures		**17.0**	16.3	16.1
Investments		**2.8**	3.3	3.0
Income tax recoverable		**1.3**	2.9	1.3
Deferred tax assets		**76.3**	70.1	70.7
Other receivables		**20.3**	15.2	19.0
Total non-current assets		**1,248.4**	1,114.1	1,139.9
Cash and short-term deposits	9	**134.0**	76.3	101.5
Inventories		**190.0**	182.9	167.7
Trade and other receivables		**375.0**	327.6	316.3
Income tax recoverable		**1.8**	2.8	2.8
Derivative financial instruments		**0.7**	-	0.5
Total current assets		**701.5**	589.6	588.8
Total assets		**1,949.9**	1,703.7	1,728.7
Equity				
Issued share capital		**27.8**	27.8	27.8
Retained earnings		**2,333.4**	2,335.5	2,346.5
Other reserves	12	**(1,385.5)**	(1,513.7)	(1,501.9)
Equity attributable to the owners of the parent		**975.7**	849.6	872.4
Non-controlling interests		**38.4**	30.8	32.7
Total equity		**1,014.1**	880.4	905.1
Liabilities				
Interest-bearing borrowings	9	**396.6**	350.3	351.7
Employee benefits - net liabilities	11	**119.7**	92.8	95.2
Other payables		**19.6**	16.9	17.0
Provisions		**30.3**	29.2	29.5
Deferred tax liabilities		**45.4**	48.1	44.6
Total non-current liabilities		**611.6**	537.3	538.0
Interest-bearing borrowings	9	**47.7**	22.7	41.4
Trade and other payables		**217.5**	197.8	178.2
Income tax payable		**43.9**	52.6	48.3
Provisions		**15.1**	12.9	17.7
Derivative financial instruments		**-**	-	-
Total current liabilities		**324.2**	286.0	285.6
Total liabilities		**935.8**	823.3	823.6
Total equity and liabilities		**1,949.9**	1,703.7	1,728.7

*Restated to reflect the amendments to the acquisition balance sheet of Sidermes spa (note 8)

Condensed Group Statement of Changes in Equity

For the six months ended 30 June 2016

	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 2015	**27.8**	**(1,466.7)**	**2,332.1**	**893.2**	**29.9**	**923.1**
Profit	**-**	**-**	**35.2**	**35.2**	**2.7**	**37.9**
Other comprehensive income/(loss), net of income taxes:						
Items that will not be reclassified subsequently to income statement:						
Remeasurement of defined benefit liabilities/assets	-	-	3.4	3.4	-	3.4
Income tax relating to items not reclassified	-	-	(0.7)	(0.7)	-	(0.7)
Items that will not be reclassified subsequently to income statement	-	-	2.7	2.7	-	2.7
Items that may be reclassified subsequently to income statement:						
Exchange differences on the net assets of foreign operations	-	(47.7)	-	(47.7)	(0.9)	(48.6)
Exchange translation differences arising on net investment hedges	-	0.7	-	0.7	-	0.7
Change in fair value of cash flow hedges	-	-	-	-	-	-
Items that may be reclassified subsequently to income statement	**-**	**(47.0)**	**-**	**(47.0)**	**(0.9)**	**(47.9)**
Other comprehensive loss, net of income tax	**-**	**(47.0)**	**2.7**	**(44.3)**	**(0.9)**	**(45.2)**
Total comprehensive (loss)/income	**-**	**(47.0)**	**37.9**	**(9.1)**	**1.8**	**(7.3)**
Purchase of own shares	-	-	(5.2)	(5.2)	-	(5.2)
Recognition of share-based payments	-	-	0.8	0.8	-	0.8
Dividends paid (note 7)	-	-	(30.1)	(30.1)	(0.9)	(31.0)
Total transactions with owners	**-**	**-**	**(34.5)**	**(34.5)**	**(0.9)**	**(35.4)**
As at 1 July 2015*, unaudited	**27.8**	**(1,513.7)**	**2,335.5**	**849.6**	**30.8**	**880.4**
Profit	**-**	**-**	**13.6**	**13.6**	**2.5**	**16.1**
Other comprehensive income/(loss), net of income taxes:						
Items that will not be reclassified subsequently to income statement:						
Remeasurement of defined benefit liabilities/assets	-	-	9.6	9.6	-	9.6
Income tax relating to items not reclassified	-	-	2.3	2.3	-	2.3
Items that will not be reclassified subsequently to income statement	-	-	11.9	11.9	-	11.9
Items that may be reclassified subsequently to income statement:						
Exchange differences on the net assets of foreign operations	-	18.6	-	18.6	0.7	19.3
Exchange translation differences arising on net investment hedges	-	(6.8)	-	(6.8)	-	(6.8)
Items that will may be reclassified subsequently to income statement	**-**	**11.8**	**-**	**11.8**	**0.7**	**12.5**
Other comprehensive income, net of income tax	**-**	**11.8**	**11.9**	**23.7**	**0.7**	**24.4**
Total comprehensive income	**-**	**11.8**	**25.5**	**37.3**	**3.2**	**40.5**
Purchase of own shares	-	-	-	-	-	-
Recognition of share-based payments	-	-	(0.7)	(0.7)	-	(0.7)
Dividends paid (note 7)	-	-	(13.8)	(13.8)	(1.3)	(15.1)
Total transactions with owners	**-**	**-**	**(14.5)**	**(14.5)**	**(1.3)**	**(15.8)**
As at 1 January 2016*	**27.8**	**(1,501.9)**	**2,346.5**	**872.4**	**32.7**	**905.1**

*Restated to reflect the amendments to the acquisition balance sheet of Sidermes spa (note 8)

Condensed Group Statement of Changes in Equity

For the six months ended 30 June 2016

	Issued share capital	Other reserves	Retained earnings	Owners of the parent	Non-controlling interests	Total equity
	£m	£m	£m	£m	£m	£m
As at 1 January 2016*	**27.8**	**(1,501.9)**	**2,346.5**	**872.4**	**32.7**	**905.1**
Profit	**-**	**-**	**24.5**	**24.5**	**3.3**	**27.8**
Other comprehensive income/(loss), net of income taxes:						
Items that will not be reclassified subsequently to income statement:						
Remeasurement of defined benefit liabilities/assets	-	-	(9.9)	(9.9)	-	(9.9)
Income tax relating to items not reclassified	-	-	1.4	1.4	-	1.4
Items that will not be reclassified subsequently to income statement	-	-	(8.5)	(8.5)	-	(8.5)
Items that may be reclassified subsequently to income statement:						
Exchange differences on the net assets of foreign operations	-	143.5	-	143.5	3.2	146.7
Exchange translation differences arising on net investment hedges	-	(27.1)	-	(27.1)	-	(27.1)
Items that may be reclassified subsequently to income statement	**-**	**116.4**	**-**	**116.4**	**3.2**	**119.6**
Other comprehensive income/(loss), net of income tax	**-**	**116.4**	**(8.5)**	**107.9**	**3.2**	**111.1**
Total comprehensive income	**-**	**116.4**	**16.0**	**132.4**	**6.5**	**138.9**
Purchase of own shares	-	-	-	-	-	-
Recognition of share-based payments	-	-	0.9	0.9	-	0.9
Dividends paid (note 7)	-	-	(30.0)	(30.0)	(0.8)	(30.8)
Total transactions with owners	**-**	**-**	**(29.1)**	**(29.1)**	**(0.8)**	**(29.9)**
As at 30 June 2016, unaudited	**27.8**	**(1,385.5)**	**2,333.4**	**975.7**	**38.4**	**1,014.1**

*Restated to reflect the amendments to the acquisition balance sheet of Sidermes spa (note 8)

Notes to the condensed financial statements

1. Basis of preparation

1.1 Basis of accounting

These condensed financial statements of Vesuvius plc ("Vesuvius" or the "Company") and its subsidiary and joint venture companies (the "Group") have been prepared in accordance with International Accounting Standard ("IAS") 34, *Interim Financial Reporting*, as adopted by the EU and in accordance with the Disclosure and Transparency Rules of the UK's Financial Conduct Authority.

These condensed financial statements have been prepared using the same accounting policies as used in the preparation of the Group's annual financial statements for the year ended 31 December 2015, which were prepared in accordance with International Financial Reporting Standards as adopted by the EU ("IFRS"). They do not include all of the information required for full annual financial statements, and should be read in conjunction with the consolidated financial statements of the Group for the year ended 31 December 2015. The financial information presented in this document is unaudited, but has been reviewed by the Company's auditor.

The comparative figures for the financial year ended 31 December 2015 are not the Company's statutory accounts for that financial year. Those accounts have been reported on by the Company's auditor and delivered to the Registrar of Companies. The report of the auditor was unqualified, did not include reference to any matters to which the auditor drew attention by way of emphasis without qualifying its report and did not contain a statement under section 498(2) or (3) of the Companies Act 2006. These sections address whether proper accounting records have been kept, whether the Company's accounts are in agreement with those records and whether the auditor has obtained all the information and explanations necessary for the purposes of its audit.

1.2 Basis of consolidation

The consolidated 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.

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, each component of other comprehensive income, and dividends paid 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 2016 interim 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 Company have adequate resources to continue in operational existence for the foreseeable future. Accordingly, they continue to adopt a going concern basis in preparing the financial statements of the Group.

1.4 Functional and presentation currency

The condensed 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"

International Accounting Standard 1 ("IAS 1"), *Presentation of Financial Statements*, provides no definitive guidance as to the format of the income statement, but states key lines which should be disclosed. It also 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. In accordance with IAS 1, the Company has adopted a policy of disclosing separately on the face of its condensed 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. In its adoption of this

1.5 Disclosure of "separately reported items", (continued)

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.

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 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 separately reported.

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.

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.

The operating segment results from continuing operations are presented below.

	Unaudited half year 2016		
	Steel £m	Foundry £m	Continuing Operations £m
Segment revenue	**443.1**	**225.2**	**668.3**
Segment EBITDA (note 15.12)	**46.3**	**32.8**	**79.1**
Segment depreciation	**(13.1)**	**(6.9)**	**(20.0)**
Segment trading profit	**33.2**	**25.9**	**59.1**
Amortisation of acquired intangible assets			**(8.3)**
Restructuring charges			**(5.3)**
Gain on employee benefit plan			**1.0**
Operating profit			**46.5**
Net finance costs			**(7.9)**
Share of post-tax profit of joint ventures			**(0.4)**
Profit before tax			**38.2**
Return on sales margin (%) (note 15.3)	**7.5**	**11.5**	**8.8**
Capital expenditure additions (£m)	**6.7**	**2.7**	**9.4**

Notes to the condensed financial statements

2. Segment information, (continued)

	Unaudited half year 2015		
	Steel £m	Foundry £m	Continuing Operations £m
Segment revenue	476.3	226.3	702.6
Segment EBITDA (note 15.12)	57.7	32.8	90.5
Segment depreciation	(13.2)	(6.9)	(20.1)
Segment trading profit	44.5	25.9	70.4
Amortisation of acquired intangible assets			(8.3)
Restructuring charges			(2.2)
Operating profit			59.9
Net finance costs			(8.0)
Share of post-tax profit of joint ventures			(0.5)
Profit before tax			51.4
Return on sales margin (%) (note 15.3)	9.3	11.5	10.0
Capital expenditure additions (£m)	11.3	4.1	15.4

	Full year 2015		
	Steel £m	Foundry £m	Continuing Operations £m
Segment revenue	897.6	424.4	1,322.0
Segment EBITDA (note 15.12)	103.8	57.3	161.1
Segment depreciation	(24.3)	(12.8)	(37.1)
Segment trading profit	79.5	44.5	124.0
Amortisation of acquired intangible assets			(16.6)
Restructuring charges			(14.6)
Operating profit			92.8
Net finance costs			(15.4)
Profit before tax			77.4
Return on sales margin (%) (note 15.3)	8.9	10.5	9.4
Capital expenditure additions (£m)	24.4	10.6	35.0

3. Restructuring charges

During 2016 charges resulting from the Group wide restructuring programme were £5.3m (2015: half year £3.1m; full year £15.5m) reflecting redundancy costs of £4.9m and consultancy fees of £0.4m. During 2015 these costs were partially offset by a release of onerous lease provisions of £0.5m and a £0.4m release of provisions for potential claims that had since expired.

The remaining restructuring provision as at half year 2016 is £5.3m (2015: half year £6.4m; full year £9.8m) of which £2.9m (2015: half year £3.8m; full year £3.3m) relates to onerous lease costs in respect of leases expiring between one and six years.

4. Net finance costs

Net finance costs for the half year 2016 of £7.9m is analysed in the table below.

	Unaudited Half year 2016 £m	Unaudited Half year 2015 £m	Full year 2015 £m
Interest payable on borrowings			
Loans, overdrafts and factoring arrangements	**7.0**	7.8	14.9
Obligations under finance leases	**0.1**	0.1	0.1
Amortisation of capitalised borrowing costs	**0.3**	0.1	0.4
Total interest payable on borrowings	**7.4**	8.0	15.4
Interest on net retirement benefits obligations	**0.6**	0.5	0.9
Unwinding of discounted provisions	**1.4**	0.5	1.0
Finance Income	**(1.5)**	(1.0)	(1.9)
Net finance costs	**7.9**	8.0	15.4

5. Income tax

The Group's effective tax rate, based on the income tax costs associated with headline performance of £13.1m (2015: half year £15.9m; full year £27.7m), was 25.5% in the first half of 2016 (2015: half year 25.5%; full year 25.5%).

The Group's total income tax costs include a credit of £2.7m (2015: half year £2.4m credit; full year £2.9m credit) relating to separately reported items comprising: a credit of £0.8m (2015: half year £0.5m; full year £4.7m) in relation to restructuring charges; a credit of £1.9m (2015: half year £1.9m; full year £1.5m) relating to the amortisation of acquired intangible assets; and a charge of £nil (2015: half year £nil; full year £3.3m) in respect of the potential recognition of US temporary differences. Tax charged in the Group statement of comprehensive income in the year amounted to £1.4m (2015: half year £0.7m credit; full year £1.6m credit), all of which related to net actuarial gains and losses on employee benefits plans.

6. Earnings per share ("EPS")

6.1 Per share amounts

		Continuing operations pence	**Discontinued operations pence**	**Unaudited Half year 2016 pence**	Continuing operations pence	Discontinued operations pence	Unaudited Half year 2015 pence
Earnings per share	- basic	**9.1**	**-**	**9.1**	13.0	-	13.0
	- headline	**12.8**	**-**	**12.8**	16.0	-	16.0
	- diluted	**9.1**	**-**	**9.1**	13.0	-	13.0
	- diluted headline	**12.7**	**-**	**12.7**	16.0	-	16.0

		Continuing operations pence	Discontinued operations pence	Full year 2015 pence
Earnings per share	- basic	17.6	0.5	18.1
	- headline	28.1	0.5	28.6
	- diluted	17.5	0.6	18.1
	- diluted headline	28.0	0.5	28.5

Notes to the condensed financial statements

6.2 Earnings for EPS

Basic and diluted EPS from continuing operations are based upon the profit from continuing operations of £27.8m (2015: half year £37.9m; full year £52.6m) less non-controlling interests of £3.3m (2015: half year £2.7m; full year £5.2m), being £24.5m (2015: half year £35.2m; full year £47.4m).

Basic and diluted EPS from total operations are based on the total profit attributable to owners of the parent of £24.5m (2015: half year £35.2m; full year £48.8m). Headline and diluted headline EPS are based upon headline profit from continuing operations attributable to owners of the parent of £34.4m (2015: half year £43.3m; full year £75.7m). The table below reconciles these different profit measures:

	Unaudited Half year 2016 £m	Unaudited Half year 2015 £m	Full year 2015 £m
Continuing operations			
Profit attributable to owners of the parent	**24.5**	35.2	47.4
Adjustments for separately reported items:			
Amortisation of acquired intangible assets	**8.3**	8.3	16.6
Restructuring costs	**5.3**	2.2	14.6
Gains relating to employee benefits plans	**(1.0)**	-	-
Profit on disposal of non-current assets	**-**	-	-
Tax relating to separately reported items	**(2.7)**	(2.4)	(2.9)
Headline profit attributable to owners of the parent – continuing operations	**34.4**	43.3	75.7

6.3 Weighted average number of shares

	Unaudited Half year 2016 m	Unaudited Half year 2015 m	Full year 2015 m
For calculating basic and headline EPS	**269.7**	270.0	269.7
Adjustment for dilutive potential ordinary shares	**0.5**	1.1	0.6
For calculating diluted and diluted headline EPS	**270.2**	271.1	270.3

For the purposes of calculating diluted basic 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 dilutive potential ordinary shares 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 earnings per share, or increase loss per share, from continuing operations.

7. Dividends

	Unaudited Half year 2016 £m	Unaudited Half year 2015 £m	Full year 2015 £m
Amounts recognised as dividends and paid to equity holders during the period			
Final dividend for the year ended 31 December 2014 of 11.125p per ordinary share	**-**	30.1	30.1
Interim dividend for the year ended 31 December 2015 of 5.15p per ordinary share	**-**	-	13.8
Final dividend for the year ended 31 December 2015 of 11.125p per ordinary share	**30.0**	-	-
	30.0	30.1	43.9

The Directors have declared an interim dividend of 5.15p per ordinary share in respect of the year ending 31 December 2016. The dividend will be paid on 23 September 2016 to ordinary shareholders on the register at the close of business on 12 August 2016. Based upon the number of ordinary shares in issue at 30 June 2016, the total cost of the dividend would be £13.9m.

8. Prior year acquisitions

On the 15 May 2015, the Group acquired a 100% ownership interest in the Sidermes Group ('Sidermes'), a leading supplier of temperature and chemical measurement solutions. The fair values of the acquired assets and liabilities disclosed as provisional in the 2015 Annual Report in respect of this acquisition have been finalised during the period. The following adjustments have been made, as at the date of acquisition:

	Fair values previously disclosed £m	Adjustments Made £m	Fair value of net assets acquired £m
Consideration transferred			
Cash	24.4	-	24.4
Total consideration transferred	24.4	-	24.4
Identifiable assets acquired and liabilities assumed at fair value			
Inventories	6.7	(0.3)	6.4
Trade and other receivables	6.4	(0.3)	6.1
Property, plant and equipment	5.7	-	5.7
Cash	0.6	-	0.6
Trade and other payables	(3.7)	(0.2)	(3.9)
Deferred tax liability	(1.2)	-	(1.2)
Employee benefits net liabilities	(0.9)	-	(0.9)
Interest bearing borrowings	(0.8)	-	(0.8)
Provisions	(0.3)	(0.1)	(0.4)
Total identifiable net assets at fair value	12.5	(0.9)	11.6
Goodwill	11.9	0.9	12.8

The finalisation of the valuation of net assets on acquisition gave rise to an additional £0.9m of goodwill.

9. Reconciliation of the movement in net debt

		Unaudited			
	Balance at 1 January 2016 £m	**Foreign exchange adjustments £m**	**Non-cash Movements £m**	**Cash flow £m**	**Balance at Half Year 2016 £m**
Cash and cash equivalents					
Cash at bank and in hand	**101.5**	**10.9**	**-**	**21.6**	**134.0**
Bank overdrafts	**(34.5)**	**(4.2)**	**-**	**(3.8)**	**(42.5)**
	67.0	**6.7**	**-**	**17.8**	**91.5**
Borrowings, excluding bank overdrafts					
Current	**(7.5)**	**(0.7)**	**-**	**2.5**	**(5.7)**
Non-current	**(353.3)**	**(37.2)**	**-**	**(7.5)**	**(398.0)**
	(360.8)	**(37.9)**	**-**	**(5.0)**	**(403.7)**
Capitalised borrowing costs	**2.2**	**-**	**(0.3)**	**-**	**1.9**
Net debt	**(291.6)**	**(31.2)**	**(0.3)**	**12.8**	**(310.3)**

Notes to the condensed financial statements

10. Cash generated from operations

	Continuing operations £m	Discontinued operations £m	Unaudited Half year 2016 £m	Continuing Operations £m	Discontinued Operations £m	Unaudited Half year 2015 £m
Operating profit	**46.5**	**-**	**46.5**	59.9	-	59.9
Adjustments for:						
Amortisation of acquired intangible assets	**8.3**	**-**	**8.3**	8.3	-	8.3
Restructuring charges	**5.3**	**-**	**5.3**	2.2	-	2.2
Gain on settlement of employee benefit plan	**(1.0)**	**-**	**(1.0)**	-	-	-
Depreciation	**20.0**	**-**	**20.0**	20.1	-	20.1
EBITDA (note 15.12)	**79.1**	**-**	**79.1**	90.5	-	90.5
Net increase in trade and other working capital	**(4.9)**	**(0.2)**	**(5.1)**	(13.8)	(7.4)	(21.2)
Outflow related to restructuring charges	**(10.2)**	**-**	**(10.2)**	(1.5)	-	(1.5)
Additional pension funding contributions	**(1.0)**	**-**	**(1.0)**	(1.0)	-	(1.0)
Cash generated from operations	**63.0**	**(0.2)**	**62.8**	74.2	(7.4)	66.8

	Continuing Operations £m	Discontinued operations £m	Full year 2015 £m
Operating profit	92.8	1.4	94.2
Adjustments for:			
Amortisation of acquired intangible assets	16.6	-	16.6
Restructuring charges	14.6	-	14.6
Depreciation	37.1	-	37.1
EBITDA (note 15.12)	161.1	1.4	162.5
Net decrease/(increase) in trade and other working capital	0.3	(7.6)	(7.3)
Outflow related to restructuring charges	(11.5)	-	(11.5)
Additional pension funding contributions	(3.7)	-	(3.7)
Cash generated from operations	146.2	(6.2)	140.0

Notes to the condensed financial statements

11. Employee benefits

The net employee benefits balance as at half year 2016 of £54.2m (2015: half year £43.3m; full year £35.3m) in respect of the Group's defined benefit pension and other post-retirement benefit obligations, comprised net surpluses of £65.5m (2015: half year £49.5m; full year £59.9m) and net liabilities of £119.7m (2015: half year £92.8m; full year £95.2m), and results from an interim actuarial valuation of the Group's defined benefit pension and other post-retirement obligations as at that date.

	Unaudited Half Year 2016 £m	Unaudited Half Year* 2015 £m	31 December 2015 £m
Employee benefits – net surpluses			
UK defined benefit pension plan	65.2	49.5	59.5
ROW defined benefit pension plan	0.3	-	0.4
	65.5	49.5	59.9
Employee benefits – net liabilities			
UK defined benefit ex-gratia pension plans	1.7	1.8	1.8
US defined benefit pension plans	47.2	33.5	37.7
Germany defined benefit pension plans	46.2	35.0	36.3
ROW defined benefit pension plans	17.4	17.6	13.7
Other post-retirement benefit obligations	7.2	4.9	5.7
	119.7	92.8	95.2
Employee benefits – total net liabilities	**54.2**	**43.3**	**35.3**

*Restated to reflect the amendments to the acquisition balance sheet of Sidermes spa (note 8)

The total net charges in respect of the Group's defined benefit pension and other post-retirement benefit obligations are shown in the table below:

	Unaudited Half year 2016 £m	Unaudited Half year 2015 £m	Full year 2015 £m
In arriving at trading profit	2.9	3.1	6.4
In arriving at operating profit	(0.8)	0.8	0.8
In arriving at profit before tax – within net finance costs	0.6	0.5	0.9
Total net charge - continuing operations	**2.7**	**4.4**	**8.1**

The net figure of £0.8m credited in arriving at operating profit is comprised of a £0.2m past service cost included in restructuring charges and a £1.0m settlement gain. Both are disclosed under separately reported items in the Group Income Statement.

Cash contributions into the Group's defined benefit pension plans amounted to £2.1m (2015: half year £2.1m; full year £6.9m), which included additional funding contributions of £1.0 m (2015: half year £1.0m; full year £3.7m).

12. Other reserves

Within other reserves as at half year 2016 is £1,499.0m (full year 2015: £1,499.0m) arising from the demerger of Cookson Group plc, being the excess of the Vesuvius plc share capital of £1,777.9m over the total share capital and share premium of Cookson Group plc as at 14 December 2012 of £278.9m. Also included are translation reserves of £114.1m (full year 2015: (£2.3m)) and investment revaluation reserves of £0.6m (full year 2015: £0.6m).

13. 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 condensed financial statements

14. Contingent liabilities

Guarantees given by the Group under property leases of operations disposed of amounted to £1.6m (full year 2015: £1.7m).

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. Reserves 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. 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.

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

15. Non-GAAP financial measures

The Company uses a number of non-Generally Accepted Accounting Practice ("non-GAAP") financial measures in addition to those reported in accordance with IFRS. The Directors believe that these non-GAAP measures, listed below, are important when assessing the underlying financial and operating performance of the Group and its divisions.

15.1 Headline

Headline performance is from continuing operations and before items reported separately on the face of the income statement.

15.2 Underlying

Underlying performance is adjusted to exclude the effects of changes in exchange rates, business acquisitions and disposals.

15.3 Return on sales

Return on sales is calculated as trading profit divided by revenue.

15.4 Trading profit

Trading profit is defined as profit from operations before separately reported items. The Directors believe that trading profit is an important measure of the underlying trading performance of the Group.

15.5 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.

15.6 Effective tax rate

The Group's effective tax rate 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.

15.7 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.

15.8 Operating cash flow

Operating cash flow is cash generated from continuing operations before restructuring, demerger payments and additional pension funding contributions but after deducting capital expenditure net of assets disposals.

15.9 Cash conversion

Cash conversion is calculated as operating cashflow divided by trading profit.

Notes to the condensed financial statements

15.10 Free cash flow

Free cash flow is defined as net cash flow from operating activities after tax, 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. "Recurring free cash flow" is free cash flow before restructuring payments.

15.11 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 annualised revenue for the period. Average trade working capital (comprising inventories, trade receivables, and trade payables) is calculated as the average of the 12 previous month end balances, and annualised revenue is the revenue for the previous 12 months.

15.12 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.

15.13 Net interest

Net interest is calculated as interest payable on borrowings less interest receivable, excluding any item separately reported.

15.14 Interest cover

Interest cover is the ratio of EBITDA to net interest.

15.15 Net debt

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

15.16 Net debt to EBITDA

Net debt to EBITDA is the ratio of net debt at the period-end to EBITDA for the preceding 12 month period.

15.17 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 (being the average over the previous 12 months of property, plant and equipment, trade working capital and other operating receivables and payables).

15.18 Constant rates

Figures presented at constant rates represent December and June 2015 results retranslated at June 2016 exchange rates.

16. Exchange rates

The Group reports its results in pounds sterling. A substantial portion of the Group's revenue and profit 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 period 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 period end rates. The principal exchange rates used were as follows:

	Income and expense Average rates					**Assets and liabilities Period end rates**				
	Half year 2016	**Half year 2015**	Full year 2015	Half year to Half year change	Half year to full year change	**Half year 2016**	**Half year 2015**	Full year 2015	Half year to Half year change	Half year to full year change
US Dollar	**1.44**	**1.52**	1.53	5%	6%	**1.33**	**1.57**	1.47	15%	10%
Euro	**1.29**	**1.37**	1.38	6%	7%	**1.20**	**1.41**	1.36	15%	12%
Chinese Renminbi	**9.38**	**9.47**	9.60	1%	2%	**8.84**	**9.74**	9.57	9%	8%
Japanese Yen	**160.51**	**183.04**	185.07	12%	13%	**137.39**	**192.37**	177.30	28%	23%
Brazilian Real	**5.32**	**4.52**	5.09	(18%)	(5%)	**4.28**	**4.87**	5.84	12%	27%
Indian Rupee	**96.41**	**95.61**	98.00	(1%)	2%	**89.81**	**99.87**	97.56	10%	8%
South African Rand	**22.12**	**18.13**	19.48	(22%)	(14%)	**19.53**	**19.11**	22.79	(2%)	14%

Non-GAAP supplementary information

5 year history at constant currency

	HY 2012	HY 2013	HY 2014	HY 2015	HY 2016
Revenue (£m)	**757.6**	**712.3**	**737.3**	**717.2**	**668.3**
Steel	499.3	480.4	500.6	484.7	443.1
Foundry	258.3	231.9	236.7	232.5	225.2
Trading Profit (£m)	**70.7**	**63.1**	**72.0**	**71.6**	**59.1**
Steel	46.9	39.7	49.0	45.0	33.2
Foundry	23.8	23.4	23.0	26.6	25.9
Return on Sales	**9.3%**	**8.9%**	**9.8%**	**10.0%**	**8.8%**
Steel	9.4%	8.3%	9.8%	9.3%	7.5%
Foundry	9.2%	10.1%	9.7%	11.5%	11.5%