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VESUVIUS PLC

ANNUAL REPORT 2013

Vesuvius plc

Welcome to the annual report of our first full year as an independent company listed on the London Stock Exchange

Vesuvius is a global leader in molten metal flow engineering, principally serving the steel and foundry industries with customised products, services and technologies that make demanding applications possible.

Our mission is to develop innovative solutions that enable our customers to improve the performance of their manufacturing process and reduce energy consumption, whilst providing each employee with a safe workplace where he or she is recognised, developed and properly rewarded.

Our ultimate goal is to deliver sustainable, profitable growth and provide our shareholders with a superior return on their investment.

Look out for these icons

For further information within this document and relevant page numbers

Additional information online at: www.vesuvius.com

Forward-looking statements

This Annual Report contains certain forward-looking statements with respect to the operations, strategy, performance, financial condition, and growth opportunities of the Group. By their nature, these statements involve uncertainty and are based on assumptions and involve risks, uncertainties and other factors that could cause actual results and developments to differ materially from those anticipated. The forward-looking statements reflect knowledge and information available at the date of preparation of this Annual Report and, other than in accordance with its legal and regulatory obligations, the Company undertakes no obligation to update these forward-looking statements. Nothing in this Annual Report should be construed as a profit forecast.

Cover Image: Sample fusion for Xray fluorescence analysis

Group at a Glance

We are a truly global Group, with a business model based upon production at close proximity to our customers

EMEA
Revenue
£672.3m
2012: £671.8m

Americas
Revenue
£481.3m
2012: £499.2m

Asia-Pacific
Revenue
£356.9m
2012: £376.5m

Europe, Middle East and Africa

5,400
Employees

Production sites 36
Sales offices 45
R&D centres 6

Asia-Pacific

2,443
Employees

Production sites 17
Sales offices 28
R&D centres 3

Steel division

The continuous casting of steel is a highly demanding process that is critically dependent upon consistent product quality and optimised production. Vesuvius provides systems, products and services that allow steel mills to control the flow of molten metal in the continuous and ingot casting processes. Our products protect the steel from oxidation and chemical contamination, increasing efficiency and productivity, enhancing quality, reducing environmental footprint and improving the safety of the casting process.

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 furnace, ladle and tundish; slide gate systems; temperature measurement and slag level detection; 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.

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

Foundry division

Vesuvius' Foundry division, trading as Foseco, is a world leader in the supply of consumable products and associated services for use in the foundry casting industry.

The foundry process is highly sequential and, similar to the continuous casting of steel, is critically dependent on consistency of quality and productivity optimisation. The Foundry division's solutions allow foundries to reduce defects (and hence reduce labour-intensive fettling and cleaning), minimise metal usage requirements (hence reducing cost, energy usage and mould size), influence the metal solidification process (increasing metal performance and reducing the weight of pieces) and automate the moulding and casting process for gains in productivity, ease of reproduction and overall yield.

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

Highlights

- Revenue of £1,511m, down 2.4%; down 0.8% on an underlying basis[1] (2012: £1,548m[4])
- Trading profit[3] of £140m, up 6.6% on a reported basis, 10.9% on an underlying basis [1] (2012: £131.3m[4])
- Return on sales[3] improved by 80 basis points to 9.3% (2012: 8.5%[4]); 1 percentage point improvement on an underlying basis
- Significant realignment of portfolio including disposal of Precious Metals Processing division and exit from low-margin businesses
- Share repurchase programme of £30m completed in September 2013
- Year-end net debt[3] reduced to £256m: positive operating cash flow[3] of £150m, cash conversion rate of 107%
- Headline earnings per share[2] of 31.9 pence; up 18% (2012: 27.0 pence[4])
- Final dividend of 10.25 pence per share recommended

[1] Underlying basis is at constant currency and excludes separately reported items and the impact of acquisitions and disposals.

[2] Headline results refer to continuing operations and exclude separately reported items.

[3] For definitions of non-GAAP financial measures, refer to Note 4 of the Financial Statements.

[4] 2012 results have been restated as a result of IAS 19 (Revised) *Employee Benefits*. Refer to Note 2.7 in the Notes to the Financial Statements.

Chairman's Statement

A successful first year for Vesuvius plc

John McDonough CBE
Chairman

I am pleased to be able to report on a successful first year for Vesuvius plc (the "Company"). There is no doubt that your Company has benefited from the independent status and greater focus it has enjoyed since its creation as a result of the demerger of Cookson Group in December 2012. This is reflected both in our very solid trading performance and in the strategic progress achieved.

Since the demerger, the Board has taken important further steps structurally to transform the business. In the first quarter of 2013, we completed the restructuring of the Fused Silica business and in May we completed the disposal of the Precious Metals Processing division. As a result, Vesuvius is now a fully focused molten metal engineering company, principally serving the global steel and foundry industries. We enjoy global leadership positions in those markets, providing technologically advanced products and services that are critical to our customers' efficiency and therefore their profitability.

The benefits of this greater focus and strong competitive positioning can be seen in our financial results for 2013. Against stable but relatively subdued market conditions overall, our profit performance improved over the prior year with, importantly, our margins benefiting from the internal performance improvement initiatives that have been implemented. Cash generation remained strong, and our balance sheet is robust.

Strategy

The Board is responsible for setting the strategic direction of your Company, and for ensuring that the business model, remuneration and all associated key performance indicators are aligned to its successful delivery.

Our strategy, which remains consistent with that set out at the time of the demerger, is to capitalise on our leading position in molten metal flow engineering to create sustainable shareholder value. We aim to do this by:

- 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 where appropriate through carefully evaluated acquisitions, an increasingly comprehensive product and technical services offering.

Our flexible business model is capable of delivering attractive levels of profit and cash over the cycle and in the face of changing market conditions. Firm financial and capital discipline is a central strategic priority.

Further detail on our strategy, and on its execution during 2013, is set out within the Strategic Report on pages 10 to 47.

Dividend

The Board has recommended a final dividend of 10.25 pence per share for 2013. This would result in a total dividend for the year of 15 pence per share, an increase on Vesuvius' share of the full year Cookson Group dividend for 2012 of 5.3%. The final dividend, if approved at the Annual General Meeting, will be paid on 23 May 2014 to shareholders on the register at 25 April 2014.

Vesuvius is a cash generative and well-invested business. Our dividend policy aims to deliver long-term dividend growth, provided that this is supported by underlying earnings, cash flows, capital expenditure requirements and the prevailing market outlook.

Capital Discipline

Alongside dividends, capital discipline plays a part in our commitment to delivering superior returns to our shareholders. Having completed the disposal of the Precious Metals Processing division for €56.8 million in May 2013, the Company returned some £30 million of those proceeds to shareholders by way of an on-market share repurchase programme which concluded in September, with the balance being applied to the reduction of net debt. Consequently, during the year we returned £70 million to shareholders as a result of the payment of dividends and the repurchase of our shares.

In December, we further strengthened our financial position through the issue of c.US$100 million of US Private Placement loan notes with a good mix of maturities out to 2028. With our balance sheet strength and cash generative characteristics, we remain in a strong position to fund attractive future growth opportunities.

Reporting

The Board has concluded that this Annual Report is fair, balanced and understandable, and that it provides the necessary information for shareholders to assess the Group's strategy, business model and performance, as well as our approach to and performance in the important areas of gender diversity, human rights, environmental impact and specifically our direct carbon emissions. Further detail on these can be found within the Strategic Report referred to above.

Board Composition

A substantially new Board of Directors was appointed in late 2012 as a result of the demerger and strengthened further on 1 March 2013 by the appointment of Nelda Connors as a Non-executive Director. Having served nine years as Non-executive Directors of Cookson Group plc prior to the demerger, both John Sussens and Jan Oosterveld retired from the Board, as planned, at the close of the Annual General Meeting on 4 June 2013. I would like to thank them for their considerable contribution to the successful start-up of Vesuvius plc. John Sussens was succeeded as Senior Independent Director by Jeff Hewitt and as Chair of the Remuneration Committee by Jane Hinkley. There have been no further changes to the Board since that date. With our strong diversity and appropriate mix of skills and experience, I am confident that the Board has operated effectively in its first full year.

In September 2013, Henry Knowles was appointed as Company Secretary and General Counsel, succeeding Richard Malthouse. On behalf of the Board, I thank Richard for his important contribution to the Company over many years.

The composition, responsibilities and operation of the Board, and Directors' Biographies are set out within the Governance Report on pages 54 to 60 and 50 to 51, respectively.

Governance

The Board is responsible for setting Group strategy and charging the executive with the delivery of that strategy, including the management of resources and associated risks and controls. Given the broad international spread of the business, the Board considers that risk management is a significant priority and consequently places considerable emphasis on this area within its overall governance agenda.

Throughout 2013 we have operated under a robust governance structure which also complied with the UK Corporate Governance Code. We continue to evolve our governance arrangements to comply with emerging best practice and we firmly believe that strong corporate governance is central to the delivery of sustainable long-term shareholder value.

The Board is committed to embedding the right culture throughout the Group and the Company's Code of Conduct clearly sets out the values and behaviour that we expect from all our people. Further details are set out on page 39 of the Strategic Report.

Annual General Meeting

The Annual General Meeting will be held at 11.00 am on 15 May 2014 at the Lincoln Centre, 18 Lincoln's Inn Fields, London. The Notice of the Meeting and explanatory notes accompany this Annual Report. I look forward to the opportunity to meet as many of our shareholders as possible at that time.

Our People

Our success over the past year has been in large part down to the talent and efforts of our people. We continue to invest in our people – in their training, development (see pages 39 to 43), and in their health and safety on which we continue to place increasing emphasis, as reported on pages 32 and 33.

On behalf of the Board, I would like to thank all our people for their significant contribution to a very successful first year as a stand-alone company.

John McDonough CBE
Chairman

4 March 2014

STRATEGIC REPORT

The Strategic Report set out on pages 10 to 47 contains a fair review of our businesses, our strategy, our business model and the associated principal risks and uncertainties. We also deliver a review of our performance during our first full year as an independent company and set out an overview of our markets. Details of our people, values and approach to Corporate Responsibility are also contained in the report. This section shows how we are well positioned to grow and to deliver superior returns to shareholders.

François Wanecq
Chief Executive

Chris O'Shea
Chief Financial Officer

Chief Executive's Review

In 2013 we have strengthened the platform from which to pursue our growth strategy

François Wanecq
Chief Executive

In our first complete year as an independent company, we have successfully initiated the recovery of margins across the Group despite the unfavourable economic environment. Market conditions remained challenging in 2013 continuing from the reduced levels of activity seen in the second half of 2012, and sterling strengthened substantially in the second half of 2013, impacting our reported growth numbers. Against this backdrop we have taken a disciplined approach to implementing our stated strategy. We streamlined our business portfolio and activities, exiting non-core low-margin businesses, further improved the quality of our products and services and implemented self-help measures to increase the productivity of our own businesses. The result is improved profitability, strong cash flow and a more focused Group. This gives us a strong platform from which to pursue our growth strategy.

Group Trading Performance

Group revenue from our continuing operations was £1,511million, a reduction of 2.4% compared to 2012. Underlying revenue, excluding impact of exchange rate movements, acquisitions and disposals, declined by 0.8%. Trading profit for the year was £140.0 million, up 6.6% from £131.3 million in 2012, up 10.9% on an underlying basis, reflecting the success of management's focus on self-help initiatives in light of continuing weak market conditions.

Market Trends and Business Performance

Our business comprises two divisions, Steel and Foundry, with the Steel division operated as two principal product lines, Steel Flow Control and Advanced Refractories. Divisional reports are set out on pages 24 to 31 of this Strategic Report.

Steel Division

After steep downturns in the steel industry in mid-2012, activity stabilised at those lower levels through the second half of 2013. Whilst world steel production grew by 4.8% driven primarily by growth in China, volumes outside China were flat, with year-on-year production reductions of 2.3% and 1.9% in the EU and the USA, respectively. To date, the Chinese steel market has been predominantly focused on 'long' products for use in infrastructure and construction, the production of which requires fewer Vesuvius products. In the coming years, with the evolution towards a more consumer-driven economy, a significant restructuring of the Chinese steel industry is anticipated, leading to a greater focus on quality and performance rather than volume. This will require more 'flat' steel production, and with our advanced process-enhancing solutions, we are in a very good position to participate in this development.

Revenue performance in the Steel division remained broadly flat versus 2012, with the effect of disposals offsetting underlying growth of 1.9%. The division reported a 6.7% improvement in trading profit, and a 9.9% increase in underlying profits. This also demonstrates that the self-help initiatives and streamlining of the portfolio, implemented from mid-2012 and throughout the year, has improved the strength of the underlying business.

Steel Flow Control

Steel Flow Control products supplied by Vesuvius include: the Viso™ product range, which are isostatically pressed alumina graphite refractories; slide-gate refractories; temperature measurement and slag level detection; fluxes; and control devices to monitor and regulate steel flow. The majority of these products are consumed during the process of making steel. Consequently, demand for Vesuvius' products is primarily linked to steel production volumes, with global steel representing almost 100% of the end-market for Vesuvius' Steel Flow Control products.

In the face of overall subdued market conditions outside China we delivered top line growth and performed ahead of the underlying steel production trend. We were able to do so because of our ability to innovate and to help customers improve process productivity and therefore extract more value from their products. This capability is particularly valued by customers in periods when their focus is on quality and cost rather than on volume.

Underlying Steel Flow Control revenue in the Americas and EMEA was broadly in line with the underlying steel production trend. Steel production in the Americas was 2.1% lower than in 2012, with US and Brazilian steel output lower by 1.9% and 1.5%, respectively. In EMEA, steel production was 0.1% lower than in 2012, with a 2.4% reduction in Europe and C.I.S, more than ofsetting a 20.7% increase in the Middle East and Africa. Revenue in EMEA grew 5.4% despite a lack of underlying market growth, owing predominantly to increased sales in the Middle East and in the UK and strong sales of fluxes through Metallurgica, a recent acquisition which was integrated successfully in 2013.

Trading in Asia-Pacific, however, showed stronger progression versus 2012. Growth in the Indian steel market (volumes up 5.9% versus 2012), following the start-up of new capacity which uses our higher value technology solutions, and increased penetration of our products in South Korea contributed to revenue growth in Asia-Pacific of 6.5%.

During the year we successfully commissioned our first robotic handling operation for Hyundai in Korea. This system brings reliability and speed to the steel production process whilst improving quality through a more precise and repeatable sequence of operations. It also enhances safety at our customers' facilities by allowing them to isolate employees from a dangerous work environment.

In conjunction with this improved penetration of new products and solutions, the Steel Flow Control product line commissioned an extension of its successful Viso™ operation at Trinec in the Czech Republic, and an integrated raw material mixing facility in Brazil. The latter will allow us to take advantage of local raw materials in local currency and to reduce our carbon footprint through more efficient logistics.

Advanced Refractories

The Vesuvius Advanced Refractories product line offers a full range of specialist refractory materials for lining steelmaking vessels such as blast furnaces, ladles and tundishes, and for applications in other high temperature process industries.

As previously outlined, a change in focus has been adopted for the Advanced Refractories product line to concentrate on more differentiated, higher-margin products and solutions. In line with this strategy, non-core low-margin businesses in Germany and Canada were disposed of in February and July 2013, respectively.

Revenue in the Americas and EMEA were each 1.8% lower than 2012, owing primarily to the initiative to withdraw from non-core low-margin business which more than offset the effect of increased penetration of our more specialised solutions.

In Asia-Pacific, revenue was down by 8.9%, reflecting the impact of the disposal in 2012 of the Andreco-Hurll construction business in Australia, which more than offset underlying growth.

A positive development was the increased penetration achieved by our ELBY™ ladle bottom, a product which allows steel makers to maximise the quantity of clean steel they can tap from a ladle before slag pollution occurs. Having already been well received in the North American market, this concept is now gaining traction in Europe and Asia-Pacific.

In addition, two new plants were commissioned in Port Kembla (Australia) and in Ras al Khaima (United Arab Emirates). These are now ramping up production and sales in line with expectations.

Combined, these developments clearly demonstrate our innovative approach, our focused investment, and our ability to deliver more engineering services to our customers in addition to the sale of our technologically advanced consumables.

Foundry Division

The Foundry division of Vesuvius, trading under the Foseco brand, is a world leader in the supply of consumable products and services to the global foundry industry, which produces castings used in a wide variety of engineered components. Some 40% of castings are produced for the vehicle sector, comprising approximately 25% for cars and light trucks ("light vehicle") and 15% for heavy trucks. Other end-markets include machinery for the construction, agriculture and mining industries, power generation equipment, railroad and general engineering.

The foundry market was significantly impacted in 2013 by the difficulties in the mining industry and, in particular, the reduction of investment spending in the extraction of hard rock metallic ores. This impacted sales in the USA, Brazil and Australia in particular. Furthermore, the truck and railroad markets remained stagnant, and the overall market in India and ASEAN was disappointing. However, Vesuvius' Foundry division made good progress in China where our solutions started to gain wider adoption.

Revenue in the Foundry division was down 7.0% year-on-year, reflecting the reduced end-market activity and the restructuring of the Fused Silica product line.

Profitability, meanwhile, has improved during the period, with trading profit up 6.4% (12.6% on an underlying basis) and return on sales margin improving from 9.1% to 10.4%, demonstrating that self-help initiatives to improve flexibility, including stemming the losses from the Solar Crucibles business, have increased the division's resilience to end-market cycles.

Revenues in all three regions were lower than in 2012, owing to the challenging end-market conditions seen globally across the foundry casting industry.

In the Americas, despite growth in the Brazilian truck industry, revenue was down 8.2% reflecting a 3% reduction in truck production in NAFTA and the lower volumes experienced by the US railroad and mining industries.

Revenue in EMEA was 3.5% lower than in 2012, reflecting a 3% reduction in German light vehicle production and European truck production volumes being lower by 4% year-on-year.

In Asia-Pacific, 11% growth in Chinese light vehicle output was offset by a 4% and 14% reduction in Japanese and Indian car production, respectively. Additionally, the foundry sector in Australia was affected by the reduced investment in the mining industry.

We continue to mitigate the effects of these challenging end-market conditions through manufacturing efficiency programmes and by maintaining the strength of the division's differentiated offering.

Chief Executive's Review continued

Construction of a new manufacturing plant for foundry products in ChangShu, China commenced during the year, with completion of Phase One expected in mid-2014.

In the Fused Silica product line, our glass roller business made good progress, benefiting from investments related to vehicle manufacturing in China and the USA.

Self-Help Initiatives

Within an uncertain environment, we have retained our focus on self-help actions to improve our performance. We have initiated a focus on quality in all business segments across the Group. Significant improvement was recorded in our Chinese steel operations and new business was successfully initiated in Korea.

As a result of our significant restructuring work the Fused Silica product line recovered from the substantial challenges experienced in 2012 in the Solar Crucibles product line.

Across the Group, specific effort was also dedicated to inventory reduction. Significant improvements were experienced across the business, most notably in Foundry. We look forward to continuing this progress in 2014. Together, these actions generate savings in the cost of handling, warehousing and rejects, and improve our overall productivity.

This emphasis on self-help has been rewarded by productivity gains in both divisions, with margins progressing markedly despite the weak market conditions and significant headwinds from foreign exchange rate fluctuation towards the end of the year. Overall margins progressed from 8.5% in 2012 to 9.3% in 2013; underlying margins increased by 1.0%.

Our successful efforts in inventory reduction together with good control of receivables allowed us to generate a substantial level of cash flow, with a cash conversion rate of 107%.

Details of our programme of excellence, encapsulating our Lean Programme, and focus on quality and safety are set out later in this Strategic Report.

Portfolio Management and Capital Allocation

Our strategy, and the focus of our management team, is to grow those activities where we can develop and exploit synergies from existing technological and market expertise. We are also committed to maintaining a robust balance sheet, and to delivering long-term dividend growth for our shareholders.

Following the demerger, we resolved to refocus Vesuvius on the businesses where we can offer a unique value proposition and differentiation from the competition. In May, we completed the disposal of the Precious Metals Processing division which had no fit with our core business of molten metal flow engineering, and which carried significant metal financing requirements. The majority of the proceeds of the transaction were returned to shareholders through a £30 million share buy-back as a sign that we are committed to delivering attractive returns to our shareholders.

We sold our German brick production business, VGT-Dyko, in February 2013 and our Canadian construction business in July 2013, thereby increasing the focus of our Advanced Refractories product line on higher margin segments.

Capital expenditure of £48 million represented 3.2% of revenue, with the focus being on expanding our capacity in emerging economies and extending our research centres.

Health and Safety

The Board places great emphasis on the importance of health and safety in the workplace and in the communities in which we operate. We measure the Lost Time Incidents Frequency Rate as a key indicator of our performance. Safety is of paramount importance as our employees often operate in harsh environments. Whilst we are constantly evolving and improving our safety programmes, we did not achieve our targets in the reduction of accidents in 2013. Very regrettably, one of our colleagues lost his life in April 2013, in a work-related incident at our Chicago Heights, Illinois, facility. It is important that, at the most senior level, we formally acknowledge and reaffirm our objective of zero accidents in the workplace. Further details of our safety programme are set out on pages 32 and 33 of this Strategic Report.

A Renewed Senior Management Team

The overall progress made in our first year owes much to the good understanding that has been developed between our new, focused Board of Directors and our widely renewed management team. Of the ten-strong Group Executive Committee, three are in their first year of tenure and three others have served less than three years in their present roles.

This executive team is engaged in re-examining all our past practices and in ensuring quality, consistency and technology are embedded at the heart of everything we do. This will be central to our success in reinforcing and growing our share of our targeted market segments. In June 2013, we launched our Group-wide plan to deliver a step change in our Quality performance. Significant progress has already been made, most notably in our Advanced Refractories product line, and within our operations in China.

The Group's overall strategy, reconfirmed by the Board in June, places particular emphasis on technology. A new worldwide research centre for Foundry is being established in Enschede, in the Netherlands, to be commissioned in mid-2014 and, in October, George Coulston (PhD, MBA) joined the Group as Chief Technology Officer to drive forward this increased focus on technology development. We continue to focus on annual R&D spend as a KPI.

Outlook

We expect the underlying trading environment during 2014 to be broadly similar to that experienced in 2013.

We are progressing with our plan to improve operational efficiency across the Group. These actions should continue to drive improvement in our trading margins and working capital performance in 2014. If the recent strength of sterling continues it will have a negative impact on our reported growth in 2014.

Our primary objectives for the medium term are to improve margins further, increase investment in research and development, sustain our global leadership in core businesses, grow further our presence in China, retain a strong balance sheet in order to give us financial flexibility, and progress our overall strategy of providing superior technical products and services for the steel and foundry industries.

François Wanecq
Chief Executive
4 March 2014

Financial Review

We have delivered improved profitability, strong cash flow, a robust balance sheet and a more focused Group

Since the demerger we have been busy on a number of fronts: streamlining and focusing the asset portfolio; improving operating margins; increasing cash flow; and strengthening the balance sheet. We have made significant progress in each of these key areas during the year, all of which underpin our ability to provide superior returns to our shareholders.

In line with our strategy of focusing the portfolio, in 2013 we completed the disposal of the Precious Metals Processing division and other lower margin businesses.

In 2013 we improved our performance with underlying operating margins improving by 1 percentage point from 8.3% in 2012 to 9.3% in 2013 despite the reduced activity levels experienced in the second half of 2012 continuing throughout 2013. We remain confident in our ability to deliver further margin improvement in the coming years by continuing to focus on improving our financial and operational flexibility. As indicated in our principal risks section (see pages 18 and 19), we consider end-market cyclicality to be a significant concern. This financial and operational flexibility will ensure that we are able to react appropriately, and quickly, to changes in end-market conditions.

As set out in our KPIs on page 17, we consider cash flow as a primary measure of success. Our continued efforts to focus the business in this area are bearing fruit, with a cash conversion ratio of 107% in 2013, meaning that for each £100 of trading profit, we generated operating cash flow after capital expenditure of £107. This contributed to a 13% reduction in our net debt to £256 million.

This reduction in net debt, together with a further improvement in the funding position of our defined benefit pension plans, has contributed to a strengthening of our balance sheet. This enabled us to raise new long-term debt on attractive terms in the second half of the year, increasing the maturity profile of our debt and thus, in line with mitigations noted in our principal risks section (see pages 18 and 19), reducing refinancing risks in future years.

During the year we returned £70 million to shareholders through dividends and a share repurchase programme, thereby returning the majority of the net proceeds of the disposal of the Precious Metals Processing division to shareholders.

With net debt of £256 million and committed debt facilities of £637 million with maturities out to 2028, we have a strong balance sheet. At the end of the year net debt represented 1.4 times 2013 EBITDA (Earnings before Interest, Taxes, Depreciation and Amortisation), well within our debt covenants. Our business is strongly cash generative with relatively low capital intensity. In short, we are well positioned to invest in organic projects, fund attractive acquisition opportunities as they arise, and provide superior returns to shareholders.

The following review considers our financial KPIs, our financial risks, and sets out other relevant financial information.

Basis of preparation

Please see Note 2.6 of the Financial Statements on page 97. All references in this review are to Headline Performance unless otherwise noted. All comparatives have been restated as noted in Note 2.7 of the Financial Statements on page 97.

Dividend

In line with the dividend policy outlined by the Chairman on page 6, the Board has recommended a final dividend of 10.25 pence per share. Together with the interim dividend paid during 2013, this will bring the full year dividend to 15 pence per share, an increase of 5.3% on Vesuvius' share of the 2012 Cookson Group plc dividend.

Financial Review continued

Financial KPIs

Underlying revenue growth

We look at underlying (or organic) movements in our results to establish meaningful period-on-period comparisons. Underlying movements are calculated by:

- restating the previous period's results at the same foreign exchange 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 the current year
- assuming acquisitions made in the prior year were made on the first day of that period.

Group revenue of £1,511 million was 2.4% lower than 2012 (£1,548 million); underlying revenues fell by 0.8% reflecting the fact that the strong market conditions experienced in the first half of 2012 were not repeated in 2013, with reductions in the Foundry division more than offsetting underlying growth in the Steel division.

Trading profit and return on sales

The underlying trading performance of the Group is measured by both the trading profit in absolute terms, and as a percentage of sales (return on sales). Trading profit of £140 million was 6.6% ahead of 2012 (£131 million); on an underlying basis, trading profit increased by 10.9%.

In the Steel division, trading profit increased from £83 million in 2012 to £89 million in 2013; on an underlying basis, trading profit increased by 9.9% with return on sales increasing from 8.1% to 8.7%. These results reflect a substantial improvement in underlying profits in the Advanced Refractories product line and the impact of a lower bad debt charge.

In the Foundry division, trading profit increased from £48 million in 2012 to £51 million in 2013; on an underlying basis, trading profit increased by 12.6% with return on sales increasing from 8.7% to 10.4%. These results reflect the elimination of the losses in the Solar Crucibles product line, which was partially offset by an underlying reduction in other Foundry activity which fed through into profitability.

Free Cash Flow	**2013 £m**	2012 £m
Recurring free cash flow	**108**	78
Demerger & restructuring expenses	**(13)**	(24)
Discontinued operations	**(10)**	3
Net free cash flow	**85**	57

Headline PBT and EPS

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

Net finance costs of £17 million comprised £16 million of net interest payable on borrowings (2012: £22 million), £2 million on retirement benefit plans (2012: nil), and £1 million relating to the unwinding of discounts on provisions (2012: £2 million); this was partially offset by £2 million (2012: £2 million) of finance income which principally comprised interest income.

The net interest payable on borrowings in 2012 includes substantially all interest costs relating to the former Cookson Group as all such costs were incurred by companies which remained with Vesuvius following the demerger. We estimate that net interest payable on borrowings in 2012 would have been £16 million had Vesuvius been a stand-alone entity throughout 2012.

Headline PBT, including our share of the profits of joint ventures of £2.5 million (2012: £0.1million) has increased by 14% to £125 million (2012: £110 million).

Headline EPS has grown from 27.0 pence per share to 31.9 pence per share, reflecting the increased profitability of the Group, the lower effective tax rate (26.5%; 2012: 27%) and the impact of the share repurchase programme which reduced the number of shares.

Free cash flow and working capital

Free cash flow is used to assess the underlying cash generation of the Group, which is impacted by the working capital employed in the business. In order to drive sustained performance in working capital management we measure performance on a 12 month moving average basis at constant exchange rates.

On this basis, trade working capital as a percentage of sales was 24.7% in 2013, a reduction of 1.9 percentage points on 2012 (26.6%). Inventory days reduced from 85 days of cost of sales at the end of 2012 to 77 days at the end of 2013, with debtor days reducing from 74 days of sales at the end of 2012 to 73 days at the end of 2013.

Operating cash flow was £150 million in 2013 (2012: £133 million), which represents a cash conversion rate of 107% (2012: 101%) in relation to trading profit from continuing operations. Our focus on working capital has led to a net cash inflow from trade and other working capital of £16 million in the year relating to continuing operations, repeating the strong performance in 2012, where the net inflow was £13 million. Free cash flow from continuing operations, before restructuring and demerger costs, of £108 million was generated in the year (2012: £78 million).

Return on net assets

Return on net assets ("RONA") is used to assess the underlying financial performance of the Group. RONA is affected both by the assets employed by the business, and the returns earned by the business. In 2013, a combination of the reduction in working capital and the improvement in profitability led to an increase in Group pre-tax RONA to 24.4% (2012: 19.5%).

Net debt and interest cover

The Group's debt facilities have financial covenants with specific limits on the ratios of Net Debt to EBITDA (maximum 3 times limit) and EBITDA to Interest (minimum 4 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 end of 2013, the Net Debt to EBITDA ratio was 1.4, with EBITDA covering net interest paid 13.0 times; accordingly, the Group was well within its covenants.

Net Debt	2013 £m	2012 £m
Drawings — Committed Facilities	**308**	421
Drawings — Uncommitted Facilities	**19**	9
	327	430
Cash & short-term deposits	**(68)**	(130)
Capitalised borrowing costs	**(3)**	(5)
Net debt	**256**	295

At the end of the year we had £637 million of gross committed debt facilities (2012:£579 million), of which £329 million was unutilised (2012: £158 million). Our net debt stood at 256 million at the end of 2013, a reduction of £39 million in the year. As part of a process to increase the efficiency of the utilisation of our facilities, we have reduced the cash and short-term deposits held to £68 million at the end of 2013 (2012: £130 million).

We keep our capital structure under regular review, and we took advantage of favourable market conditions and strong demand for our credit to raise new long-term fixed rate debt on the US Private Placement market on attractive terms as follows:

- €15 million at 3.46% maturing in December 2021
- US$30 million at 4.61% maturing in December 2023
- €15 million at 3.93% maturing in December 2025
- US$30 million at 4.96% maturing in December 2028.

As a result, at the end of 2013 one-third of our committed debt facilities comprised long-term fixed rate facilities, with the remainder being the £425 million multi-currency revolving credit facility which runs until April 2016.

Gross borrowings at the end of 2013 amounted to £327 million. Of this, approximately two-thirds is long-term fixed rate debt, with the remainder floating rate. The currency split of the borrowings is approximately one-third in each of euros, US dollars, and sterling.

Financial risk factors

There are two main financial risk factors. End-market cyclicality is discussed in the introduction to this section on page 13. In addition, the Group faces risks relating to foreign exchange, capital market, interest rate and inflation uncertainties. Despite the mitigations described on page 19, we operate in many countries and, as such, our reported results vary with foreign exchange rates. When sterling strengthens against a currency, our revenues and profits as reported in sterling are reduced; however, the underlying revenues and profits in the local currency are unaffected.

The second half of 2013 saw a strengthening of sterling against a number of our important trading currencies, most notably the Indian rupee and the Brazilian real. This, coupled with the weakness experienced throughout the year in the Japanese yen and the South African rand, more than offset the effects of a stronger US dollar, euro, and renminbi. The combined effects of these foreign exchange movements served to constrain our growth in profits. We continue to monitor this closely, and where possible seek to balance our cost and revenue base in similar currencies to minimise exposure. As with all international companies, and particularly ones like ours focused on growth in emerging markets, this continues to be an area of attention.

Other relevant financial information

Trading Results – Discontinued Operations

The results of the Precious Metals Processing division up to the date of disposal (31 May 2013) are reported as discontinued operations in 2013. In 2012 the consolidated results of the Alent plc group of businesses up to 18 December 2012, plus the results of the Precious Metals Processing division were reported as discontinued operations.

Revenue in the Precious Metals Processing division for 2013 was £65 million, down from £190 million in 2012, reflecting the disposals of the European business on 31 May 2013 and the US business on 1 May 2012. Trading profit for the year of £14 million (2012: £17 million) reflected weaker end-market conditions in 2013 together with the effect of the business disposals. Included within trading profit is £10 million relating to the release of a provision following the successful conclusion of a UK VAT dispute.

Total revenue of Alent plc for the period up to the 18 December 2012 was £698 million, with trading profit of £100 million.

Restructuring

The restructuring charge in 2013 of £4 million principally comprises costs relating to the relocation of a Steel division production facility in Australia, the closure and relocation costs relating to two Foundry production sites in China, and some trailing costs relating to prior restructuring programmes. Around one-third of this charge is non-cash.

The restructuring charge in 2012 of £57 million principally related to the restructuring of the Solar Crucibles business, with around 80% representing non-cash asset write-offs.

Taxation

The headline effective income tax rate for the year reduced to 26.5% (2012: 27.0%).

The income tax credit on separately reported items principally consists of non-cash deferred tax movements relating to the amortisation of a deferred liability arising from the acquisition of Foseco plc in 2008 (£7 million; 2012: £7 million), and the recognition of a deferred tax asset due to the forecast utilisation of US tax losses incurred in prior years (£29 million). Due to the uncertain nature of future profitability we have recognised an asset equivalent to the estimated profitability in the three coming years.

During the year the major part of a dispute with the UK tax authorities over VAT on metal purchases relating to the Precious Metals Processing division was resolved in our favour, resulting in the release of a provision of £10 million held in relation to this matter. This has been included in the results from discontinued operations. Further details are set out in Notes 25 and 37 to the Financial Statements.

Capital expenditure

Capital expenditure in 2013 of £48 million (2012: £57 million) comprised £29 million (2012: £38 million) in the Steel division and £19 million (2012: £19 million) in the Foundry division. This represented 3.2% of revenue (2012: 3.7%).

Financial Review continued

Pensions

The net pension deficit in our post-retirement employee benefits plans reduced during the year from £69 million to £48 million, with the reduction coming primarily from employer contributions (£15 million) and gains on plan assets (£9 million), partially offset by service charges, administration costs and finance costs.

The triennial valuation of the UK plan as at 31 December 2012 was agreed during 2013. This showed the plan had a funding surplus of £11 million. As a result of this valuation, we ceased obligatory contributions to the plan in July 2013 and agreed with the Trustee, on a non-binding basis, to make payments of £2 million per annum from 1 January 2014 to build further the strength of the plan.

The funding surplus of £11 million is equivalent to the accounting surplus of £23.3 million at the end of 2012. The difference reflects the use of more conservative assumptions for the funding basis than is allowed for the accounting basis.

Our activities to reduce Vesuvius' exposure to defined benefit pension risks continue and in early 2014 we are transferring the liabilities for members who have retired since July 2012 to Pension Insurance Corporation ("PIC"), under the terms of an extension to the original buy-in agreement signed with PIC in 2012.

This extension provides that UK plan members who retire up to the end of 2015 will have their pensions insured on agreed terms. This agreement covers up to £30 million of liabilities, with the future premium payments to be met from the existing assets of the UK plan. As a result, we expect around 65% of the total UK plan liabilities will be covered by these agreements with PIC.

Corporate activity

On 31 May 2013 we completed the disposal of the Precious Metals Processing division for a cash consideration of €56.8 million. The results of this business prior to disposal have been reported as discontinued operations.

Our non-core German brick manufacturing business, VGT-Dyko, was disposed of in February 2013. In August 2013 we announced the disposal of our construction and installation business in Canada which follows the disposal of a similar business in Australia in 2012.

During 2013, no businesses were acquired as we focused on putting in motion the actions required to improve the profitability of the base business. Metallurgica was acquired in 2012 for £28 million. It is one of the world's leading suppliers of fluxes - a range of powders used together with refractory products in the enclosed continuous casting process. Profit margins in Metallurgica improved in 2013 following the integration of the business into Vesuvius. With improvements in margins also achieved in 2012, this highlights the synergies achievable from acquiring such complementary businesses.

Share buy-back

During the year we committed to returning the majority of the net disposal proceeds of the Precious Metals Processing division to shareholders by way of an on-market repurchase of shares. The net proceeds from the disposal amounted to £37 million, comprising the cash-free debt-free gross proceeds of £47 million less the cash consumed by the business operations in the period prior to disposal, which amounted to £10 million. Of this, £30 million was used to repurchase 7,271,174 shares currently held in treasury at an average price, including transaction costs, of 412.59 pence per share between 5 June 2013 and 17 September 2013.

Additionally, during the year the Employee Share Ownership Trust ("ESOT") purchased 851,736 shares at an average price, including transaction costs, of 479.77 pence per share. These shares were purchased by the ESOT partially to cover the anticipated vesting of current share-based incentive awards. Subsequent to the year-end, the EBT purchased a further 82,152 shares at an average price, including transaction costs, of 503.52 pence per share.

Chris O'Shea
Chief Financial Officer
4 March 2014

Pension and other post retirement schemes	2013 £m	2012 £m
Pension Deficits		
US	**23.3**	35.2
Germany	**32.6**	33.0
Rest of World	**11.3**	15.4
UK ex gratia	**1.3**	1.2
	68.5	84.8
Pension Surplus		
UK	**(28.7)**	(23.3)
Net deficit on pension schemes	**39.8**	61.5
Net deficit on other post retirement benefit plans	**8.1**	7.3
Net deficit on pension and other post retirement schemes	**47.9**	68.8

Key Performance Indicators

Vesuvius' Board and executives monitor both financial and non-financial performance indicators to measure the Group's performance over time

Non-Financial KPIs	Purpose	2013 performance vs 2012
Lost time injury frequency	• Measures progress towards the Group's goal of zero work-related injuries and illness	• The number of work-related illnesses or injuries which resulted in an employee being absent from work for at least one day, per million hours worked remained at 1.8 (2012: 1.8)
Research and development ("R&D") spend	• Monitored to ensure that adequate resources are being invested to maintain the Group's strong pipeline of new products and services	• R&D spend: £26.7m (2012: 24.5m)
Total energy consumption	• Measured as part of the Group's programme to reduce energy usage and the associated carbon emissions	• Energy usage in manufacturing operations: - Gas use down 3.0% - Electricity use down 1.6%

Financial KPIs	Purpose	2013 performance vs 2012
Underlying revenue growth	• Provides an important indicator of organic or "like-for-like" growth of Group businesses between reporting periods. This measure eliminates the impact of exchange rates, acquisitions, disposals and significant business closures	• Underlying revenue growth: - Group down 0.8% - Steel up 1.9% - Foundry down 6.0%
Trading profit, return on sales ("ROS")	• Used to assess the trading performance of Group businesses	• Continuing operations: - Group trading profit: £140.0m up 6.6% - ROS: 9.3% up 80 basis points
Headline profit before tax ("PBT") and headline earnings per share ("EPS")	• Used to assess the financial performance and earnings capacity of the Group as a whole	• Headline PBT: £125.2m up 14.1% • Headline EPS: 31.9p up 18.1%
Free cash flow and average working capital to sales ratio	• Free cash flow is used to assess the underlying cash generation of the Group. One of the factors driving the generation of free cash flow is the average working capital to sales ratio, which indicates the level of working capital used in the business	• Continuing operations: - Free cash flow: £94.9m (2012: £54.2m) - Average working capital to sales of 24.7% (2012: 26.6%)
Return on net assets ("RONA")	• Used to assess the financial performance of the Group	• Group RONA: 24.4% vs 19.5% in 2012
Interest cover ratio and ratio of net debt to EBITDA	• Both ratios are used to assess the financial position of the Group and its ability to fund future growth	• Interest cover: 13.0 times • Net debt to EBITDA: 1.4 times

Principal Risks and Uncertainties

The Group faces various risks, both internal and external, which could significantly impact long-term performance

The Board is responsible for the Group's risk management and assessment of the measures used in managing risk across the Group. Vesuvius operates a continuous process for identifying, evaluating and managing significant risks and regular reports are made to the Board on the process of how these are being managed. Thus, the Board receives regular reports on major issues that have arisen during the year, can make an assessment of how the risks have changed over any given period, and can assess whether they are being effectively managed. Where practical, risks are managed in order to mitigate exposure and, where cost effective, the risk is transferred to insurers.

The risks identified below are those seen by the Board as being the most relevant to the Group in relation to their possible impact on achieving its strategic objectives.

All of the risks set out below 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. The risks below are not the only ones that the Group will face. Some risks are not yet known and some that are not currently deemed material could later become so.

End-market cyclicality	• 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 Vesuvius revenue • Robust credit control processes
Protectionism in key countries	• Loss of business from enforced preference of local suppliers • Imposition of increased import duties • Increased tax burden or changes to rules and enforcement	• Local manufacturing operations in 26 countries • Robust internal tax policies and strict transfer pricing rules • Strong internal control of inter-company trading
Product liability issues	• Claims from third parties resulting from use of potentially hazardous materials • Customer claims and loss of business from product quality issues • Personal injury claims arising from product failure	• Appropriate insurance cover obtained • Active monitoring of HSE issues • Stringent quality control standards systematically implemented in manufacturing • Experienced legal team used to negotiate appropriate customer agreements
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 • Whistleblowing procedure implemented across the Group • Ongoing training and review of effectiveness of relevant policies

Maintenance and 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 • 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
Foreign exchange, capital market, interest rate and inflation uncertainties	• 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
Loss of a major site	• Loss of revenue resulting from inability to supply customers on loss of production facilities	• Diversified manufacturing footprint with some 69 facilities across 26 countries • Maintenance of excess capacity to allow plants to meet peak demands
Ability to source and use critical raw materials	• Manufacturing interruption from failure of a key supplier • 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
Cyber security	• Loss of availability of IT service leading to disruption of business • Intellectual Property accessed by malicious third parties leading to loss of revenues through copying	• State-of-the-art firewalls and networking equipment with associated monitoring and follow-up • Encrypted traffic over the Internet • Centralised backups and server virtualisation • Specific focus on security issues and programmes controlling internal and external access
Attraction and retention of staff	• Insufficient high quality staff to run base business and generate growth through innovation	• 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

Strategy

Our five strategic objectives will enable us to deliver superior returns to shareholders

Vesuvius is a community of experts in high temperature and molten metal flow containment. As a company, we have developed this expertise over more than fifty years of leadership in areas where our technology has proven to bring outstanding value to our customers.

Our strategy is to build on this unique asset and develop additional business segments where we have synergies from existing technological and market expertise.

This strategy is designed to enable us to grow our revenue ahead of underlying growth in our end-markets; to provide higher margins and return on capital as we aim to grow in less capital intensive sectors; and to deliver strong cash flow and superior returns to our shareholders.

Our strategy is developed along the following five objectives:

Reinforce our technology leadership
Given the breadth of our experience and global reach, we have an ability to undertake technological development unparalleled in our industry. Our aim is to concentrate our research efforts in a small number of centres of excellence where we activate a critical mass of knowledge and, in parallel, operate development centres in all major markets to interact with our customers and address their immediate requirements.

We ring-fence a substantial sum for longer-term fundamental research, the acquisition of enabling technologies and ensuring cross-business fertilisation. All of these things help generate innovation from "out of the box" thinking.

Technology is the basis of our ability to create value in our customers' processes. This underpins our growth by continuously enriching our value proposition.

In addition to our capital investment in research facilities, we will spend approximately 2% of our annual revenue in R&D over the long term as detailed in our KPIs on page 17.

See the **Innovation** section on page 34 for more information on our R&D capabilities

Increase the penetration of existing and new value creating solutions
Our solutions bring value to our customers' processes through quality improvement, productivity enhancement and increased efficiency. Process development is more easily adopted by the top end of our markets where higher levels of quality are demanded and labour is more expensive. In addition, we serve an industry which operates in hostile environments where innovation is continually challenged by the need to ensure process safety.

The foundation for momentum in growth for our business is our ability to market the innovations we develop to the wider audience of customers we believe can benefit from them. We will continue to invest in industrial marketing and value capture analysis to enable us to deliver this message and outperform the underlying market evolution with our revenue growth.

See our Safety section on page 32. Also see the **Sustainability** section on page 44 for the effect of our products on customer efficiency

Capture growth in the developing markets

Our markets in Steel and Foundry divisions are driven by the industrial manufacturing base of the countries in which we operate. The emerging markets are large consumers of steel goods and foundry castings and consequently the demand for our products and value solutions is growing rapidly in these areas. Today, more than 65% of the world steel production is in Asia.

Our business model is to produce at close proximity to our customers' sites, and for several decades Vesuvius has set up production facilities in the emerging markets to answer the growing industrial needs of these countries.

Improve our cost leadership and margins

No leadership position can be sustained without maintaining clear control of costs as we need to remain competitive for the levels of quality we deliver to our customers.

We continue to leverage our manufacturing volume and use our significant process experience to enhance productivity and upgrade our quality levels. We remain focused on developing efficiencies in supply and logistics costs and investing in process technology.

Develop a new business of technical services

Our close relationships with customers and our permanent presence at their production sites puts us in a privileged position for providing them with engineered services around the core operations of steel manufacturing and foundry casting.

We already offer much more than purely consumables, by providing customers with systems and design assistance complementary to the use of our products.

We will enrich our present offering over the medium term by providing services around data capture and interpretation that deliver decision-critical, process enhancing information to our most advanced customers in the metal casting field.

For more information on our global coverage see the **Group at a Glance** section on pages 02 and 03

See the **Lean Manufacturing** section on page 36 for further details on our drive for efficiency and excellence

For more information on services development see our **Innovation** section on page 34

The Vesuvius Business Model

We operate a profitable, flexible, cash-generative and growth-generating business model.

This model has been developed and refined over many years to build the brand equity of our Vesuvius and Foseco products through reliability, technology and service.

The foundation of our business model is our worldwide presence, with our industry experts embedded at many customer locations, ideally placed to identify potential process improvements in cooperation with customers.

Our model is supported by our technology centres which develop solutions involving engineered systems and high-value consumables.

These solutions are industrialised in our low-cost, dispersed manufacturing system within which we are located close to our customers' facilities.

This allows us to supply customers on a reliable, just-in-time and highly competitive basis, essential for consumable goods involved on the critical path of our customers' process.

Thanks to our global presence, these products are serviced at our customers' facilities by our industry experts.

Our business model:

- is resilient to end-market cycles due to the flexibility of our diversified manufacturing footprint and adjustable cost base
- is profitable, as it allows value pricing for bespoke products
- generates growth, as we can enlarge the accessible market with additional innovative products and solutions.

Read more about **Global Presence** on pages 02 and 03

Read more about **Advanced Technology Knowledge** on pages 34 and 35

Read more about **Optimised Manufacturing Footprint** on page 36

Read more about **Service & Consistency** on pages 37 and 38

Global Presence

Vesuvius is present in six continents, with manufacturing capability within all the main steel and foundry markets. We sell consumables that are critical to the processes of our customers, and commit to supply into our major end-markets from trucking distance. For the last forty years, Vesuvius has supported the development of global steel and foundry manufacturing processes with new technologies. Everywhere in the world, new steel and foundry plants have been commissioned with Vesuvius and Foseco products to create the best conditions for a successful start. To facilitate this, Vesuvius has established manufacturing plants in emerging countries from the very beginning of their industrialisation. The breadth and depth of the experience and expertise we have developed over these years with our customers is peerless.

Our knowledge of end-market processes, specifications and techniques around the world gives our experts a unique ability to support our customers no matter what their required configurations. This has contributed to the trust built with our customers in the reliability of our service and assistance. Local manufacturing, local expertise, and leveraging a global knowledge of our customers' processes gives Vesuvius a special relationship with its customers, to help them optimise their process and their product performance.

To support our global presence, we hire and train local engineers in most developing countries, who are then progressively integrated within the Vesuvius network of experts and offered international careers. These technical experts become partners of their local customers and help them meet their aims for continuous improvement, whilst maintaining the utmost level of reliability. Through this close technical relationship, we can identify together new development opportunities to create value in a customer's process.

Advanced Technology Knowledge

The ability to support our customers' development and to anticipate their future needs results from the capacity of our Research & Development centres to leverage their knowledge in the most advanced ceramic and metallurgical techniques. Our laboratories are equipped with state-of-the-art equipment and utilise the most advanced technologies of simulation and finite element analysis to simulate the behaviour of molten metal in a customer's specific equipment configuration. Our three central laboratories explore the fundamental aspects of the casting process with the most sophisticated equipment, whilst our eight local development centres feed on these fundamental findings and elaborate custom-designed, customer-specific solutions that will create value for our customers and help them differentiate from competition. These innovations can then be tested at the customer's facility with the highest level of confidence in their suitability, based on Vesuvius experience and on past success.

Optimised Manufacturing Footprint

When successfully tested, our products can be manufactured at a short distance from our customers' plants, guaranteeing just-in-time delivery and a competitive cost. To enable us to supply most customers from trucking distance, we optimise our cost competitiveness by investing in the lowest cost production site in a given area and, together with the large volume of pieces we produce, this provides our customers with the best balance between value and cost for our high technology solutions.

Service & Consistency

Being global, we can ensure a local service to our customers, including the management of an optimal level of inventories at their location, high quality technical support and a unique capacity to be reactive in modifying our production and supply of product and service to reflect any unexpected change in customers' requirements. This high level of service relies on our technicians' permanent presence on the customers' shop floor, leveraging their worldwide expertise accumulated in Vesuvius over many years.

Steel Division

Flow Control and Advanced Refractories products in the steel manufacturing process

We supply the global steel industry with products that increase efficiency and quality in the continuous casting process

Steel Industry Overview in 2013

According to the World Steel Association ("WSA") global steel production (see above chart) grew 3.5% in 2013 vs 2012 to 1,607.2 megatonnes ("Mt"), with China experiencing growth of 9.9% to 779Mt; global production, excluding China, was flat at 828.2Mt. The growth came mainly from Asia, the Middle East and India whilst crude steel production in the European Union, South America and NAFTA decreased compared with 2012.

Growth compared to the prior year was stronger, in the second half of 2013 than the first half, partially due to the fact the first half of 2012 was very strong with the second half experiencing a substantial reduction in production.

Asia's share of world steel production, driven predominantly by China, increased slightly from 65.4% to 67.3% in 2013. Growth in China was substantial albeit that month-on-month declines from Q3 2013 resulted in a reduction in Chinese growth in late 2013 which is expected to continue into 2014.

Market View 2014 and Beyond

Despite continued volatility and limited market visibility the perspectives for steel production in 2014 are generally positive. The WSA has predicted a 3.3% increase in steel demand in 2014. Our expectations are that steel production increases will be broadly in line with this increase in demand, with modest growth in China and a return to growth across the developed world.

The Steel Process and Vesuvius

Vesuvius in the Steel Industry

The two product lines that comprise the Steel division are Steel Flow Control and Advanced Refractories.

Flow control products are used in the continuous casting process which enables steel manufactured in a blast furnace or electric arc furnace to be cast directly into blooms or slabs without interruption (i.e. be continuously cast) and to remain protected from the atmosphere between tundish and mould (i.e. be enclosed), thus significantly reducing the levels of contamination.

Steel Division continued

Vesuvius products have a short service life (often a matter of a few hours) due to the significant wear caused by the high temperature, high thermal cycling and the erosive and corrosive environment in which they operate.

They represent a relatively small proportion of the input costs of our customers (e.g. less than 1% for a steel producer) but their performance is critical to their production processes. Therefore, customers demand high quality and consistent products for these most demanding of applications to ensure maximum safety, quality and productivity. Vesuvius is a global leader in the 'metal flow' market. We achieve this by working closely with our customers to develop customised refractory systems, services and technologies that enable them to improve their performance.

Vesuvius also supplies the steel industry and other process industries with advanced refractory materials used for lining vessels such as blast furnaces, ladles and tundishes to enable them to withstand high temperatures and/or corrosive attack.

As both flow control and advanced refractory products are consumables, steel production volumes (and, in particular, production of higher quality steels using the enclosed continuous casting process) are the critical driver of demand for the Vesuvius Steel division.

Steel producers are continually striving to enhance the enclosed continuous casting process to improve production through less downtime, to reduce labour costs, to increase steel quality, reduce energy usage, and reduce reworking through thinner slab casting.

Vesuvius has developed close, collaborative relationships with industry-leading customers and Original Equipment Manufacturers ("OEMs") and, due to the specialised nature of its products and the high volume in which they are consumed, has developed a global network closely aligned with its customers' locations, with 65 major manufacturing facilities across the world. Through this network we develop customised refractory systems, services and technologies that enable our customers to enhance performance.

Customers of the Steel division are principally steel producers themselves, but also include the manufacturers of steel production equipment.

Around 10% to 15% of revenues in the Steel division arise from non steel-related process industries supplied by the Advanced Refractories product line.

The Vesuvius Product and Service Offering

Our products are highly specialised consumable ceramics, including shrouds, stoppers, nozzles, slide gates, lining refractories (monolithic and pre-cast) and fluxes for the steel production industry. In addition, we supply automation equipment and sensors used to control, monitor and regulate the flow of molten metal. This technical and application expertise is a significant part of our product offering giving us a distinct competitive advantage.

Steel Division Performance

In 2013, the Steel division's revenue of £1,018 million comprised £556 million for Steel Flow Control and £462 million for Advanced Refractories

Steel Flow Control

Steel Flow Control products supplied by Vesuvius include: the Viso™, isostatically pressed alumina graphite and VAPEX® extruded clay graphite product ranges, used to channel and control the flow of steel from ladle to tundish and from tundish to mould; slide-gate refractories, including nozzles, plates and speciality shapes for furnace, ladle and tundish slide-gate systems; Accumetrix® temperature measurement and RADAR™ slag level detection; tundish and mould fluxes; purging systems and control devices to monitor and regulate steel flow into the mould. These products have been designed to resist extreme thermo-mechanical stresses and corrosive environments. They must withstand temperature changes from ambient to 1,600°C in just a few minutes, while resisting liquid steel and slag corrosion for several hours. In addition, the ceramic parts in contact with the liquid steel must not in any way contaminate it. To bring all of these characteristics together in the same products, Vesuvius has designed composite parts combining a variety of special materials. The majority of these products are consumed during the process of making steel and some must be replaced frequently. Demand for Vesuvius' products is thus primarily linked to steel production volumes.

In addition to a large range of products and equipment Vesuvius has developed 'state-of-the-art' global modelling and simulation capabilities which enable the development of custom refractory designs to optimise the flow of molten metal within the tundish and mould. More details on this are contained in the Innovation section on pages 34 and 35.

Global steel production represents almost 100% of the end-market for Steel Flow Control products and services. There is therefore a strong correlation between steel production and Steel Flow Control revenues. Global steel production in the first half of the year was approximately 2% higher than the first half of 2012, mainly driven by China. However, from September onwards there was a strengthening in steel production compared with 2012, resulting in higher Steel Flow Control revenues.

Revenue of £556 million was 2.7% higher compared with 2012. On an underlying basis (being revenue at constant exchange rates and adjusted for the acquisition of Metallurgica in March 2012), revenue was up 0.7% on the prior year.

Prices for raw materials, particularly for graphite and zirconia, remained relatively stable during 2013. However, significant currency devaluation in both Brazil and India adversely impacted our input costs. Consequently, price increases were initiated at the end of 2013 to compensate for higher material costs but, due to timing, will not have a positive impact until 2014.

We maintain our technology leadership in flow control by continuing to leverage our understanding of customer processes to provide products and solutions that meet customers' needs in terms of safety, quality, reliability, productivity and ergonomics.

Vesuvius flow control products can greatly influence the quality of our customers' products and the efficiency of their processes. Recently introduced new products and solutions are developed with value creation for our customers in mind, as demonstrated by our innovative technical solutions around the continuous caster. The latest robot compatible tundish tube changer (SEM3085) and the first products of our new Robotic Casting Technology range continue to perform well with the first fully robotic installation now fully operational in Korea.

A number of significant contracts for the SEM3085 have also been secured in Europe, China and Vietnam.

Maintaining a strong regional manufacturing capability combined with local development centres, including physical and computational fluid dynamic modelling, represents a key element in our strategy of capturing the growth in developing markets. Previously announced capacity expansion projects in Eastern Europe and South America were successfully completed in 2013. Equipment installation, commissioning and production ramp-up of the Isostatic capacity expansion in Trinec, Czech Republic, was completed successfully in the second half of 2013. The new manufacturing facility in Brazil to improve the efficiency of raw material processing and sourcing was completed with commissioning and production ramp-up commencing in the last quarter of 2013. This will facilitate greater use of local raw materials, allowing shorter leadtimes, a reduction in working capital, improved production flexibility and allow us to maintain our cost leadership.

Vesuvius' presence at our customer sites and our intimate understanding of their processes places Vesuvius in a strong position to build a technical services offering. The integration of SERT, AVEMIS and Metallurgica combined with Vesuvius' refractory and flow control systems knowledge and expertise is playing a key role in supporting this last strategic pillar. In particular, the acquisition of Metallurgica, and the benefits that we have been able to deliver in this business within Vesuvius, shows the opportunities that can be captured from the acquisition of complementary businesses.

We have developed new products and capabilities to monitor flow characteristics throughout various points in the steel casting process and data feedback systems and control schemes for real-time optimal flow control throughout the entire casting sequence.

Advanced Refractories

Under new management, Advanced Refractories has embarked on a process of culture change by introducing value selling, training, brand and product rationalisation and multi-branding. We have also exited low-margin and high risk business associated with labour-only construction projects. The focus has changed to providing best-in-class products and application equipment supported by highly experienced and trained technical support personnel. Quality initiatives have also improved performance which has assisted in the margin improvement we have seen within this business during the year.

A restructuring was undertaken in NAFTA and South America to align our organisation with customer requirements, as well as investment in growth areas in Central Europe, and the Middle East and North Africa ("MENA").

Investment has also been made in a new production facility in Ras Al Khaima in the United Arab Emirates and also at Port Kembla in Australia, as well as capabilities for taphole clay production in India. These new facility investments are on schedule to achieve their projected returns, despite a considerable downturn in the Australian market. Furthermore, Vesuvius Advanced Refractories has recently acquired its production site in Sao Paulo and invested in new senior management to assist in our strategy of growth in developing markets. Finally, investment in a new laboratory in India has been approved and construction is expected to begin in early 2014.

Revenue of £462 million was 3.1% lower compared with 2012. On an underlying basis revenue was up 3.5% reflecting the restructuring undertaken to divest non-core activities and to realign our business.

As has been detailed elsewhere, the Group's strategy is based upon five major objectives. The following provides more information about Advanced Refractories' progress with these objectives.

Advanced Refractories continues to focus on technology leadership with:

- The Gard™ brand that has established a best-in-class product offering in each market served
- Application operators who are trained and certified in correct application practice using state-of-the-art equipment specific to the required application
- Total Tundish Management, supported by advanced simulation techniques, which assists our customers in ensuring optimum tundish design and associated steel cleanliness
- Automated robotic application, used to ensure safe and consistent application of our advanced refractories in the tundish
- The Elby™, our Engineered Ladle Bottom Yield programme, which has rapidly gained acceptance at major forward-thinking steel plants. As a result Elby™ production capacity was doubled in the USA with investment in UK and German precast plants currently being planned.

Value creation for our customers is a fundamental focus. It is critical that our technical customer-facing colleagues understand the cost and quality drivers of our customers. This continued high level interaction with our customers is key to meeting their requirements. Customer needs are communicated through to the organisation in R&D as well as reflected in training sessions carried out with key customers. Demonstrating this value creation objective, Advanced Refractories enjoys many Total Material supply contracts under which the customer hands over their entire refractory needs to Vesuvius who takes full responsibility for cost and consistency.

Lithogard™ for the cement industry and Lavagard™ in iron production are two examples of recently launched solutions that drastically reduce overall monolithic refractory consumption and increase up-time associated with these industries. When Elby™ is employed, yield improvements of up to 4% have been identified in many customers.

Steel Division continued

In a very competitive environment, Vesuvius maintains its focus on cost leadership. The global purchasing organisation only deals with approved suppliers and is constantly looking at opportunities to ensure consistent high quality raw materials with long-term pricing stability. Whilst maintaining consistent quality, dual sourcing of materials is an active ongoing initiative.

The technical services offering of Advanced Refractories is of paramount importance in differentiating us from low-tech commodity suppliers with limited technical support. Recent progress in laser measuring techniques coupled with intelligent camera systems and temperature measurement have enabled us to identify steel cleanliness numerically together with safety risks associated with ladle wear and inclusion reduction. Due to the exceptional quality of our magnesium carbon bricks, capacity was increased by 25% to support this objective and also to support the growing market demand.

China

A new management structure has been created and implemented in the Steel division in China to drive business growth in this developing market, together with a new overall organisation structure reflecting the new market environment as China moves from a fast capacity growth market to a position of overcapacity.

In 2013 a quality programme was started to improve performance in this area. This has required investment in a new quality team and the introduction of updated quality programmes in several manufacturing plants in China.

After a period of reducing revenue in 2013 Vesuvius achieved a small revenue growth in China. In addition, the profitability improved in the year, by coupling a cost reduction programme and an adjustment of the manufacturing operation footprint with steps forward in quality to meet the current and projected market demand.

China Market Environment

Whilst the overall steel market in China continued to grow from 2012 to 2013, the strong focus by the central government on environmental issues favours production at new mills over older production sites. More environmentally friendly products and processes are being stipulated, which are beneficial to Vesuvius although these developments are being countered by the need to maintain strong employment prospects in traditional manufacturing areas.

Within the Chinese market production volume exceeded 750Mt in 2013, although in 2013 the second half volumes were stronger than the first half of the year. We believe that 2014 will see a modest growth in steel production although there is estimated to be significant overcapacity of crude steel production in the China market.

Due to this overcapacity the Chinese steel price is under severe downward pressure. As a result, some cash shortages have been experienced throughout the steel industry and have lengthened payment terms and put pressure on receivables.

Foundry Division

Foseco products in the foundry casting process

Binders
POLITEC™, ECOLOTEC™, FENOTEC™, POLISET™, ESHANOL™

Coatings
RHEOTEC™, SEMCO™, TENO™, HOLCOTE™, DYCOTE™, ISOMOL™

Feeding Systems
FEEDEX™, KALMINEX™, KALMIN™, KALPUR™

Filtration
SEDEX™, SIVEX™, STELEX™, RODEX™

Melt Shop Refractories
KALTEK™, VAPEX™, CRITERION™, INSURAL™, KELLUNDITE™, SILCOR™, DIAMANT™

Metal Treatment
INOCULIN™, MSI & UNIT™, NUCLEANT™, NODULANT™, COVERAL™, FDU & MTS UNITS™

Foundry Division continued

Foseco is a world leader in the supply of consumable products to the foundry casting industry

Foundry Industry overview in 2013

The light vehicle industry continued to face challenges in most parts of the world. German light vehicle production reduced 2.5% on 2012, with strong exports to China and the US not fully compensating for weak domestic demand. By contrast, NAFTA and Brazilian production grew 4% and 7% respectively as domestic demand continued to recover. In Asia, Japanese production reduced 3.5%, Korea remained flat as exports to China compensated for weaker domestic demand and India, continuing to suffer from an overall weak economy, rising fuel prices and interest rates saw 2013 car production fall 14% vs 2012. China light vehicle output grew 11%.

The global truck industry grew 4% on 2012, driven by a 50% growth in South America as Brazil recovered from a weak 2012 (which had been down 63% from 2011) due to the wider availability of fuel for the new Euro V engines. Aside from 10% growth in China, the rest of the world experienced reduced output – Europe down 4% and NAFTA down 3%.

During the second quarter it became clear that the general decline in commodity and precious metal prices was starting to impact the mining industry. New projects were delayed resulting in reduced activity for those foundries producing castings for the mining process and related equipment and vehicles. The railroad industry also suffered due to reduced mining activity. These effects were felt most severely by the North American and Australian foundry industries and in the former, the growth in shale gas as a source of energy further reduced railroad activity as coal movement reduced. A number of construction and mining equipment producers have announced rationalisation programmes.

Foundry Outlook in 2014

Global foundry activity is expected to continue in 2014 at similar levels witnessed in 2013, though the situation varies by casting end-user market segment and geography. No short-term recovery is expected in the North American or Australian mining industries, though North American and German automotive production are expected to remain firm. Activity in China continues to strengthen.

Vesuvius in the Foundry Industry

The Foundry division of Vesuvius, trading under the Foseco brand, generates 33% of total Group revenue and is focused on the global foundry industry which produces castings used in a wide variety of engineered components. Some 40% of castings (and a similar percentage of the revenue for the Foundry division) are produced for the vehicle sector, of which approximately 25% comprise light vehicle (passenger cars and light trucks) and 15% for heavy trucks. Other end-markets for foundry castings include machinery for the construction, agriculture and mining industries, power generation equipment, railroad and general engineering. Foseco is a world leader in the supply of consumable products and services to the foundry industry. These products typically represent less than 5% of a foundry's production cost, but contribute significantly to improving both product quality and manufacturing efficiency whilst reducing the environmental impact of the casting process.

Customers of the Foundry division include the world's major automotive OEMs, truck producers and manufacturers of construction, railroad and mining equipment. The foundry market is highly fragmented and Vesuvius' 20 largest foundry customers represented only 11% of the division's revenue in 2013.

Potential revenue per customer and per tonne of castings produced is strongly influenced by the technical sophistication of the casting and the process used in its production. These factors tend to correlate with the level of industrial development of the market. Therefore Vesuvius sees significant growth potential as industrial development continues to progress in developing markets, particularly certain parts of Eastern Europe and Asia.

Foundry Division performance

Revenue of £493 million represented a 7.0% reduction compared with 2012 (down 6.0% on an underlying basis). The impact of the mining and construction slowdown in the second half of the year contributed to the reduction in revenue. As mentioned, the impact was most severe in the Division's US and Australian businesses. In both locations action was taken promptly to align the cost base with activity.

In last year's report a key strength of Vesuvius was highlighted, that of having a cadre of geographically mobile senior executives whose skills are transferable across the Group, thereby facilitating the transfer of best practices and the Group's value-based culture. This remains the case, and during the year, the leadership team for the Foundry division was strengthened by the transfer of the Group Lean Director to the position of Foundry Operations Vice President.

During the year significant progress was made in implementing the Foundry division strategic plan.

Key actions included:

- The near-completion of Phase One of the China manufacturing expansion in ChangShu, due for commissioning in the first quarter of 2014. This first phase will be a state-of-the-art Feeding Systems plant
- The Board approved the Phase Two investment in ChangShu, a Coatings plant with a total investment of £8 million
- The purchase of a building in Enschede, the Netherlands, for conversion to the new Foundry central R&D facility to be commissioned in the third quarter of 2014
- The development of growth plans for the Chinese, Mexican and Central European markets followed by initial implementation actions.

The Foundry Strategy

The Foundry strategy, Performance Partnership, is focused on creating greatest value for the customer, by delivering higher casting quality and foundry process improvements. This is achieved through a partnership relationship in which the customer's highest priority growth and process improvement priorities are shared by Foseco. Foseco can then develop solutions customised to the specific customer's needs and opportunities.

Foseco's capability to develop solutions relies upon a Toolkit with four components:

- **Product Technology** – a wide range of best-in-class products, renewed through continual innovation
- **Applications Expertise** – the applications skills required to ensure that the products deliver maximum performance when used by foundries
- **Foundry Process Knowledge** – intimate knowledge of foundry technology, the customer and its casting processes
- **Process Control Capability** – a range of hardware and software to optimise product performance and consistency in use.

Ensuring that Foseco's Toolkit is always up to the job requires that we excel at product innovation based upon a deep understanding of the foundry industry needs, the development of teams of expert application engineers across the world and that we maintain a deep knowledge of the foundry industry and our customers.

In respect of product technology, Foseco is a world leader in the breadth of its product range with consumable products for all parts of the casting process. To ensure that the customer gains the full benefit from the use of Foseco's products, a high degree of applications expertise is required. Foseco has a comprehensive network of technical sales staff and application engineers across the world, thereby ensuring that customers have access to high levels of locally available technical support. This network is being expanded in developing markets.

As a partner to its customers, Foseco must bring deep foundry process knowledge to the relationship to ensure that the proposed solutions align with each customer's unique needs. Finally, to maximise the performance of the product or process, process control capability is necessary. Foseco achieves this through a range of engineering equipment and software, all of which are designed to control and provide feedback on the performance of the product.

China

As set out above, Phase One of our ChangShu investment is nearing completion. Phase Two investment has already started, expected for completion in the first half of 2015. In conjunction with this the Foundry business unit manufacturing capability in China will be at the leading edge, with a technical team that continues to be strengthened through the secondment of group experts into the region.

Safety

Vesuvius is fundamentally committed to protecting our employees by reducing and eliminating workplace hazards

As set out in our KPIs on page 17, we place the highest priority on the safety of our employees and use the Lost Time Injury Frequency rate as a key indicator of our performance.

We adopt an integrated and comprehensive approach to managing workplace risks, covering people and property, in our approach to effective health and safety management. Our aim is to identify, eliminate, reduce or control all workplace risks.

Safety Leadership

Safety is the first item on the agenda at all our executive and management meetings.

The Group is committed to continual safety improvement with a Group Health and Safety Policy stating an objective of:

- Zero accidents
- No repeat injuries
- No harm to people

These objectives are pursued through a range of policies, standards and procedures. Our first major change programme, 'Safety Breakthrough' was launched in 2008. This global initiative was designed to reduce the number of accidents in the business to the lowest level within the industry sector, with the ultimate goal to reach zero accidents throughout Vesuvius.

The current phase of the Safety Breakthrough initiative - Turbo S - builds on the foundation of Safety Breakthrough and includes a broad range of actions based on recording, analysis and the subsequent development of new or improved safety procedures.

As part of this initiative:

- Senior executives regularly lead safety tours at all locations
- Employees participate in routine safety audits
- We invest significantly in safety training, recently covering Ergonomics and a complete review of Lock, Tag and Try implementation
- All employees are expected to routinely raise safety improvement opportunities
- Safety standards are continually updated, translated and deployed globally throughout Vesuvius
- All severe injuries are analysed locally, with a formal presentation to and review by the Group Executive Committee.

Our current strategies show good progress over the past six years in reducing the number of lost time injuries and Lost Time Injury Frequency Rate ("LTIFR"), as shown below. This chart highlights the improvement achieved to date – although we recognise the need for continued focus on this area. In 2013 we set ourselves a Group LTIFR target of 1.3. We did not achieve this during the year, recording the same LTIFR of 1.8 attained in 2012. For 2014 we will focus on continual improvement to meet the Group's target of 1.2.

Very regrettably, and despite our efforts, in 2013 Vesuvius suffered a work-related loss of life. A full investigation with senior HSE Management followed the accident and a Group-wide review of relevant procedures was undertaken. These standards were updated, operators were retrained and we communicated globally on the lessons learned from this tragic event.

Accident and Incident Reporting and Analysis

A significant investment in time and resources has been made over recent years to develop robust, comprehensive and timely reporting of accident and incident information. Our standard provides the foundation for targeted safety interventions and activities to reduce the number, severity and frequency of lost time injuries and incidents. As part of management reporting, the Vesuvius Board receives a monthly update on all lost time injuries and severe accidents.

Vesuvius has developed a reporting process that uses more stringent definitions for LTI and 'severe accidents' than OSHA (USA). This ensures that we capture and investigate all fires, explosions and any major spill or other chemical release and means we report on all potential fire and explosion scenarios, no matter how small the actual outcome. 2010 was used as the base year for global reporting in order to establish key improvement initiatives and meaningful relative targets. This process has been successful with much more effective reporting levels.

Accident information is openly available and summarised in the HSE database, including the mandatory completion of a full investigation report for more significant incidents to identify the true root cause – in line with the 'No Repeats' objective. The quality of accident investigation has improved thanks to the common establishment of a 'Vesuvius 8D' process for practical problem-solving.

Fire incident reporting is an important part of the accident and incident reporting process. Efforts to improve the reporting of all fires, and, in particular, minor and contained process fires, have been successful.

Taking Safety Breakthrough to the Next Level – Turbo S

Vesuvius launched Safety Breakthrough with the aim of reducing the number of accidents (including fires), lost time injuries and increasing safety awareness through greater employee engagement. This major initiative aimed to raise health and safety performance to best-in-class levels throughout the Vesuvius business. Turbo S integrates good management practices in the workplace with a strong emphasis on the need to standardise tasks so that everybody works to the same high standards in safety performance.

Turbo S has been designed to deploy best practice and increasing management and employee involvement. This is supported by dedicated training for all employees including senior managers. The initiative continues to work towards the ultimate objective of zero workplace incidents.

Turbo S features:

- The implementation and sharing of best practices through Vesuvius standards and other tools
- A commitment to become a true Learning Organisation, avoiding repeat accidents and sharing lessons learned
- Total employee involvement, with the need for safety improvement being driven at the most senior levels of our business.

Safety Audits

A key part of the Turbo S programme is to ensure that safety audits become an established and sustainable part of the Group's ongoing safety efforts.

The audit programme involves employees at all levels – from Group executives and safety specialists through to local site management, employees and contractors. A database is maintained of all Executive, Corporate and Fire Safety audits to enable all auditors to have a full site history available prior to undertaking the next, upcoming audit. The successful programme to include employees in safety audits as auditors started in 2012 has continued with nearly 50% of employees and contractors involved in conducting audits. The target employee participation for 2013 was 50% with 55% participation achieved. A target of 75% has been set for 2014.

Safety Improvements and Lessons Learned

A feature of Turbo S is to become a true learning organisation, avoiding repeat accidents and we share lessons learned using the 'Red Stripe' distribution process to avoid repeat accidents by highlighting and sharing a serious issue.

Promoting employee engagement in improving safety conditions is an important objective. This objective is also pursued using the Safety Improvement Opportunity with Permanent corrective Action ("SIOPA") initiative. This requires site employees to identify safety problems / improvement opportunities, which then require a formal response including the implementation of improvement action. The Group has annual targets for employee SIOPAs which are continually reviewed.

Innovation

Increasing value to our customers through the development and application of leading edge technology

Innovation is at the core of all Vesuvius activities. Maintaining technology leadership is a central objective of our strategy and, as we identify on page 19 a failure to develop and protect market-leading technologies could place our business at financial risk.

We regularly examine the structure of the R&D organisation and its processes for developing new technologies and applications to support Group strategy. This process will be enhanced following the appointment of our new Chief Technology Officer, George Coulston PhD, in October.

The innovation process starts with an intimate knowledge of our customers' processes and needs. We have more than 200 field applications engineers supported by local development teams on all continents. These local technical teams are constantly updated with the practical information on the latest technologies developed in our six global research centres.

These centres have connections with universities all over the world and our internal research and our cooperation with universities and technical centres is directed by a group of dedicated scientists and engineers whose mission is to ensure that both the short-term and long-term technology needs of our businesses are being met. We aim to strike a balance between maintaining a local presence and capturing the synergies and other advantages that come from organisations based in well-equipped global research centres. With this objective in mind, a new global Foundry research centre is under construction in Enschede, the Netherlands and will open during 2014.

Our customer-focused approach to research and development ("R&D") is critical to supporting the achievement of the objectives required by the Group's strategy.

We will maintain our technology leadership by:

- Continuously investing in the skills and knowledge of our employees through in-house training programmes, as well as by hiring engineers from diverse industries, and leading universities
- Continuously investing in the latest analytical instruments, modelling facilities, and customer process simulation equipment so that prototypes of new offerings can be developed quickly
- Leveraging our understanding of customer processes to provide products and solutions that meet a customer's existing, as well as unarticulated, needs.

We have expanded our R&D budget by over 20% in the last three years, and have already begun to see benefits. As detailed elsewhere in this report, R&D expenditure is a key performance indicator for our overall business. We have filed 27 new invention and 150 new patent applications, in 2013, and also had 182 patents granted worldwide during the year.

Vesuvius solutions and products can greatly influence the quality of our customers' products and the efficiency of their processes. All our new products and solutions are developed with value creation for our customers in mind. We regularly conduct customer seminars and training sessions, which are given to a wide range of managerial, technical and operational staff. This seeks to ensure that the full range of Vesuvius products and solutions are known and properly used, so that the maximum benefits are derived.

The following two major innovations, one for the foundry industry and the other for steel production, clearly illustrate how Vesuvius can reduce its customers' costs:

- Foseco's unique, patented collapsible metal core technology continues to capture market share throughout all regions (sales have grown 50% in the last four years), delivering optimum feed performance, casting yield improvement and cleaning cost reduction. When foundry customers pour molten metal into a mould they need to account for shrinkage, which will occur as the molten metal cools. This shrinkage can lead to a variety of defects and result in scrap. Known in the trade as "feeders", our products are a critical part of the solution to counteract that shrinkage and avoid scrapping the parts
- Improved iron-making productivity and blast furnace operations with Lavagard™ Monolithic Refractory Solutions.

A fully engineered customer-designed solution to improve blast furnace up-time and productivity has significantly improved iron making operations at one of the highest output production facilities in the world. Working with blast furnace engineers using novel installation and application technology, Vesuvius engineers were able to recommend changes to the existing casthouse design and refractory system.

By incorporating products from the Lavagard™ suite of monolithic refractories, which included Lavagard™ FCX precast monolithics and Lavagard™ SZ pneumatically installed hot veneering repair materials, the blast furnace team was able to extend their scheduled rebuild and maintenance practices. This has resulted in a reduction of 20% repair materials and doubling of the tilter life.

Vesuvius local development centres are a key element in our strategy of capturing growth in developing markets. They are present in all regions, and include facilities for both physical and computational fluid dynamics. The centres ensure an immediate and local focus is applied to specific regional issues, ensure new opportunities are identified for our current product range, and bring newly developed products quickly to market in these fast-growing economies.

The R&D organisation has the direct responsibility to support the cost leadership element of our strategic objectives. A dedicated group of engineers specialises in raw materials, with the objective of deeply understanding raw material quality and its effect on Vesuvius products.

Vesuvius R&D is playing a key role in supporting the strategic pillar to build a technical services offering, by developing new products and capabilities such as:

- New instrumentation to monitor flow characteristics throughout various points in the steel casting process
- Data feedback systems and control schemes for real-time optimal flow control throughout the full casting sequence
- Integrated foundry systems and controls to help ferrous melt shop to produce quality products.

Modelling Capabilities

The Vesuvius R&D team makes extensive use of sophisticated modelling tools to accelerate the rate of innovation. The use of Computational Fluid Dynamic ("CFD") modelling, thermodynamic modelling, and physical simulation tools, such as advanced water modelling, are now deployed throughout the solution development process.

For example, these modelling tools allow experienced scientists and engineers to analyse the complex fluid interactions between refractory materials and molten metals which would exist in our customers' operations, and to predict the formation of undesirable impurities.

Consequently, potential problems with a product design can often be discovered and rectified before the design leaves the computer.

Advanced simulations are also used to understand how geometric changes to a refractory design impacts the flow of molten metal in our customers' facilities, which in turn impacts the quality of the product they produce. For example, gas injection into liquid metal, a technique employed by our customers to ensure homogeneity of temperature and composition in a melt, is extremely difficult to visualise in situ. Our CFD tools allow such mixing to be simulated and are extremely useful for determining the influence of the gas on the overall behaviour of the system. By combining this information with detailed understanding of the chemical interactions between refractories and molten metal, Vesuvius scientists are able to optimise designs and material selection.

The graphics to the right show how CFD modelling can be used (1) to visualise the flow of argon gas injection in a sub-entry nozzle used in a steel plant, and (2) to review the flow of gas in a steel ladle.

Vesuvius engineers are also able to create physical models of critical portions of our customers' operations to gain further insights into how certain products will perform. Our customers often participate with us in this modelling process, and they use the results to make their own design decisions. By working together with us, they are able to explore the pros and cons of various design choices, which would otherwise potentially have been cost prohibitive.

Lean Manufacturing

Our Lean Programme focuses us on building an organisation that delivers sustainable and continuous improvement

The focus on cost leadership and margin improvement is one of our five strategic objectives. Additionally, in a business where we need to manage the challenges presented by cyclicality in our end-markets, a focus on process efficiency and quality is fundamental.

Focusing on the need to excel in our key operational processes, we commenced our Lean Programme in 2008. The goal is to generate short-term operational gains whilst also building an organisation that delivers sustainable and continuous improvement. Some of our core requirements are that:

- Standardisation of tasks and processes is the cornerstone of safety, quality, productivity, and continuous improvement
- Employee motivation and customer satisfaction are critical foundations for the long-term success of the Group
- Improving information flow is instrumental to guarantee fast and effective cross-functional processes.

The initial focus of the Lean Programme was on improving Safety management on the shop floor. We then launched an initiative to improve Quality in production, which will be followed by productivity improvement projects.

We focus on ensuring the long-term success of these initiatives by:

- Implementing a robust shop floor organisation centred around strong first level managers
- Growing our problem-solving capabilities through training, coaching and workshops to "learn by doing"
- Designing information systems that will support the improved processes.

In 2013, we maintained our focus as follows:

- Several lean and practical problem solving training sessions were carried out
- A training programme for shop floor managers was designed and piloted
- Delivering successful workshops that provided significant results in terms of productivity increase and lead time reduction
- Production control & logistics training was organised in all regions to accelerate material and information flows across functions, giving a framework for substantial inventory reduction
- A bespoke Manufacturing Execution System, to collect all relevant quality control data and ensure end-to-end traceability of our products was designed
- We started the roll-out of a Sales & Operations Planning application, to collect and distribute forecasts, allowing production levelling and inventory reduction without jeopardising service to our customers.

In 2014, we will continue the deployment of lean practices, with a special emphasis on:

- **5S** to reinforce work environment appropriation by workers and continue to increase safety. This will be also the first step on the way to improve the maintenance of key equipment
- **Equipment flexibility** improvement and a batch reduction plan in key processes to support inventory reduction
- **Specific project maintenance targets** to enhance equipment efficiency and reliability
- **Labour efficiency** by the reinforcement of the standardisation of work and "Kaizen" processes.

We aim to incorporate our Lean Programme in a global Excellence model to embed a consistent Group-wide approach to operational efficiency.

5S

5S is an operational methodology developed in Japan to improve employees' workspace efficiency. It is based on five Japanese words: Seiri (Sort); Seiton (Set in order); Seiso (Shine); Seiketsu (Standardise); and Shitsuke (Sustain). The method is based around a shop floor team, and includes the use of standardised colours to identify and store items used, and specific obligations to maintain work areas to perpetuate the 5S approach. An example is shadow boards for tools - where missing tools are immediately visible against their outline.

Quality

We will operate all work and business activities to ensure the quality of the products and services we deliver to our customers

Vesuvius Quality Policy

Focusing on Quality is the another important step in the implementation of our wider Lean programme. We see this as a fundamental part of our progress towards operational excellence. Already, the renewed focus on Quality has improved customer relationships and added to operating efficiency.

Our Quality Policy clearly defines the commitments and responsibilities which apply to all aspects of the business, with implementation driven throughout the organisation by senior management.

Our Quality Plan features:

- The application of the **Vesuvius 8D methodology** to resolve customer, supplier and internal issues. This methodology is built upon the 8 Disciplines to follow in order to eliminate problems permanently. It is focused on determining the root cause, implementing effective corrective actions and preventing repeat issues
- A commitment to become a true **Learning Organisation**. Every problem is welcomed as an opportunity for improvement where lessons learned are created and shared in order to leverage the benefits across the Group
- The application of **Lean Principles** to improve shop floor quality, responsiveness, and flexibility. Lean manufacturing methods, such as those successfully utilised in the automotive industry, have been adopted throughout the Group. These principles drive implementation of:
  - strong control plans to detect any defects as close as possible to their point of occurrence in order to facilitate immediate problem solving
  - accelerated product flow to allow quicker detection of issues and impact rejects / rework
  - standardised production methods to ensure excellent quality.

Quality Strategy

Quality Strategy defines a holistic approach to the execution and implementation of our Quality Policy throughout the organisation. We have aligned our Quality Strategy to the corporate strategy. The Quality Strategy seeks to support the five aspects of corporate strategy:

- **Maintain technology leadership** by allowing Marketing & Technology, and R&D to keep their focus on technology and improving the industrialisation of new products than quality fire-fighting
- **Increase penetration of value-creating solutions** by satisfying customers through improved consistency, leading to improved cross-selling and reduced business loss
- **Capture growth in developing markets** by differentiating ourselves from our competition on the basis of our quality and our service offering
- **Support the goal of cost leadership** by improving the reliability of our products, by improving the total cost of ownership for our customers, and by reducing costs associated with defects, reworks and customer rejects
- **Built technical service offering** to align the business with customer needs through information received from customer surveys and through increased executive visits to customers.

Quality continued

The key features of our Quality Strategy are:

- Roll out the Quality Breakthrough Initiative throughout the organisation
- Build infrastructure to support embedding of Quality Breakthrough Initiatives in the organisation
- Leverage global roll-out of the improvement process to drive behaviour to improve product and service quality and deliver customer loyalty
- Use senior executive visits to customer sites and lost business analysis as drivers for reducing customer attrition.

Reliability

Reliability 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. Reliability therefore is a primary commitment of Vesuvius.

We strive to deliver reliability and consistency through best-in-class quality management in our 69 production sites and 107 major customer locations.

Reliability also flows from our close cooperation with customers' operations, the permanent presence of our engineers and technicians at our customers' locations and the level of service and expertise we provide.

Reliability is maintained within our global process of innovation and continuous improvement through strict testing procedures and transparency with our customers on the protocols we follow to validate any change in our products.

Service is part of the Vesuvius culture

The quality of our service delivery derives from our deep understanding of our customers' processes and expectations, our intimate knowledge of their needs and our efforts to increase their performance at all levels of their value chain.

Vesuvius' plants are close to the customers they serve and can deliver goods and technical service at very short notice.

Our experts are in permanent contact with our customers' operations to provide support with creative solutions and new technologies, based on their access to the unrivalled experience acquired across the world and throughout the industry.

Case Study

Reliability

In 2013, Voestalpine was looking for the refractory materials, service and support for their jobbing foundry that uses one of the largest coreless induction furnaces in the world. Because this furnace is used up to 15 times a month, it needs to be relined five times per year, which requires ten tonnes of refractory material each time. Due to the fact that the steel is heated up to 1,780°C, the lining application is demanding and the refractory materials must perform well.

Vesuvius service personnel worked closely with the customer to find the best option. After some preliminary trials the furnace was completely lined with Vesuvius products in June 2013 to meet customer expectations.

Maintaining our high level of service is part of our commitment to our customers.

Case Study

Reliability

Foseco specialists played a significant role in the supply of safety critical steel construction rings used for building a new roof at the 76,000 seat Olympic Stadium in Berlin. Foseco-patented KALPUR direct pour technology was used by Friedrich-Wilhelms-Hütte (FWH) steel foundry for the production of steel construction rings. Reliability of these safety-critical steel construction rings was crucial, and the foundry chose a Foseco patented technology for making these castings.

Case Study

Reliability

Vesuvius is the pioneer in designing, supplying and operating "no-lift" refractory tube exchange mechanisms for slab casters. There is more steel cast through Vesuvius tube exchange devices than through any other option available on the market. A large number of such installations are successfully operating worldwide on more than 310 slab strands. The use of mechanisms and refractories from a single technological source guarantee utmost operational safety and highest performance level. Launched first in Europe, our most recent Tube Changer SEM3085, is now beginning to be used worldwide. By the end of 2014, 16 strands in the Americas, Asia or Europe will operate with this breakthrough model. Besides productivity, safety and quality impact on final steel, the SEM3085 brings new reliability standards.

Its strong design includes a new clamping concept for refractory parts as well as an iron cast metallic enclosure to support and fix the refractory part in a more protected way. Thus, it limits stress on refractory materials and ensures minimum risk of breakage. A complete integration of pipes into the mechanical parts minimises risk of malfunction of the inert gas or air cooling circuit.

Through better sealing between plates, it also offers better reliability on steel quality to the customer, while taking advantage of the tube change function for highest productivity and reduced operation cost. Last but not least, SEM3085 has been designed robot-ready: the tube change operation can be in option under full control of a robot that will change tube after tube in a reliable protocol.

Corporate Responsibility

Meeting our responsibilities will enhance our performance

We recognise that our operations impact a wide community of stakeholders, including investors, employees, customers, business associates and local communities, and that appropriate attention to the fulfilment of our corporate responsibilities will enhance overall performance.

Information on our Code of Conduct, which requires the highest standards of legal and ethical behaviour, is set out below. Health, Safety and the Environment remain of paramount importance to the business. A number of Vesuvius work activities are undertaken in higher-risk locations such as steel mills or other customer-controlled facilities. These environments can prove dangerous for all personnel engaged in working there. Information on how we address safety is set out on pages 32 to 33. For information on sustainability see pages 44 to 47. Our disclosures concerning Greenhouse Gas emissions are shown on page 45 and the new Human Rights policy is highlighted below.

Code of Conduct

Vesuvius has a Code of Conduct, which has been distributed throughout the Group and by which all our businesses are required to operate. The Code of Conduct emphasises the Group's commitment to compliance with the highest standards of legal and ethical behaviour. The Code of Conduct is reproduced in full on the Company's website (www.vesuvius.com).

The Code of Conduct sets out clear and simple principles covering: Customers, Products and Services; Employees; Investors; Society and Local Communities; Health, Safety and the Environment; Conflicts of Interest; and Competitors. Maintaining a reputation for integrity in all business and other dealings both with customers and suppliers remains critical to Vesuvius. The Code of Conduct recognises that the pursuit of the highest possible ethical standards must be as much part of our culture as any other facet of our operations. It sets out our required standards of legal and ethical behaviour and emphasises our commitment to the performance of our business in accordance with these standards.

During the year we continued to expand our training programme on the Code of Conduct and associated anti-bribery and corruption policies. This comprised face-to-face training and use of an e-learning module, together with the publication of an updated Code of Conduct and related policies on the Group's intranet site. To date more than 2,000 employees have been trained on anti-bribery and corruption issues, focusing particularly on those who work with customers, suppliers and public officials. We continue to develop this process to help our staff and counterparties to understand that bribery and corruption will not be tolerated in the performance of our business.

Human Rights Policy

The Group has developed a new Human Rights Policy, which supplements the Code of Conduct and has been approved by the Board. It reflects principles contained within the United Nations Universal Declaration of Human Rights, the International Labour Organisation's Fundamental Conventions on Labour Standards and the United Nations Global Compact.

The Policy is applicable to all employees of Vesuvius plc and its subsidiaries. It sets out the principles for our actions and behaviour in conducting our business affairs and provides guidance to those working for us on how we approach human rights issues.

Vesuvius seeks to be a good corporate citizen wherever it does business and respects local concerns, customs and traditions. Embracing Diversity is a cornerstone of Vesuvius' values. The Policy sets out the Group's commitment not to discriminate in any of our employee practices and to offer equal opportunities to all. The Group respects the principles of freedom of association and the effective recognition of the right to collective bargaining and opposes the use of, and will not use, forced, compulsory or child labour.

Where the Policy commitments are more stringent than local laws, we will adhere to the standards set out in the Policy. If local law is more stringent than our principles, we will comply accordingly, using the Policy as a guideline.

Additional information online at www.vesuvius.com

Our Values

Our corporate values guide us in our everyday behaviour

Our five corporate values, aimed at directing our everyday behaviour at work, are as follows:

Creativity

Our commitment to technology and quality is the basis for our competitive advantage. Creativity allows us to develop innovative solutions that generate value through performance enhancements and continuous improvements.

Cooperation

Encouraging internal and external cooperation is an effective tool which enables us to create unique solutions with our partners. Each Vesuvius employee is committed to the success of their community of colleagues and customers.

Reliability

Our solutions involve us in critical aspects of our customers manufacturing processes. Our commitment to consistently deliver quality products and services gives them the level of confidence they require.

Integrity

At the heart of our promise lies the trustworthiness of all Vesuvius employees in their acts and words. Integrity, honesty and transparency are essential in all our exchanges.

Embracing Diversity

Vesuvius is a global company built upon a true respect for local customs and experience. We recognise and embrace the potential for creativity that comes from the coexistence of so many different cultures.

The best examples of how our employees demonstrate our values are celebrated once a year during the Living The Values ("LTV") Awards ceremony.

Vesuvius LTV Awards

During the year, every employee can nominate another employee or team to recognise exemplary working behaviour in line with our values. In 2013, over 107 nominations were received. These were reviewed by a selection committee and the best selected for recognition at our LTV Awards ceremony. Seventeen awards were made in 2013, bringing together employees from all geographies of our business to celebrate the Vesuvius values.

Human Resources

Our mission is to help our employees develop and deploy their talents so that Vesuvius is well equipped to meet its strategic objectives

In 2013, the HR organisation has realigned itself and its initiatives to support the strategic objectives of the business. Dedicated roles have been created in the areas of Talent Management and Reward Management, together with a further role created to focus on the deployment of our Standard Operations Model.

We have established this Operations HR Business Partner role to ensure that in our drive to excellence, operations receive the Human Resources support they need. The role gives active support on training and development, compensation and other technical HR issues to our manufacturing facilities and personnel in order to support the deployment of the Vesuvius Standard Operations Model.

In delivering this global consistency, we rely on a strategic framework that ensures alignment of HR programmes across divisions. This framework is named HTR, and focuses on:

- Hiring and Resourcing
- Training and Developing
- Retaining and Motivating.

Vesuvius is a community of experts. We gain a significant part of our competitive advantage from the skills and expertise of our technical staff. Many of our employees, particularly those in technical roles, have been with the Company for much of their careers, and as such have obtained and retained hugely valuable knowledge within their fields of expertise. As noted in our Principal Risks (see page 19), we consider the ability to attract and retain the right level of talent as a key risk to be addressed by the business.

We have met this challenge in a number of ways. In particular we have focused on knowledge transfer through the operation of a number of Group-wide training programmes. These are deigned to be relevant to all individuals within Vesuvius, depending on the stage in their career path with the Company and their functional responsibilities.

We have taken particular effort to ensure that appropriately targeted technical training is available to all members of the Vesuvius community. Under the HeaTt banner - the Vesuvius Technical University - we support the development of our technical service offering.

Through our Wings programme we aim to continuously develop the capabilities of our middle managers by exposing them to a wide range of management disciplines and coaching.

Line managers are expected to release staff for training, and when involved in courses, the precedence of the course over day-to-day responsibilities is strictly enforced.

Critically, our HR programmes support the deployment of our Group strategy. In order to maintain its technological leadership, the Foundry division has chosen the city of Enschede in the Netherlands to install its worldwide R&D centre. The city is located near the borders with Germany, centre of the foundry industry in Europe, and has a renowned university. The location is easily accessible for researchers on short and long-term assignments and will also operate as a centre for training employees on our products and processes.

Human Resources continued

The smooth deployment of our strategy is also supported by the positive relationship developed with the employee representatives in the European region. Agreement on the terms of the working of the European Works Council was reached on 7 June 2012. On 24 May 2013, the first session of the European Works Council took place in Belgium with management and personnel delegates from Belgium, Germany, France, Spain, the Netherlands, Poland, Sweden and Romania.

To contribute to building the foundation of our value-added solutions, Vesuvius has designed a series of marketing courses, as a continuation to foundations laid down by senior management (Boost!) and middle management (Wings, Pulse) development programmes. These are delivered as training modules available in the corporate training programme. Over the course of 2013, 46 employees have attended one of the two corporate courses "EVC Forward Together" or "Advanced Marketing". Another 50 were exposed to key industrial marketing principles during our one week middle management training, Wings.

In order to meet our business objectives, we have to have the right structure to allow for the best people to be at the right place at the right time.

The optimal development and deployment of our people is at the core of our People Review programme. Annually, global, regional and country organisations establish their succession plans, identify their high potentials and agree on individual development plans, supported by a global performance management system.

Vesuvius has around 40 expatriates from 13 different nationalities across 11 countries. Most of the expatriate population is located in Asia focusing on developing our local operations.

Our Columbus Project - now in its third year - aims to ensure the continuous inflow of new talent into our internationally mobile workforce. In 2013, five young graduates, two from India and three from Brazil, have swapped countries for a year as part of pursuing a career at Vesuvius.

The Columbus Project

"The Columbus Project is definitely a really challenging and life changing experience. It is not easy being away from family and friends for nine months in a country that has such a different culture and tradition. All of these experiences helped me learning to see things from different perspectives and made me more adaptable to new situations. The feeling now, when we are less than one month from coming back to Brazil, is that we are not the same."

After three months in her home country, Brazil, Aline Baros, Chemical Engineer from the Federal University of Minas Gerais, spent nine months at Vesuvius in Pune and Calcutta, India.

In addition, the management of our Human Resources is underpinned by the worldwide Towers Watson grading system and a structured and consistent compensation & benefits management framework, that intends to attract, retain and motivate our employees.

HeaTt Training

We want to equip our people with the right skills, both technical and behavioural, and preserve our talents from waning over time. In addition to local training initiatives, the Vesuvius Corporate Training programme offers a wide range of disciplines and is adjusted every year to ensure that it still reflects the needs of the business.

HeaTt, the Vesuvius Technical University, supports the development of our technical service offering, the fifth pillar of our strategy. HeaTt stands for 'Hub for Employee Advanced Technical Training' and is structured along five levels, from 'entry' to 'expert'. The modules are designed and delivered by our internal trainers. While the first introductory level gives an overall view of the Vesuvius business, its end-markets, products and their applications, the more advanced modules are specialised by Business Unit.

HeaTt Training

In 2013, more than 300 employees took part in more than 20 heaTt training events across the globe. This platform, together with the continuous reinforcement of marketing principles amongst our sales and technical people and a constant focus on innovation, ensures that Vesuvius is well positioned to keep on developing its offering of technical services to complement its products offering.

Finally, Vesuvius and its employees support several small scale projects in local communities. As an example, winners of an LTV award have each elected a charity to which Vesuvius made a donation. In the Czech Republic, together with other local companies, Vesuvius has financed the purchase of several cars by a local charity in order to transport disabled children and adults in the area. More examples of our contribution to such projects are provided on our website (www.vesuvius.com).

Gender Diversity

Details of the gender diversity of the Group are set out below (excluding JVs).

	Male	Female	Total	% Female	% Male
PLC Board	5	2	7	29%	71%
GEC members	10	0	10	0%	100%
Senior management	101	4	105	4%	96%
Middle management	274	27	301	9%	91%
All other permanent employees[1]	9,143	957	10,100	9%	91%
Total employees	9,533	990	10,523	10%	90%

NOTE

1. Gender details are not kept for hourly permanent employees

Sustainability

We will operate all work and business activities in a manner which ensures appropriate care and protection of the environment

Background

Vesuvius remains committed to reducing its environmental impact by reducing, reusing and recycling waste and improving energy efficiency wherever economically viable. The Board recognises that good environmental management is aligned with the focus on cost optimisation and operational excellence.

The Group has 69 manufacturing sites, 18 warehouses and 91 sales offices located in 34 countries throughout the world's major economic regions. As part of our business model we locate facilities close to our customers to allow us to operate in just-in-time supply chains. This benefits the customer with short lead times from order to delivery and reduces the environmental impact of our logistics.

Vesuvius and its processes

Our manufacturing processes are not energy intensive (total energy costs are less than 3% of revenue, with only 1.9% of the total energy requirements across the Group consumed in the UK) and do not produce large quantities of hazardous or other wastes and emissions.

Our customers and their processes

As our products are used with molten metal at extreme temperatures, our primary commitment to our customers is the provision of reliable solutions to help protect their employees.

However, under the Vesuvius and Foseco brands, our business delivers a large range of solutions that help our customers improve not only the safety, but also the productivity of their operations, the quality of their products and the environmental footprint of their processes.

Thermal optimisation, slag and reject reduction are key factors in the processes for which we supply solutions. Vesuvius contributes to the reduction of its customers' energy usage and subsequent carbon dioxide ("CO_2") emissions through insulating materials, laminar flow management, facilitating extended manufacturing sequences and reduced downtime. A number of case studies, showing the effect and importance of the Group's products on customers's greenhouse gas ("GHG") and CO_2 savings, are shown later in this section.

Environmental Monitoring

All our factory emissions are proactively managed in accordance with local regulations. Regular analysis of our operations enables us to take appropriate actions to reduce our emissions and operate more efficiently. As you will see from its inclusion as a key performance indicator for the Group (page 17),we consider our levels of energy use as a fundamental indicator in the day-to-day performance of our business. Consequently, the Group monitors its energy consumption, worldwide CO_2 emissions and usage of water.

Regulatory Commitments

The Group also meets all of its obligations in relation to the Carbon Reduction Commitment Energy Efficiency Scheme ("CRC") and the Producer Responsibility Packaging Waste regulations.

The CRC is a mandatory scheme designed to encourage large public and private sector organisations to reduce their carbon dioxide emissions through energy efficiency. The Group also has a Climate Change Agreement ("CCA") in place through the British Ceramic Confederation. This CCA commits us to achieving a specific level of energy consumption, which reduces the CCA levy payable if we are successful.

The Packaging Waste regulations require us to report the total volume of waste packaging we handle each year and to pay a contribution towards the collection and recycling costs of this material by purchasing Packaging Waste Recovery Notes ("PRN").

Energy Conservation Plan

The Vesuvius Energy Conservation Plan was launched in 2011 with the objective of reducing our normalised energy consumption by 10% over the following three years. Whilst we have made progress, we are still working towards achieving this target. Managing our energy intensity is part of enhancing our cost competitiveness. It also contributes to improving the total environmental impact of our customers. It is part of our commitment to the communities in which we operate.

Greenhouse Gas Reporting

In reporting GHG emissions, we have used the GHG Protocol Corporate Accounting and Reporting Standard (revised edition) methodology to identify our greenhouse gas inventory of Scope 1 (direct) and Scope 2 (indirect) CO_2. We report in CO_2 equivalent (**"CO_2e"**).

Global GHG emissions data for period 1 January 2013 to 31 December 2013

Emissions from:	kg of CO_2e Current Reporting Year 2013
Combustion of fuel & operation of facilities	398,250
Electricity, heat, steam and cooling purchased for own use	101,216
Vesuvius' chosen intensity measurement: Emissions reported above normalised to per tonne of product output	520

METHODOLOGY

We have reported to the extent reasonably practicable on all the emission sources required under the Act which fall within our consolidated financial statements.

Scope 1 covers emissions from fuels used in our factories and offices. Scope 2 relates to the indirect emissions resulting from the generation of electricity, heat, steam and hot water we purchase to supply our offices and factories.

We have used data gathered to fulfil our requirements under the CRC Energy Efficiency scheme and emission factors from UK Government's GHG Conversion Factors for Company Reporting 2014 in the calculation of our GHG.

So what is Vesuvius?

A Responsible Supplier

1.8 tonnes of CO_2 are emitted for every tonne of steel produced. In 2010 the iron and steel industry accounted for approximately 6.7% of total world CO_2 emissions. Additionally, approximately 10 kg of refractory material is required per tonne of steel produced.

Vesuvius' products, which include refractories, reduce the energy consumption of our customers and, as their usage also increases the quality of customers' products and reduces waste, they are increasingly beneficial when energy costs rise. Benefits are realised through:

- Working closely with customers to improve processes through the supply of technologically advanced consumables to reduce energy intensity and CO_2e Intensity Ratio in our customers' processes
- Reductions in refractory usage per tonne of steel produced by customers, from higher quality longer service life
- An increase in the level of good castings produced per tonne of metal melted through improved mould design and the application of molten metal filtration and feeding systems
- Further downstream benefits of enabling lighter, thinner and stronger components leading to lighter vehicles and less energy consumption.

A Responsible Manufacturer

Vesuvius' products are manufactured using energy intensive processes. Energy management and the CO_2e Intensity Ratio reduction are actively recognised as an area of increasing importance.

Through our membership of the European Refractories Producers Federation, currently chaired by François Wanecq, Vesuvius' Chief Executive, we work closely with other manufacturers to reduce the industry carbon footprint. Most recently, a European footprinting exercise has been completed for refractories as part of the 2050 roadmap, with the ultimate ambition of an 80% reduction in the carbon footprint of the European ceramic industry.

Detailed analysis of energy usage and GHG emissions are undertaken to focus on significant processes, with a view to reducing the energy consumption and CO_2e Intensity Ratio.

A Responsible Purchaser

Fuel selection is made carefully to account for current and future cost trends, availability and environmental impact.

Vesuvius' purchasing professionals work closely with suppliers to ensure availability of raw materials and their sustainable supply.

Sourcing of new plant and equipment takes into account lifetime energy consumption in order to deliver a lower energy intensity, lower CO_2e intensity ratio and hence lower lifetime running cost.

Sustainability continued

Energy Efficiency and our Customers

Vesuvius' specialised expertise in molten metal handling and casting provides assistance to customers both by reducing the energy intensity of their existing and new breakthrough processes, and through the manufacture of new products that improve the energy efficiency of metal-using products in society.

We launched our Energy Efficiency and CO_2 Impact project to foster the deployment of energy efficiency and sustainable solutions engineered by our technology departments. A CO_2 Impact stamp, launched in 2011, highlights the most energy efficient solutions in our portfolio of products and services.

The following examples show a sample of the significant potential reduction in CO_2:

Steel Flow Control

- To support a major Mexican customer's need to reduce energy consumption and improve quality, Vesuvius designed, developed and implemented a significant process change. This resulted in not only all of the customer's requirements being met but also the following additional benefits:
  - Reduced preheating and associated energy consumption
  - Reduced refractory consumption
  - An 8,173 tons per annum steel yield improvement
  - A reduction in annual CO_2 emissions of 15,500,000 kg

- Vesuvius was able to apply its expertise in a European Steel customer to deliver improved mould flow, increased productivity and extended tundish lifetime, resulting in:
  - Reduced refractory consumption
  - Reduced preheat energy consumption
  - A 2,500 MT steel per annum yield improvement
  - This is equivalent to a reduction of 4,750,000 kg CO_2 emissions per annum.

Advanced Refractories

- In South Africa, Vesuvius is the leading supplier of calcined dolomite for use in the local primary steel industry.
- The manufacturing process emits significant quantities of CO_2 and has been the focus of a detailed study aimed at reducing the CO_2 intensity ratio and the energy intensity.
- In 2014 the process will be upgraded with an expected reduction in the energy intensity of 5%, resulting in:
  - A reduced combustion of coal of 2,400 MT per annum.
  - An equivalent reduction in emissions of 5,600,000 kg CO_2 per annum.

Foundry

- The Furnace Deck and Metal Transfer area accounts for over half of a foundry's energy consumption. Vesuvius' Foundry division offers solutions for these key areas that:
  - Improved yield through the use of SEDEX® STELEX® and STELEX PrO® molten metal filtration products and KALMIN® KALMINEX® and KALPUR® feeding systems.
    - An Italian ductile iron foundry achieved a reduction of 6,000,000 kg CO_2 annually for 57,000 tons castings shipped
    - There was an additional €180,000 saving in emission certificates
  - Reduced energy consumption, for example, through the use of KALTEK® refractory insulating linings for ladles.
    - One Dallas foundry achieved savings in CO_2 emissions of almost 1,200,000 kg CO_2
  - Resulted in right first time castings through computer simulation.

Foundry

- Foseco foundry ENERTEK crucibles are a new family of energy efficient crucibles. Specially designed to maximise thermal conductivity, they typically offer foundries a 3%–8% reduction in energy consumption with an equivalent reduction in CO_2 emissions.
- In just one aluminium sand foundry, this gave a reduction in CO_2 emissions of 33,000 kg per annum.

CORPORATE GOVERNANCE

Board of Directors

JOHN McDONOUGH CBE
Chairman

John was appointed as a Director and Chairman of the Company on 31 October 2012. John was group Chief Executive Officer of Carillion plc, the support services and construction firm, for 11 years until he retired in 2011. Prior to joining Carillion plc he spent nine years at Johnson Controls Inc. working for the automotive systems division, initially in the UK, before moving to become Vice President of the division's European operations and ultimately to Singapore to develop the business in Asia Pacific. He then returned to the UK as VP of the integrated facilities management division for EMEA. John served as Chairman of the Remuneration Committee of Tomkins plc from 2007 to 2010 and as a Non-Executive Director of exel plc from 2004 to 2005. He joined The Vitec Group plc in March 2012, and has served as its Chairman since June 2012. John was awarded a CBE in 2011 for services to Industry and is a British citizen.

FRANÇOIS WANECQ
Executive Director, Chief Executive

François was appointed as a Director of the Company on 31 October 2012. He previously joined the Cookson Group plc board in February 2010. François has been the Chief Executive of Cookson's Engineered Ceramics division since October 2005. Prior to joining Cookson he held a series of senior management roles at Arjo Wiggins Group and served as an Executive Director of Arjo Wiggins Appleton plc from 1999 until it was delisted. From 1985 to 1995 he was Managing Director of the technical ceramics division of the Saint-Gobain Group. François graduated from the École Polytechnique and École des Mines de Paris and is a French citizen.

CHRIS O'SHEA
Executive Director, Chief Financial Officer

Chris was appointed as a Director of the Company on 31 October 2012, having joined Vesuvius earlier in the year. Prior to joining Vesuvius, Chris held a number of senior finance roles at BG Group, latterly serving as CFO for the group's businesses in Africa, the Middle East and Asia. From 1998 to 2005 Chris lived and worked in the UK, the US and Nigeria for Royal Dutch Shell in a variety of roles, including CFO for Shell's offshore exploration and production business in Nigeria. Chris is a Chartered Accountant with degrees from the University of Glasgow and Duke University, and has also worked for Ernst & Young. Chris is a British citizen.

JEFF HEWITT

Senior Independent Director & Audit Committee Chair

Jeff was appointed as a Director and Chairman of the Audit Committee of the Company on 31 October 2012 having previously joined the Cookson Group plc board in June 2005 where he was also Chairman of the Audit Committee. Following the June 2013 AGM, Jeff was appointed as the Senior Independent Director. Jeff was previously Deputy Chairman and Group Finance Director of Electrocomponents plc. He is a Non-executive Director and Chairman of the Audit Committees of Cenkos Securities plc and Foreign & Colonial Investment Trust plc. He is also the Chairman of Electrocomponents Pension Trustees Limited. Jeff is a Chartered Accountant and is a British citizen.

NELDA CONNORS

Non-executive Director

Nelda was appointed as a Director of the Company on 1 March 2013. She served as President and Chief Executive of Tyco International, Electrical & Metal Products division (renamed Atkore International in 2010) from 2008 to 2011, prior to which she spent six years at Eaton Corporation, in a number of international management roles which included nearly four years based in Shanghai. Nelda spent much of her early career in the automotive industry working for Ford, Chrysler and Mogami Denki, a Toyota supplier. During this period she undertook roles in general management, engineering, quality, customer service and strategic planning and worked in the US, Europe and Asia Pacific. She is a Non-executive Director of Blount International, Inc., Echo Global Logistics and Boston Scientific Corporation and sits on the Board of the Federal Reserve Bank of Chicago. Nelda is Chairwoman and Founder of Pine Grove Holdings, LLC, a consultancy that provides advisory services to private equity and investment firms and limited investments to small and mid-sized businesses. Nelda is a US citizen.

JANE HINKLEY

Non-executive Director & Remuneration Committee Chair

Jane was appointed as a Director of the Company on 3 December 2012. Jane became Chairman of the Remuneration Committee in June 2013. Jane spent a large part of her career working at Gotaas-Larsen Shipping Corporation, the LNG shipping specialist which was listed on both the London Stock Exchange and NASDAQ. She served as CFO from 1988 to 1992, and as Managing Director until 1997. In 1998 Jane was appointed Managing Director of Navion Shipping AS, a company majority owned by Statoil, the oil and gas company, a position she held until 2001. Jane is currently a Non-executive Director and Chairman of the Remuneration Committee of Premier Oil plc, an oil exploration and production company. She also serves as a Non-executive Director of Teekay GP L.L.C, the international provider of marine transportation services for Liquefied Natural Gas, LPG and crude oil, which is an NYSE listed partnership. She previously held the position of Non-executive Director of Revus Energy ASA, a Norwegian exploration and production company. Jane is a Chartered Accountant and a British citizen.

CHRISTER GARDELL

Non-executive Director

Christer was appointed as a Director of the Company on 31 October 2012 having previously joined the board of Cookson Group plc in June 2012. Christer is Managing Partner of Cevian Capital which on 28 February 2014 held just over 21% of the Company's issued share capital. Christer co-founded Cevian Capital in 2002. From 1996 to 2001, he was the Chief Executive Officer of AB Custos, the Swedish investment company. Prior to joining AB Custos he had been a partner of Nordic Capital and McKinsey & Company. Christer is a Vice Chairman of the global Finnish technology and services company Metso Corporation. He served as a Non-executive Director of AB Lindex until December 2007 and of Tieto Corporation until March 2012. Christer is a Swedish citizen.

Group Executive Committee

The Group Executive Committee ("GEC") is convened and chaired by the Chief Executive. It comprises the Chief Executive, the Chief Finanacial Officer and the following eight members of senior management. Biographical details of François Wanecq and Chris O'Shea are set out on page 50.

Chris Abbott
President Flow Control

Chris Abbott was appointed President Flow Control in October 2008. Having joined Vesuvius in 2000, Chris was appointed Vice President for Manufacturing, QHSE, Engineering and Purchasing in 2002. Prior to joining Vesuvius he held a number of senior Industrial and manufacturing managerial positions with Schlumberger's UK and European businesses. He completed an Engineering apprenticeship with the Wolsely Group whilst studying Mechanical Engineering and Business Studies at the Birmingham Polytechnic. Chris is based in Belgium and is a British citizen.

Patrick Bikard
President Operations

Patrick Bikard was appointed President Operations in January 2014 having been Vice President for Manufacturing, QHSE, Engineering & Purchasing since February 2008. Since joining Vesuvius, Patrick has led the operations functions with an emphasis on improving safety, quality and reducing inventories. Patrick worked for nine years in Renault, ending as Director Production & Supply Chain of the Douai plant. This was followed by senior operational roles at Alstom and Faurecia. He has wide experience in creating value through customer focus, lean techniques, operations, change management and continuous Improvement. He is a graduate from École Polytechnique, École des Mines de Paris and Cedep (INSEAD). Patrick is based between Belgium and the UK and is a French citizen.

Glenn Cowie
President Advanced Refractories

Glenn Cowie was appointed President Advanced Refractories in May 2011. He started his career in Foseco South Africa in 1981, where he held several technical and sales positions in both the Foundry and Steel divisions, before becoming the Chief Executive Sub Saharan Africa. Glenn transferred to the UK in an international Strategic Growth Initiative role and shortly thereafter was promoted to Area Director Northern Europe, based in Borken, Germany. Following a two year period with Fosbel, he returned to Foseco in 2008 as Vice President Foundry NAFTA, and subsequently the Americas.Glenn is a Diploma engineer in Metallurgical Engineering. Glenn is based in Pittsburgh and is a South African and British citizen.

George Coulston
Chief Technology Officer

George was appointed Chief Technology Officer in October 2013. Prior to joining Vesuvius, George worked for Kennametal Inc for nine years, where his most recent positions were VP Innovation Ventures and VP Marketing. During his career George also worked for DuPont, in research, manufacturing technology and new business development roles. He has wide experience in R&D, managing projects and organizations with additional experience in marketing and operations. George is a member of the Product Development & Management Association and the Association for Iron & Steel Technology. George has a BSc in Chemical Engineering from the University of Connecticut, a PhD in Engineering and Applied Science from Yale University and an MBA from the University of Pittsburgh. George is based in Pittsburgh and is a United States citizen.

David Hughes

President Foundry

David Hughes was appointed President Foundry in October 2011. For the prior five years David was responsible for the Foundry business in Asia Pacific. Having joined Foseco in 1981, David has held a number of technical, sales and general management roles in Asia followed by a central strategy and M&A role in the UK. After three years he moved to India as Managing Director of Foseco India, a company listed on the Mumbai Stock Exchange and in 2006 David took over the role of Foundry Vice President Asia Pacific. Dave has a Master's degree in Natural Sciences from Cambridge University and in addition holds a Diploma in Accounting and Finance from ACCA. David is based in Shanghai and is a British citizen.

Henry Knowles

General Counsel & Company Secretary

Henry Knowles joined Vesuvius as General Counsel and Company Secretary in September 2013. Prior to joining Vesuvius, Henry spent seven years at Hikma Pharmaceuticals PLC, a FTSE 250 generic pharmaceutical manufacturer with significant operations in the Middle East and North Africa, where he held the roles of General Counsel, Company Secretary and also led the compliance function. Henry trained and practised as a corporate lawyer with Ashurst in London and Tokyo. He graduated from Trinity College, Cambridge with a degree in Social and Political Science, and attended law school in London. Henry is based in London and is a British citizen.

Ryan van der Aa

Vice President Human Resources

Ryan van der Aa was appointed Vice President Human Resources in May 2013. Ryan joined Foseco in 1999 as HR Director Europe and, prior to its acquisition by Vesuvius, was HR Director of Foseco plc for two years. Before 1999, Ryan held several international HR management positions in Indigo NV, HVA International BV and Berenschot Moret Bosboom. Ryan has wide experience in international organisational development and change processes, people development processes and international compensation and benefits. Ryan has a Masters of Law Degree from the University of Tilburg, Netherlands. Ryan is based in London and is a Dutch citizen.

Roel van der Sluis

President Refractories North Asia

Roel was appointed President Refractories North Asia in April 2012. Roel joined Foseco in 1997 when they acquired SMC Foundry Products from Metallgeshellshaft AG where Roel led the Europe global foundry division. He then held the roles in M&T Northern Europe, Central Europe and the Middle East where he opened a number of new markets for Foseco before moving to China, where he was based for three years. Roel has wide experience in both the Foundry and the steel industry and is a member of the German foundry institute, VDG, and the Dutch foundry institute NVVGT. Roel has engineering degrees from the Universities of Delft and Utrecht in the Netherlands and holds an AMP from INSEAD in France. Roel is based in Suzhou and is a Dutch citizen.

Chairman's Governance Letter

Strong corporate governance is central to the delivery of sustainable long-term shareholder value

Dear Shareholder,

2013 was the first full year in which the Board, supported by our management team, embraced the governance responsibilities that come with being an independent public company. It was a year in which narrative reporting was significantly updated, with new disclosure requirements on strategic issues, remuneration and audit matters. For the first time we cover our approach to human rights (see the Corporate Responsibility section from page 39), and the identification our own greenhouse gas emissions including case studies showing the major impact we have in reducing our customers' CO_2 emissions (see the Sustainability section on page 44). We welcome the opportunity that these changes give us to continue to explain the Vesuvius story and how we approach the management of our business.

Board

Following the changes at the demerger, in 2013 we continued to shape our Board for the future. John Sussens and Jan Oostervelt retired at the 2013 AGM, and we thank them for their considerable contribution to the successful start-up of Vesuvius plc. Nelda Connors joined the Board in March 2013, Jane Hinkley took over the Chair of the Remuneration Committee following the AGM and Jeff Hewitt became our Senior Independent Director, continuing as Chairman of the Audit Committee. I chair the Nomination Committee (other than when the committee is considering my successor). We each report on the activities of our respective committees in this governance report. I believe that the Board's composition addresses our current requirements for expertise, diversity and experience and, as such, is well equipped to face the challenge of setting and managing the strategic direction of the business.

Evaluation

We undertook an externally moderated evaluation of the Board, its committees and individual Directors towards the end of 2013. I am delighted to report that the overall outcome from the evaluation was that the Board and its individual Directors are performing effectively, that the Board is well supported and presents an open forum for debate. Arising out of the evaluation, the primary areas for future focus were succession planning and ensuring that we spend adequate time on strategy, particularly in the light of the increasing and evolving governance and compliance obligations placed on all listed companies.

Succession

The Board is content with its current composition but will continue to keep succession under review. In 2014 the primary focus will be on Executive Director and senior management succession and, as part of the Board's overall review of strategy, this will be a key area for further development.

Training

As part of its training and development remit, the Board visited operations in China, and during the year had discussions with our advisers on the capital structure of the Group, returns to shareholders, strategy, and anti-bribery and corruption issues. I also continued to develop my wider understanding of the business with visits to operations in Germany, Poland, Belgium, South Africa and the USA, plus a second visit to China. Board development relating to the Vesuvius business and the wider corporate environment is an ongoing process. The Board engages directly with senior management, both through set-piece presentations at the Board and through Board and individual Director visits to operations. We will continue to do this throughout 2014.

Risk

Alongside every successful strategy has to be the management of the risks that come with its execution. During the year we re-examined how we identify and analyse risk, so that major issues are identified across the Group's business. The methods by which we manage our risks and assess their impact will be reviewed again in 2014.

Looking Ahead

In 2014 we will take the messages that came out of the external evaluation to build on existing Board practices, and develop our stewardship of the Company and its overall governance. We will continue to develop both as a Board and as individual Directors, and we look forward to contributing towards and overseeing the development of Vesuvius over the next year and beyond.

Yours sincerely

John McDonough CBE
Chairman
4 March 2014

Governance Report

The Board of Vesuvius plc (the "Company") is responsible for the Group's system of corporate governance and is committed to maintaining high standards and to evolving governance arrangements to comply with emerging best practice. This report describes the Company's corporate governance structure and explains how Vesuvius has applied the main principles of the UK Corporate Governance Code issued by the Financial Reporting Council (the "Code") during the year ended 31 December 2013. Throughout the year and up until the date of this report Vesuvius was in full compliance with the requirements of the Code.

Roles and Responsibilities of the Board

Ultimate responsibility for the management of the Group rests with the Board of Directors. The Board focuses primarily upon strategic and policy issues and is responsible for the Group's long-term success. It sets the Group's strategy, oversees the allocation of resources and monitors the performance of the Group in pursuit of this, all within a framework of prudent and effective control which enables risk to be assessed and managed.

The Board

The Board has a formal schedule of matters reserved to it and delegates certain matters to its committees. It is anticipated that the Board will convene on seven scheduled occasions during 2014 as well as holding ad hoc committee meetings to consider non-routine business when required.

The Chairman and Chief Executive

The division of responsibilities between the Chairman and the Chief Executive is set out in writing and was reviewed during the year as part of the Company's annual corporate governance review.

The interactions in the governance process are are shown on the following schematic.

Board Committees

The principal governance committees of the Board are the Audit, Remuneration and Nomination Committees. Each committee has written terms of reference, which were reviewed during the year and agreed by the Board. These are available to view on the Company's website (www.vesuvius.com).

Governance Report continued

Committee	Role	Chair of Committee	Membership
Audit	To monitor the integrity of financial reporting and to assist the Board in its review of the effectiveness of the Group's internal controls and risk management systems	Jeff Hewitt	All independent Non-executive Directors
Remuneration	To determine the appropriate remuneration packages for the Group's Chairman, Executive Directors, and Company Secretary, and to recommend and monitor the level and structure of remuneration for other Senior Management	John Sussens up to the date of the 2013 AGM, and Jane Hinkley thereafter	All independent Non-executive Directors
Nomination	To advise the Board on appointments, retirements and resignations from the Board and its committees and review succession planning for the Board	John McDonough, the Chairman (except where considering his own succession in which case the Committee is chaired by an appropriate Non-executive Director)	The Chairman and any three Non-executive Directors

In addition, the Board delegates certain responsibilities on an ad hoc basis to a Finance Committee and Share Schemes Committee, which operate in accordance with the delegation of authority agreed by the Board.

Committee	Role	Chair of Committee	Membership
Finance	To approve specific funding and treasury-related matters in accordance with the Group's delegated authorities or as delegated by the Board	John McDonough, the Chairman	The Chairman, Chief Executive, Chief Financial Officer and Group Treasurer
Share Schemes	To facilitate the administration of the Company's share schemes	Any member	Any two Directors or a Director and the Company Secretary

The Group also operates a Group Executive Committee ("GEC"), which is convened and chaired by the Chief Executive, and assists him in discharging his responsibilities. The GEC comprises the Chief Executive, Chief Financial Officer, the three Business Unit Presidents, the President Refractories North Asia, the Vice President Human Resources, the Chief Technology Officer, the President Operations and the General Counsel & Company Secretary. The Executive Committee met six times during 2013 and is scheduled to meet seven times during 2014. Its meetings are held between the London head office and major operational sites. Biographical details of the GEC members are set out on pages 52 and 53.

BOARD AND COMMITTEE ATTENDANCE

The attendance of Directors who served between 1 January 2013 and 31 December 2013, at the Board meetings and principal Committees of which they were a member held during this period, is shown in the table below. The maximum number of meetings in the period during which the individual was a Board or Committee member is shown in brackets.

	Board	Audit Committee	Remuneration Committee	Nomination Committee
Chairman				
John McDonough CBE	7 (7)	4 (4)	7 (7)	2 (2)
Executive Directors				
François Wanecq	7 (7)	–	–	–
Chris O'Shea	7 (7)	–	–	–
Non-executive Directors				
Nelda Connors[1]	6 (6)	3 (4)	5 (6)	1 (1)
Christer Gardell	7 (7)	–	-	2 (2)
Jeff Hewitt	7 (7)	4 (4)	7 (7)	2 (2)
Jane Hinkley[1]	6 (7)	4 (4)	6 (7)	1 (2)
Jan Oosterveld	3 (3)	1 (1)	3 (3)	1 (1)
John Sussens	3 (3)	1 (1)	3 (3)	1 (1)

NOTE
1. Jane Hinkley was unable to attend one day of meetings due to commitments made prior to joining the Board. As noted in the Remuneration Report, Nelda Connors was delayed in travelling on one occasion due to adverse weather conditions in the US.

To the extent that Directors are unable to attend scheduled meetings, or additional meetings called on short notice, they will receive the papers in advance and relay their comments to the Chairman for communication at the meeting. The Chairman will follow up after the meeting in relation to the decisions taken.

EFFECTIVENESS

Board Composition

The Board comprises seven Directors – the Non-executive Chairman, John McDonough CBE; the Chief Executive, François Wanecq; the Chief Financial Officer, Chris O'Shea; and four Non-executive Directors, three of whom are deemed to be independent for the purposes of the UK Corporate Governance Code. Jeff Hewitt is the Senior Independent Non-executive Director. Richard Malthouse served as Company Secretary until 1 September 2013 when Henry Knowles was appointed to the role.

The Board seeks to ensure that both it, and its committees, have the appropriate range of diversity, skills, experience, independence and knowledge of the Company to enable them to discharge their duties and responsibilities effectively. The Board's overall skills and experience, as well as Non-executive Director independence, were reviewed during the year as part of the annual corporate governance review, and Board composition formed part of the Board's evaluation process. The Board considers its diversity, size and composition to be appropriate for the requirements of the business. The Non-executive Directors are drawn from different nationalities and have significant experience of managing complex global businesses.

Committee composition is set out in the relevant committee reports. No one other than Committee Chairs and members of the Committees are entitled to participate in meetings of the Audit, Nomination and Remuneration Committees, but others may attend by invitation.

The Board considers that a majority of the Board, (excluding the Non-executive Chairman) namely Nelda Connors, Jeff Hewitt, and Jane Hinkley, are independent of management and free from any business or other relationship which could affect the exercise of their independent judgement. Christer Gardell is Managing Partner of Cevian Capital which holds 21.02% of Vesuvius' issued ordinary share capital and is not considered to be independent. He brings a wealth of commercial acumen to the Board. The Chairman satisfied the independence criteria on his appointment to the Board. John Sussens served as Senior Independent Director until his retirement at the 2013 AGM, when Jeff Hewitt was appointed to the role. Biographical details of the Directors are set out on pages 50 and 51.

Appointments to the Board

Recommendations for appointments to the Board are made by the Nomination Committee. The Nomination Committee follows a formal, rigorous and transparent procedure for the appointment of new Directors to the Board. Board appointments are made on merit against objective criteria, selecting the best candidate for the post. Non-executive appointees are also required to demonstrate that they have sufficient time to devote to the role. The Nomination Committee is responsible for reviewing Board succession to ensure that plans are in place for the appropriate refreshing and orderly succession of Board directorships. Further information is set out in the Nomination Committee report on page 65.

Time Commitment of the Chairman and the Non-executive Directors

The Chairman and Non-executive Directors each have a letter of appointment which sets out the terms and conditions of their directorship. An indication of the anticipated time commitment is provided in any recruitment role specification, and each Director's letter of appointment provides details of the meetings that they are expected to attend, along with the need to accommodate travelling time (particularly for overseas trips). Non-executive Directors are required to set aside sufficient time to prepare for meetings, and regularly to refresh and update their skills and knowledge. In signing their letters of appointment, all Non-executive Directors have consequently agreed to commit sufficient time for the proper performance of their responsibilities, acknowledging that this will vary from year to year depending on the Group's activities. Directors are expected to attend all scheduled Board and Committee meetings and any additional meetings as required. Each Director's other significant commitments are disclosed to the Board at the time of their appointment and they are required to notify the Board of any subsequent changes. The Company has reviewed the availability of the Non-executive Directors and considers that each of them is able to, and in practice does, devote the necessary amount of time to the Company's business.

Induction and Training

A comprehensive induction programme is in place for new Directors, and was used in 2013 on the appointment of Nelda Connors. This includes visits to manufacturing facilities, meetings with key Group executives and introductions to the Company's principal external advisers, as appropriate. Reference materials are provided, including information about the Board, its committees, Directors' duties, procedures for dealing in the Company's shares and other regulatory and governance matters, and Directors are advised of their legal and other duties and obligations as Directors of a listed company. The Company Secretary ensures that after a certain period of appointment, new Directors feel that they have received sufficient induction information, and supplies support for any subsequent requirements.

The Chairman, through the Company Secretary, continues to ensure that there is an ongoing process to review training and development needs. Directors are provided with details of seminars and training courses relevant to their role. They are encouraged to attend these as they consider appropriate and are supported by the Company in doing so. Where a general training need is identified, in-house training can be provided to the entire Board. Regulatory updates are provided as a standing item at each Board meeting in a Secretary's Report. In 2013, given the proximity of the demerger, no formal externally moderated update on corporate matters was undertaken. However, technical updates were delivered by certain of the Company's advisers and focused predominantly on changes to narrative reporting.

Governance Report continued

Information and Support

The Board ensures that it receives, in a timely manner, information of an appropriate quality to enable it to adequately discharge its responsibilities. Papers are provided to the Directors in advance of the relevant Board or Committee meeting to enable them to make further enquiries about any matters prior to the meeting should they so wish. This also allows Directors who are unable to attend to submit views in advance of the meeting.

Outside of the Board documents the Chief Executive provides written updates on important Company business issues together with certain financial and management information to keep Directors updated. Regular updates on shareholder issues and discussions are also provided to the Board, who also receive copies of significant analyst's notes issued on the Company. Directors have access to a secure online portal used for the distribution of all information.

All Directors have access to the advice and services of the Company Secretary. There is also an agreed procedure in place for Directors, in the furtherance of their duties, to take independent legal advice at the Company's expense.

Performance Evaluation

In accordance with the provisions of the Code, the Chairman led a formal and rigorous evaluation of the Board's performance and effectiveness during the year, together with an evaluation of the performance of the Audit and Remuneration committees and an individual performance review of each of the Board members. In addition, the Senior Independent Director led an evaluation of the performance of the Chairman. The evaluation was externally moderated by Lintstock, who collated responses from participants and presented an analysis of the results to the Chairman. Lintstock examined the balance of individual skills and experience, independence, and knowledge of the Company amongst the Directors, together with Board diversity (including gender) and Board interaction and effectiveness as part of the evaluation. Lintstock's analysis was circulated to the Board and formed the basis of one-on-one discussions conducted by the Chairman with each member of the Board and the Company Secretary. These conversations also covered the output from the individual Director reviews.

The overall outcome of the evaluation was that the Board and its individual Directors are performing effectively, that the Board is well-supported in terms of information flow and presents an open forum for debate. The primary areas identified for future focus were succession planning, Board composition, and ensuring that the Board maintained its focus on strategy, particularly in the light of the increasing and evolving governance and compliance obligations placed on plc boards. As a result of the evaluation, Board and senior management succession will be addressed specifically at the Group strategy review to be held in July and a series of set piece business unit and functional presentations will be made to the Board to ensure that Group-wide strategy is being understood and interpreted in the Business Units and that direct feedback on strategy can come to the Board.

Appointment and Replacement of Directors

The Board membership should not be fewer than five nor more than 15, save that the Company may, by ordinary resolution, from time to time vary this minimum and/or maximum number of Directors. Directors may be appointed by ordinary resolution or by the Board. A Director appointed by the Board must retire from office at the first Annual General Meeting ("AGM") after his/her appointment. A Director who retires in this way is then eligible for reappointment. The Board may appoint one or more Directors to any executive office, on such terms and for such period as it thinks fit and it can also terminate or vary such an appointment at any time. The Articles specify that at every AGM, any Director who has been appointed by the Vesuvius Board since the last AGM and any Director who held office at the time of the two preceding AGMs and who did not retire at either of them, shall retire from office. Any Director who retires at an AGM may offer himself for reappointment. In accordance with the requirements of the Code, all the Directors will offer themselves for re-election at this year's AGM. The biographical details of each of the Directors, including details of their other directorships and relevant skills and experience, are set out on pages 50 to 51 and in the 2014 Notice of AGM. The Board believes that each of the Directors standing for re-election is effective and demonstrates commitment to his/her respective role. Accordingly, the Board recommends that shareholders approve the resolutions to be proposed at the 2014 AGM relating to the re-election of Directors.

Directors' Conflicts of Interest

The Board has established a formal system to authorise situations where a Director has an interest that conflicts, or may possibly conflict, with the interests of the Company ("Situational Conflicts"). Directors declare Situational Conflicts so that they can be considered for authorisation by the non-conflicted Directors. In considering a Situational Conflict these Directors act in the way they consider would be most likely to promote the success of the Company, and may impose limits or conditions when giving authorisation or subsequently if they think this is appropriate. The Company Secretary records the consideration of any conflict and records any authorisations granted. The Board believes that the systems it has in place for reporting Situational Conflicts continues to operate effectively. No Situational Conflicts were brought to the Board for authorisation during the year under review.

ACCOUNTABILITY

The Audit Committee

The members of the Audit Committee are set out on page 61. The Audit Committee report which describes the Audit Committee's work in discharging its responsibilities, is set out on pages 61 to 64.

Risk Management and Internal Control

The Board has overall responsibility for establishing and maintaining a system of risk management and internal control, and for reviewing its effectiveness. This system is designed to manage, rather than eliminate, the risks facing the Group and safeguard its assets. No system of internal control can provide absolute assurance against material misstatement or loss. The Group's system is designed to provide the Directors with reasonable assurance that problems are identified on a timely basis and are dealt with appropriately.

The Audit Committee assists the Board in reviewing the effectiveness of the Group's system of internal control, including financial, operational and compliance controls, and risk management systems. The key features of the Group's system of internal control are set out below.

Process	Elements
Strategy and financial reporting	• comprehensive strategic planning and forecasting process • annual budget approved by the Board • monthly operating financial information reported against budget • key trends and variances analysed and action taken as appropriate
Vesuvius GAAP	• accounting policies and procedures formulated and disseminated to all Group operations • cover the application of accounting standards, the maintenance of accounting records and key financial control procedures
Operational controls	• operating companies and corporate offices maintain internal controls and procedures appropriate to their structure and business environment • compliance with Group policies on items such as authorisation of capital expenditure, treasury transactions and the management of intellectual property • common accounting policies and procedures and financial reporting software used in financial reporting and consolidation • significant financing and investment decisions reserved to the Board, including guarantees and indemnities • Board monitors policy and control mechanisms for managing treasury risk
Risk assessment and management	• continuous process for identifying, evaluating and managing any significant risks • risk management process designed to identify the key risks facing each business • reports made to Board on how those risks are managed • each major Group Business Unit produces a "risk map" to identify key risks, assess the likelihood of risks occurring, their impact and mitigating actions • Board reviews insurance and other measures used in managing risks across the Group • Board notified of major issues and makes an annual assessment of how risks have changed

Reviewing the Effectiveness of Internal Contol

The internal control system is monitored and supported by the Group's internal audit function, which conducts reviews of Vesuvius' businesses and reports objectively both on the adequacy and effectiveness of the system of internal control and those businesses' compliance with Group policies and procedures. The Audit Committee receives reports from the Group Head of Internal Audit and reports to the Board on the results of its review.

As part of the Board's process for reviewing the effectiveness of the system of internal control, iit delegates the following matters to the Audit Committee to be carried out during the year:

- Review of external and internal audit work plans
- Consideration of reports from management, internal audit and external audit on the system of internal control and any significant control weaknesses
- Discussions with management on the actions taken on problem areas identified by Board members, in internal audit reports or in external audit management letters

At the year-end, following the review by the Audit Committee of internal financial controls and of the processes covering other controls, the Board evaluated the results of the internal control and risk management procedures conducted by senior management. This included a self-certification exercise by which senior financial, operational and functional management throughout the Group certified the effectiveness of the system of internal control within the business area for which they were responsible, together with their compliance throughout the year with the Group's policies and procedures.

Consequently, in accordance with the provisions of the Code, the Directors confirm that they have reviewed the effectiveness of the Group's system of internal control and that the necessary actions have been taken to remedy any control weaknesses identified during the year. Since the date of this review there have been no significant changes in internal controls or other matters which could significantly affect them.

Governance Report continued

Executive Compensation and Risk

All of the independent Non-executive Directors serve on both the Audit and Remuneration Committees. They therefore bring their experience and knowledge of the activities of each committee to bear when considering the critical judgements of the other. This means that the Directors are in a position to consider carefully the impact of incentive arrangements on the Group's risk profile and to ensure the Group's remuneration policy and programme is structured so as to accord with the long-term objectives and risk appetite of the Company.

Share Capital and Voting

Disclosure of the information regarding share capital, the authorisation received by Directors at the AGM regarding the issue of shares and the authority to purchase own shares, is contained on pages 85 and 86 of the Directors' Report. There are no restrictions on voting contained in the Company's Articles of Association. Further details are set out in the Directors' Report on page 87.

Relations with Shareholders

The Board is committed to communicating with shareholders and stakeholders in a clear and open manner, and seeks to ensure effective engagement through the Company's regular communications, the AGM and other investor relations activities. The Company undertakes an ongoing programme of meetings with investors, which is managed by the Chief Executive and Chief Financial Officer. The majority of meetings with investors are led by them. However, the Chairman, Senior Independent Director and Committee Chairs remain open for discussion with shareholders on matters under their areas of responsibility, either through contacting the Company Secretary or directly at the AGM. All Directors are expected to attend the Company's AGM, providing shareholders with the opportunity to question them about issues relating to the Group, either during the meeting or informally afterwards.

The Company reports its financial results to shareholders twice a year, with the publication of its Annual and Half-Yearly Financial Reports. It also issues two further trading updates each year with the publication of its Interim Management Statements. In conjunction with these announcements, presentations or teleconference calls are held with institutional investors and analysts. Recordings of these will be made available on the Group's website (www.vesuvius.com) along with hard copies of any presentation materials issued.

Audit Committee

During the year the Audit Committee continued to focus on monitoring the integrity of the Group's financial reporting and also advised the Board on the application of recently introduced reporting and governance requirements, including whether the Annual Report is fair, balanced and understandable

Committee Members

Jeff Hewitt (Committee Chairman)
Nelda Connors
Jane Hinkley

The Audit Committee

The Audit Committee comprises all of the independent Non-executive Directors of the Company. The Members bring a wide range of financial and commercial expertise to the Committee's deliberations. I continued to be the Committee Chairman. I am a qualified accountant and have the required recent and relevant financial experience. Jane Hinkley joined at the time of the demerger of Cookson Group and Nelda Connors joined the Committee in March 2013; both Nelda and Jane have brought a fresh perspective to the Committee's activities. Member's biographies are on page 51. The Company Secretary is Secretary to the Committee.

Meetings

The Committee met four times during the year. We continue to operate in an inclusive manner. Hence, the Board Chairman, non-independent Non-executive Director, Chief Executive, Chief Financial Officer, Group Financial Controller, Head of Internal Audit and KPMG were invited to each meeting. Other management executives were invited to attend as appropriate. This openness supported the quality and transparency of the Committee's work and the communication of its deliberations with the Board, executives and auditors. The Committee also met privately with the external auditor KPMG and the Head of Internal Audit without any executives being present, and I met informally with KPMG and with the Head of Internal Audit between the scheduled meetings to discuss any emerging issues. This "avoidance of surprises" approach was reinforced by regular meetings with relevant executives. I reported on the outcome of our meetings to the Board and all members of the Board received the agenda, papers and minutes of the meetings.

Roles and Responsibilities

The primary roles and responsibilities of the Committee remained the same as in 2012, with the addition that in 2013 the Committee advised the Board on whether it believed the Annual Report and Accounts taken as a whole to be fair, balanced and understandable.

The Committee operates under formal terms of reference which were reviewed and updated during the year and approved by the Board. The terms of reference are available on the Group's website (www.vesuvius.com). Within these terms the Committee and its individual members are empowered to obtain outside legal or other independent professional advice (at the cost of the Company). Such powers were not required during the year. The Committee may also secure the attendance at its meetings of any employee or other parties with relevant experience and expertise should it be considered necessary.

Activities in 2013

In 2013 we particularly focused on the requirements arising from guidance and regulation relating to financial reporting, and in particular on changes to narrative reporting. I and the other members of the Committee believe that we received sufficient, relevant and reliable information from management and the external auditor, to enable us to discharge our responsibilities. Rather than reporting our meetings chronologically I will highlight the areas of our focus.

Financial Reporting

In relation to the year under review, we discharged our primary responsibility to review the integrity of the half year and annual financial statements with management and the external auditor. This included assessing:

- The quality, acceptability and consistency of the accounting policies and practices
- The clarity and consistency of the disclosures, including compliance with relevant financial reporting standards and other reporting requirements
- Significant issues where judgements have been made that are material to the reporting or where discussions have taken place with the external auditor in arriving at the judgement or estimate
- At the request of the Board, whether the Annual Report and Accounts taken as a whole is fair, balanced and understandable taking into consideration all the information available to the Committee.

Audit Committee continued

The Committee deliberated reports from the Chief Financial Officer and Group Financial Controller that were well prepared and analysed various alternatives as appropriate. KPMG also delivered memoranda for the half-year and year-end reporting their views on significant issues. KPMG provided a summary for each issue, including their assessment of the prudence of management's judgements. The Committee considered the overall degree of prudence applied this year and also in comparison with the prior year. Importantly, the Committee agreed with KPMG that the judgements made were cautious, but not overly prudent, and consistent over time. Consistency remained a critical consideration, so that the trend in reported performance is not distorted by differing judgements on issues that span more than one reporting period. KPMG proposed no material audit adjustments arising from their audit work, which provided additional comfort to the Committee.

Significant Issues and Material Judgements

In discussing the significant issues and areas of material judgement, I have distinguished between issues that were specific to the year and ongoing topics that persist from year to year. Both were and are important areas for the Committee to consider, but the ongoing topics have been and are covered regularly in the accounts with disclosures and are generally common topics across many companies.

Significant topics specific to the year:

- **Recognition of US deferred tax asset.** The recognition of £29.2m of deferred tax assets as explained in Note 12 was a major judgement taken during the second half of the year and was arrived at after extensive modelling, specifically of future profits in the United States. The Group has additional tax losses and other timing differences in the United States and elsewhere which have not been recognised, but recognition will be kept under review in future years as expectations of future profits, and hence the prospects for utilising these losses, evolve. This is a highly technical area where the Committee drew on the views of internal and external experts to agree the treatment.
- **Disposal of Precious Metals.** The disposal of the Precious Metals Processing division in the year was completed and a number of warranties were given, for which reasonable and prudent reserves have been established. The Committee agreed the accounting treatment and the outstanding matters on the disposal were completed within expectations.
- **VAT Claim.** As noted in the Contingent Liability Note 37, the Precious Metals Processing business in the UK was subject to a Missing Trader VAT fraud claim by HMRC. During the second half of the year this claim failed and the prior year provision that had been made was substantially reversed within Discontinued Operations. The Committee was regularly updated on progress and agreed the accounting treatment.

Significant ongoing topics considered were:

- **Income Tax provisions.** Provisioning for income tax is an ongoing complex area where major judgements are made, for example, on provisions relating to taxes that might arise from transfer pricing policies. The Committee agreed the overall tax provision of £45.0m, as reflected in the Group balance sheet, after consideration with internal and external experts.
- **Other provisions.** The Committee considered the level of provisions established in the context of all available internal and external advice, together with any existing insurance cover. The level of provisions held in respect of open litigation matters is an area of significant ongoing management judgement. Provisioning for future potential costs associated with businesses disposed of or closed or restructured is a further area where ongoing long-term judgements are required. Expert advice is taken on the relevant areas, including litigation claims, environmental liabilities and warranty claims, together with provisions in respect of indirect taxation matters and the level of provisions held was adjusted appropriately as reflected in Note 35 to the accounts. Given that the trading of the Group's steel industry customers was difficult during the year, particular attention was paid again to the working capital reserves held against receivables and inventories to ensure that appropriate levels have been established.
- **Impairment of intangible assets.** The carrying value of goodwill and other intangible assets, being some £555m and £162m at year-end, respectively, was tested against the current economic backdrop and the Committee agreed that no impairment charge was required (see Note 19).
- **Pensions.** Given the complexities of the pension accounting treatment and assumptions described in Note 31 to the accounts, these were challenged as to their appropriateness for the Group's major schemes.

The judgements made on each of the significant issues were considered and found to be appropriate and acceptable by the Committee.

The Committee assessed all information available to it in considering the overall drafting of the Annual Report and the process by which the report was compiled and reviewed so as to be able to provide its advice to the Board that the Annual Report is fair, balanced and understandable. The Committee noted that the "understandable" test is challenging given the complexity of the accounting standards that have to be applied.

Internal Controls

The Committee considered the process by which management evaluated internal controls across the Group. The Head of Internal Audit provided the Committee with a review and analysis of the assurance provided by the controls and the testing of these controls. The Committee agreed that the review indicated a satisfactory control environment.

The Group is made up of mainly small operating units in geographically diverse locations and so segregation of duties and remote management oversight can give rise to fraud opportunities. Over the years there have been limited instances of fraud, which had been detected and preventative actions taken. The amounts involved were small. The internal audit scope and coverage was reviewed again in light of such risks, and line management was further strengthened. This year the external auditor performed enhanced procedures around the Code of Conduct, the Code itself and the process for embedding it across the Group. The Committee found this further process useful. Each year the General Managers and Finance Managers of the businesses self-certify compliance with Group policies and regulations, which provides another safeguard.

After considering these various processes, the Committee was able to provide its assurance to the Board on the effectiveness of internal control within the Group.

The Committee also continued its monitoring and oversight of the procedures for the receipt, retention and treatment of complaints by employees. This is an independent and confidential service worldwide where employees may register any concerns about any incorrect or irregular practices they perceive in their workplace. The very limited number of complaints were followed up appropriately and related to organisational grievances. The effectiveness of these procedures will be reviewed further during 2014.

Internal Audit

The Group's internal audit function operates on a global basis. The Head of Internal Audit is responsible for the team of five professionally qualified individuals located in the major regional areas of the Group's activities. As in previous years, the team carried out assignments in accordance with an annual internal audit plan approved by the Committee. The plan is based on assessed risks and aims to cover all locations on a three-year cycle as the minimum.

In 2013, 48 audit assignments were undertaken covering 30% of the business. The Head of Internal Audit reports directly to me and the Committee reviewed progress against the plan and discussed recent reports from the Head of Internal Audit at each of its meetings. Where control issues or other problems were flagged by the fieldwork the Committee ensured appropriate and timely action by the responsible management, involving senior management as necessary, with a follow-up review. An internal survey of the quality and effectiveness of internal audit was undertaken and again the team scored highly on their professional approach. The long-standing Head of Internal Audit retired at the end of the year and a successor has been recruited. She will review and, as necessary, further develop the effectiveness of the internal audit function.

Risk Management

Risk management is inherent in the business planning processes of the Group and risk registers were constructed and reviewed in each major business. The Head of Internal Audit coordinated the accumulation of these operational risks for consideration by the Group Executive Committee and then by the Board, who also input top-down strategic risks into the process. The Committee oversaw this process and its members fully participated in the Board examination of risks and mitigating actions. In particular, the Committee determined that the principal risks and uncertainties as set out on pages 18 and 19 of the Strategic Report properly reflect the outcome of this process.

External Audit

The Committee and the Board is committed to the continued excellence of the external audit process and this expectation is well understood by management. The effectiveness of the external audit in the past year was tested by reviewing the quality of issues and challenges raised by KPMG to the Committee and to management across the Group, supported by a quality review carried out by the Group Financial Controller. The effectiveness of the external audit was deemed high by the Committee and management.

The audit report provided by KPMG on pages 89 and 90 of the accounts provides a summary of the scope, coverage and materiality levels applied by KPMG in the audit. The Committee agreed as part of the audit planning based on the forecast results of the year and a detailed risk assessment, a materiality figure of £7.0m for Group financial reporting purposes. Importantly much lower levels of materiality are used in the audit fieldwork on the individual businesses in the Group and these lower figures drive the scope and depth of audit work. Small operations were subject to statutory audit but were also subject to internal audit reviews based on risk assessments. Any misstatements at or above £0.4m are reported to the Committee. There were no significant changes to the audit scope during the course of the audit.

The KPMG audit fee was reviewed in light of the audit work required and thence agreed by the Committee for recommendation to the Board. The Board approved the fee estimate, which is flat with 2012 for the Group's continuing operations.

KPMG provided updates at the half year and running up to the year-end, including commentaries on significant issues and their assessment of prudence in the judgements made. Private sessions were held with KPMG without management being present covering reporting and control issues in the context of the demerged Group and the resourcing of the finance team. More specific matters discussed included the auditor's assessment of management's identification of business risks and of the action taken by management in relation to them. In these sessions KPMG confirmed that their work had not been constrained in any way and that they were able to exercise their appropriate professional scepticism and challenge through the audit process.

Audit Committee continued

External Auditor Independence

The Committee continued to operate safeguards to ensure that the independence and objectivity of the external audit was and is not compromised, including:

- Regular confirmation that the external auditor is independent of the Company in its own professional judgement
- Evaluating all the relationships between the external auditor and the Group, including those relating to the provision of non-audit services to determine whether these impair, or appear to impair, the auditor's independence.

In accordance with established Group policy, the external auditor was, and is, prohibited from performing services where it:

- May be required to audit its own work
- Would participate in activities that would normally be undertaken by management
- Is remunerated through a "success fee" structure
- Acts in an advocacy role for the Group.

Other than these, the policy does not impose an automatic prohibition on the external auditor undertaking non-audit work that is not, or is not perceived to be, in conflict with auditor independence, provided it has the skill, competence and integrity to carry out the work in the best interests of the Group. In the coming year, the Committee will consider the implications of the draft EU legislation on further limiting non-audit work by the external auditor. The Group's existing policies will probably have to become more restrictive as a result of the changes, but the Committee's overriding principle will continue to be that the quality of the external audit should not be compromised in any way by any other activity.

An annual budget for non-audit related fees which management is proposing to pay to the external auditor, is presented for pre-approval to the Committee. Where the non-audit fee is likely to be in excess of £50,000, it must be pre-approved by the Committee and where appropriate, services are tendered prior to the awarding of work.

During 2013, the non-audit fees amounted to £0.2m, or 12% of the audit fee, primarily relating to assurance services related to the review of the Company's interim financial statements and taxation advice (see Note 6 on page 102 of the Financial Statements). This showed a large reduction from 2012 where KPMG undertook significant work relating to the demerger. The Committee also monitored fees paid to other accounting firms as part of the review so as to determine where there might be any current or future conflicts of interest.

External Auditor Reappointment

The Committee is responsible for making recommendations to the Board in relation to the appointment, reappointment and removal of the external auditor. In relation to the reappointment of the external auditor for 2014, the Committee considered various factors, but most importantly the demonstrated quality of the teams delivering the audit, both locally and centrally, and in particular the presence and capabilities of the lead partner. We also consider the overall quality of the firm's work as reflected in the reports of the Audit Quality Review Team of the Financial Reporting Council.

The Committee is well aware that KPMG or its predecessor firms have had a long-standing tenure as the auditor of Vesuvius and its predecessors. The services of KPMG were retained during the demerger in 2012 as it represented the most efficient and cost-effective accounting firm to undertake the work and at that time the lead audit partner was changed in accordance with lead partner rotation regulatory requirements.

Given the tenure, the Committee goes to considerable lengths to determine that the audit by KPMG is of maintained high quality, with excellent staffing, tested by internal reviews by management. The Committee is conscious of the proposals for audit firm rotation from the FRC, the Competition Commission and the EU Commission. Our advice is that the proposed EU legislation (though not yet finally formulated) will prevail, be mandatory and will come into force in the coming year. This will require audit firm rotation after a maximum of ten years with a possibility of an extension of a further ten years if a competitive tender has taken place at the ten year point, though these periods could be shorter if determined by enabling national legislation. Importantly there are proposed transitional arrangements which, as currently formulated, would require the Group to undertake a competitive tender within six years of the proposed EU legislation coming into force.

The Committee and the Board believe the Group is receiving a very good quality of audit service from KPMG. Consequently, the Board intends that the Group will have a competitive tender process at the time of the next partner rotation in 2016. Meanwhile, demanding audit performance requirements will continue to be applied to KPMG. By 2016 the requirements arising out of what is currently still proposed legislation will be much clearer. As such, the Committee has recommended, and the Board has agreed, that, subject to shareholder approval, KPMG will be reappointed at the 2014 AGM. Should any shareholder wish to discuss this approach and timing with me then I should be happy to do so.

Committee Evaluation

The Committee's activities formed part of the evaluation of Board effectiveness performed in the year. Details of this approach are given on page 58.

On behalf of the Audit Committee

Jeff Hewitt
Chairman, Audit Committee
4 March 2014

Nomination Committee

During the year the Committee appointed a new Senior Independent Director and, in line with its primary responsibility, focused on Board succession planning — ensuring that the Board is made up of individuals with the necessary skills, diversity and experience to lead the Company

Committee Members

John McDonough (Committee Chairman)
Nelda Connors
Christer Gardell
Jeff Hewitt
Jane Hinkley

The Nomination Committee

The Nomination Committee is made up of any three of the Non-executive Directors. During the year I continued as Chairman of the Committee, though I would not act as Chairman when the Committee is considering the appointment of my successor. In this case, the Chairman would be an appropriate Non-executive Director. In addition to the Directors named above, Jan Oosterveld and John Sussens were also members of the Committee until their retirement from the Board at the AGM in June 2013. The Company Secretary is Secretary to the Committee. Members' biographies are set out on pages 50 and 51.

Meetings

The Committee meets as and when required, which it did twice during 2013. Both meetings were convened with all Non-executive Directors present together with the Chief Executive, who was invited to attend both meetings. I reported the outcome of our meetings to the Board. Formal meetings are held to consider standing items of business. However, particularly when a recruitment exercise is taking place, there is also a significant level of ad hoc discussion between members of the Committee.

The Committee operates under formal terms of reference which were reviewed and updated during the year and approved by the Board. The terms of reference are available on the Group's website (www.vesuvius.com).

The Committee and its members are also empowered to obtain outside legal or other independent professional advice (at the cost of the Company) in relation to its deliberations (which rights were not exercised during the year) and to secure the attendance at its meetings of any employee or other parties it considers necessary.

Role and Responsibilities

The Nomination Committee's foremost priorities are to ensure that the Company has the best possible leadership and maintains a clear plan for both Executive and Non-executive Director succession. Its prime focus is therefore on the strength of the Board, for which appointments are made on merit, against objective criteria, selecting the best candidate for the post. The Nomination Committee advises the Board on the appointments, retirements and resignations from the Board and its Committees.

Activity in 2013

During the year, the Committee considered the appointment of a new Senior Independent Director to replace John Sussens who retired from the Board at the 2013 AGM. The Committee recommended to the Board that an external candidate was not required to fill this position as Jeff Hewitt was an outstanding candidate for the role, given his wide experience of Vesuvius and corporate governance.

During the year, as part of the annual corporate governance review, the Committee also reviewed the independence of the Board and the potential lengths of tenure of each of the independent Non-executive Directors.

The majority of the Board was appointed only recently. However, the Committee continues regularly to re-examine succession and the Board's balance of skills, experience and diversity. Succession planning, led by the Nomination Committee, forms an integral part of the Board's annual strategy review.

Board Composition

All Directors have served at a very senior level in global organisations, have international experience across a variety of industries, and most have spent a considerable amount of time resident outside the UK. At present, two of the seven Directors are women, and three are non-British citizens. The Nomination Committee continues to believe that this diversity underpins the successful operation of an effective Board. It should be noted that in Lord Davies' original recommendation on Women on Boards, he stated that listed companies in the FTSE 100 should aim for a minimum of 25% female board member representation by 2015. He also recommended that FTSE 350 companies should be setting their own, challenging targets and expected that, in time, many would achieve a much higher figure than this minimum. We are pleased to report that the Vesuvius Board has achieved this target.

Nomination Committee continued

Process for Board Appointments

When considering Board appointments, the Nomination Committee draws up a specification for the Director, taking into consideration the balance of skills, knowledge and experience of its existing members, the diversity of the Board, the independence of continuing Board members and the ongoing requirements and anticipated strategic developments of the Group. The search process is then able to focus on appointing a candidate with a balance of skills that enhance the Board's diversity. For example, whilst most of the work for the appointment of Jane Hinkley and Nelda Connors was undertaken in 2012, their appointments required global Chief Executive/CFO experience, an understanding of executive compensation and knowledge of, and experience in, project management, lean manufacturing and growing a business in Asia.

When considering Board appointments, the Committee utilises the services of search firms to identify appropriate candidates, ensuring that the search firm appointed does not have any other connection with the Company. In addition, the Committee will only use those firms that have adopted the Voluntary Code of Conduct addressing gender diversity and best practice in search assignments. A 'long list' of potential appointees will then be reviewed followed by the shortlisting of candidates for interview based upon the objective criteria identified at inception. Care is taken to ensure that all proposed appointees have sufficient time available to devote to the role and do not have any conflicts of interest. The Committee then recommends a preferred candidate and the Directors not on the Committee meet the candidate. Following this the Committee would make a formal recommendation to the Board on the appointment. The preferred candidate would also be supported in undertaking their own due diligence on the Company and with its advisers.

Senior Management Succession

During the year, each of the Vesuvius Business Units and head office functions submitted their succession plans in respect of senior executives to the Board for review. The Board also actively seeks to meet with key executives throughout the Group in order to gain a greater understanding of the breadth and depth of management talent. During 2014 this process will be augmented to include a series of presentations to the board by Business Unit and functional Presidents and the senior managers that work in their teams. In this way members of the Board and the Committee will be able to adopt a more informed approach to executive succession planning across the Group.

On behalf of the Nomination Committee

John McDonough CBE
Chairman
4 March 2014

Directors' Remuneration Report

Dear Shareholder,

I am pleased to update you on the Remuneration Committee's activities in Vesuvius' first full year as an independent public company.

I took over as Chair of the Committee from John Sussens, and I am grateful to him and Jan Oosterveld (who both left the Committee at the 2013 AGM), for their expertise and judgement. Nelda Connors joined the Committee on 1 March 2013. The Committee has a broad, diverse and balanced set of skills to meet its ongoing requirements.

The Annual Report on Remuneration provides further detail about the work of the Committee in 2013. During the year we laid the groundwork for Vesuvius' remuneration arrangements as a stand-alone company, whilst maintaining overall continuity with the previous executive remuneration policy. As a result, the remuneration policy (detailed later) is substantially similar to that adopted by the Committee at the demerger, with the exception of the elements highlighted below.

During the year, the key elements that the Committee debated were:

- Changing the measurement of the Vesuvius Share Plan EPS growth to compare to nominal global Gross Domestic Product growth, rather than an absolute target, thus reflecting the Company's strategy and growth ambition (see page 70 of the Policy and page 71 for further detail);
- Agreeing that our Group Executive Committee, who are central to delivering the ongoing success of the Company, are included in the Vesuvius Share Plan;
- The payment of incentive awards in shares rather than cash to senior managers in the Medium Term Plan ("MTP");
- The agreement of financial targets for the 2014 annual incentive (though we will not disclose targets set until after the relevant performance period because of commercial sensitivities); and
- The adoption of a longer-term horizon (of 2-3 years) for base salary increases for senior executives and Executive Directors to evaluate and reward performance over the medium term.

Clearly, it must be recognised that, when base salary rises are awarded under the new salary approach, they may be substantially higher than if made on an annual basis. In line with this new approach, the Executive Directors requested that no increase in salary be awarded to them for 2014.

As described elsewhere in the Strategic Report, and in the financial highlights on page 05, the Company has enjoyed a successful year. The annual incentive awards based upon Group Headline Earnings per share of 125% and 100% of base salary for the Chief Executive and CFO, respectively, reflect this solid trading performance. In 2012 no performance-related annual incentives were paid. The long term incentive awards made in 2011 under the Cookson LTIP matured at the end of 2013. Under this plan, performance is measured equally in TSR relative to the FTSE 250 (excluding Investment Trusts) and headline EPS over a three year period. Relative TSR performance was between median and upper Quintile, resulting in a performance share award of 28.4% (out of a maximum 50%) and matching share awards of 1:0.621. However, the EPS target for the three year period was not met and therefore none of the element of the award related to EPS performance vested. In confirming the vesting of the relative TSR performance portion of the award, noted above, we reviewed the underlying performance of the Company to satisfy ourselves that the numerical outcome was justified.

The previous Committee Chairman and I talked with major shareholders to address any questions they had arising from the change of leadership, and as noted above, the proposed change of the Vesuvius Share Plan EPS growth measure. I remain keen to hear shareholder views on remuneration matters and look forward to a continued dialogue.

The remuneration policy we propose is not materially different to the remuneration approach applied to Executive Directors in 2013.

Finally, I am delighted to present our first Remuneration Policy to our shareholders for a binding vote, and our Annual Report on Remuneration, as before, for an advisory shareholder vote. The Committee recommends both elements to you for approval. We look forward to another year of support from our investors.

Yours sincerely

Jane Hinkley
Chair, Remuneration Committee
4 March 2014

Directors' Remuneration Report continued

Directors' Remuneration Policy

As reported on last year, the overarching philosophy for remuneration within Vesuvius is to attract, retain and motivate individuals of the calibre necessary to successfully implement our business strategy. In particular, we ensure that incentives are appropriate to encourage enhanced performance and to avoid underperformance being rewarded. In reviewing and setting Vesuvius' remuneration policy, the Committee seeks to balance the interests of our employees and those of our long-term shareholders, to support Company strategy and foster a high performance culture, where a meaningful portion of remuneration is performance linked and subject to clawback.

In setting our policy for Executive Directors and senior managers the Committee seeks to emphasise pay for performance and to account for the broad international scale and nature of the Company's operations. We also consider the approach taken to the pay and employment conditions of other Company employees, together with UK governance requirements and developments in governance practice issued by leading shareholders and shareholder advisory bodies.

The Committee reviews information on the remuneration of comparable roles at similar companies to provide a point of reference for determining remuneration levels. Given that there is not a clear comparator group of companies for Vesuvius, this is judged in the context of other FTSE 250 companies and other relevant international sector-specific companies to reach a rounded judgement and deliver remuneration that is competitive.

Although Vesuvius is in its early stages as an independent company, the Committee is satisfied that the flexibility within the policy, and the ability to exercise discretion and judgement, will allow the Committee to ensure that an appropriate balance between the interests of employees and shareholders is maintained.

A separate resolution will be put to shareholders at the AGM to approve the Remuneration Policy which, if approved, will take effect from the date of the AGM on 15 May 2014.

Remuneration Policy for Executive Directors

Alignment/Purpose	Operation	Opportunity	Performance
Base salary			
Helps to recruit and retain key employees. Reflects the individual's experience, role and contribution within the Company.	The individual's performance is reviewed annually, with changes to base salary appraised over a two to three year period. Any change will be effective from 1 January in the year of the increase. Base salary is positioned to be market competitive when considered against relevant international and FTSE 250 companies (excluding Investment Trusts). Paid in cash, subject to local tax and social security regulations.	In considering any increase in base salary, the Committee will consider (1) the role and value of the individual, (2) changes in job scope or responsibility, (3) progression in the role (e.g. for a new appointee), (4) a significant increase in the scale of role and/or size, value or complexity of the Group, (5) the need to maintain market competitiveness, and (6) increases paid to the wider global employee population in the Company's most significant locations. In line with the 2-3 year period for base salary appraisal, individual increases when paid are likely to be in excess of those for the wider population of employees for that year.	Any increase will take into account the individual's performance, contribution and increasing experience.

Alignment/Purpose	Operation	Opportunity	Performance
Other benefits			
Provides normal market practice benefits.	A range of standard benefits including, but not limited to: car allowance, private medical care (including spouse and dependent children), life assurance, disability, health insurance together with relocation allowance and expatriate benefits.	The Committee retains the discretion to adjust the value of benefits where: (1) there is a significant change in the individual's circumstances, (2) there is an increase in existing cost beyond the Company's control, (3) there is a change in benefit provider(s), or (4) there is a change in an individual's location; and to amend the type of benefits to reflect the above and market practice. Standard benefits remain a small percentage of total remuneration.	None.
Pension			
Helps to recruit and retain key employees. Ensures income in retirement.	An allowance is given as a percentage of base salary. This may be used to participate in Vesuvius' pension arrangements, invested in own pension arrangements or taken as a cash supplement (or any combination of the above options).	30% of base salary.	None.
Annual Incentive			
Incentivises Executive Directors to achieve key short term financial, and strategic, targets of the Group.	Entire bonus amount payable in cash with no deferral. The Committee has the discretion to determine that actual incentive payments should be lower than levels calculated by reference to achievement against targets if it considers this to be appropriate. Subject to clawback.	Below threshold: 0%. On-Target: 62.5% of base salary for the Chief Executive and 50% of base salary for other Executive Directors. Maximum: 125% of base salary for the Chief Executive and 100% of base salary for other Executive Directors. Payments made between threshold and on-target and between on-target and maximum are prorated.	Annual Incentive is measured on targets set at the beginning of each year. Currently, it is based on Group Headline Earnings Per Share which accounts for 100% of the performance measure, with an adjustment based on the Group's working capital performance. The effect of this is to reduce payments by 10% if specified working capital targets are not met. The adjuster also increases payout by 10% if targets are exceeded, but not above the plan maximum. Going forward the plan may include other financial or non-financial measures comprising KPIs, corporate objectives and personal performance. The Committee establishes threshold and maximum performance targets for each financial year, set by reference to the Group budget and other objectives for that year. Actual performance targets will be disclosed after the performance period has ended. They are not disclosed in this policy due to their commercial sensitivity.

Directors' Remuneration Report continued

Alignment/Purpose	Operation	Opportunity	Performance
Vesuvius Share Plan			
Flexible "umbrella" Plan. Aligns Executive Directors' interests with those of shareholders through the delivery of shares. Rewards Executive Directors for achieving the strategic objectives of growth in shareholder value and earnings. Assists retention of Executive Directors over a three-year performance period.	Awards may be granted as: • Performance share awards; • Deferred share bonus awards; • Restricted share awards, and • Market-price options. Individuals are entitled to an aggregate annual maximum amount of awards. If more than one type of award is granted, the individual limit for all awards is reduced to remain within the maximum. Awards vest three years after their award date subject to the achievement of specified conditions. The Committee has the discretion to award participants the equivalent value of dividends accrued during the vesting period on any shares that vest. Subject to clawback. The Committee will only made awards of Performance Shares to Executive Directors under the Plan, and will consult with shareholders prior to granting other types of awards, excluding Restricted Share awards authorised under the recruitment policy.	Executive Directors are eligible to receive an annual award with a face value of up to 200% of base salary in performance share awards.	Vesting of 50% of performance share awards is subject to the Company's TSR performance versus the FTSE 250 (excluding Investment Trusts), with: • 0% vesting for below median performance; • 12.5% of the total award vesting at median performance; • 50% of the total award vesting at upper quintile performance; and • Pro rata vesting between median and upper quintile Vesting of the remaining 50% of performance share awards is subject to the growth in the Company's EPS. The Committee decides on the appropriate EPS growth targets each year, taking into account the Group's prospects and the broader global economic environment. The Company reserves the right only to disclose EPS performance targets after the performance period has ended due to their commercial sensitivity. Prior to any vesting, the Remuneration Committee also reviews the underlying financial performance of the Company over the performance period to justify the vesting.
Legacy Cookson Group Share Schemes			
Used to align Executive Directors' interests with those of shareholders through share ownership.	Awards granted prior to the demerger remain outstanding. No further awards will be made under these plans.	Subject to achieving the relevant vesting criteria, the Company will satisfy awards as they arise.	Performance and other conditions set at the time of award continue to operate.
Restricted Share Award			
A one-off award to compensate for prior employer long-term incentive awards forfeited on appointment at Vesuvius.	Dated 5 November 2012 to the Chief Financial Officer. Half of the award vested on first anniversary of joining (11 October 2013). Remainder vests on second anniversary.	Shares to the face value of one-times base salary (108,805 Vesuvius Shares), together with shares or cash to the value of dividends that would have accrued on the shares between date of award and vesting.	None. Holder must remain employed and not be under notice of termination.

Selection of Performance measures

Measures for the Annual Incentive are selected to reflect key strategic aims and the need for a rigorous focus on working capital management. Each year the Committee will agree challenging targets to ensure that underperformance is not rewarded.

For the Vesuvius Share Plan, at the demerger, Vesuvius stated that the performance measures would be similar to those for the Cookson LTIP, to focus Executive Directors on the execution of long-term strategy and also align their rewards with value created for shareholders. On this basis, the performance conditions for the Vesuvius performance share awards are based half on TSR performance and half on EPS performance. The comparator for the TSR performance condition will be reviewed annually to ensure its continuing relevance for the Group. In 2014 the Committee agreed the continuation of comparison to the FTSE 250 (excluding Investment Trusts). In respect of the EPS measure, the Committee wished to align the target with the Company's ambitions to grow ahead of end markets. As an international company, a global metric was deemed important by the Committee, and in 2013 an EPS target, based upon outperforming global Gross Domestic Product ("GDP") growth was adopted. This has been carried through to 2014. Within the policy period, the Committee will continually review the performance conditions used, including EPS and other financial measures, used to ensure that awards are made on the basis of challenging targets that clearly support the achievement of the Group's strategic aims.

Illustration of the Application of the Remuneration Policy for 2014

The charts below show the total remuneration for Executive Directors for minimum, on-target and maximum performance. The fixed elements of remuneration comprise base salary, pension and other benefits, using 2014 salary data. The assumptions on which they are calculated are as follows:

Minimum: Fixed remuneration only

On-Target: Fixed remuneration plus on-target Annual Incentive and threshold vesting (i.e. median performance for TSR and threshold for EPS) for performance share awards (made at 200% of base salary) under the Vesuvius Share Plan

Maximum: Fixed remuneration plus maximum Annual Incentive and 100% vesting for performance share awards (made at 200% of base salary) under the Vesuvius Share Plan

Chief Executive

Chief Financial Officer

Directors' Remuneration Report continued

Recruitment Policy

On appointment or promotion of a new Executive Director, the Committee will typically use the above policy to determine ongoing remuneration. However, the Committee retains the discretion to make appropriate remuneration decisions outside the standard policy to meet specific circumstances.

Base salary levels will generally be set in accordance with the policy taking into account the experience and calibre of the appointee. If it is appropriate to appoint an individual on a base salary initially below what is adjudged to be market positioning, contingent on individual performance, the Committee retains the discretion to realign base salary over the one to three years following appointment, which may result in a higher rate of annualised increase than might otherwise be awarded under the policy. If the Committee intends to rely on this discretion, it will be noted in the first Directors' Remuneration Report following an individual's appointment. Other than in exceptional circumstances, other elements of annual remuneration will, typically, be set in line with this Policy. The Committee retains the discretion to make the following exceptions:

- In the event that an internal appointment is made, the Committee may continue with existing remuneration provisions where appropriate;
- If necessary and appropriate to secure an appointment from an international pool of candidates, the Committee may make additional payments linked to relocation, above those outlined in the Policy Table and would authorise the payment of a relocation allowance and repatriation, as well as other associated international mobility terms. Such benefits would be set at a level which the Committee considers appropriate for the role and the individual's circumstances; and
- In order to provide an immediate interest in the Company's performance, the Committee may grant, on recruitment, an award of Performance Shares (with a market value of up to 200% of salary) under the Vesuvius Share Plan and/or an individual award agreement (under Listing Rule 9.4.2(2)) on similar terms. Performance conditions for any such award will be set in line with the policy and the Committee will determine the vesting period that will apply to such awards at the time of award, taking into account the strategy and business circumstances of Vesuvius.

Service contracts will be entered into on terms similar to those for the existing Executive Directors, summarised in the service contract section below.

In addition to the annual remuneration elements noted above, the Committee may consider buying out incentive awards that an individual forfeits in accepting an appointment with Vesuvius. The Committee will have the authority to rely on Listing Rule 9.4.2 (2) or to apply the existing limits within the Vesuvius Share Plan to make Restricted Share awards on recruitment. In making any such awards, the Committee will review the terms of any forfeited awards, including, but not limited to, vesting periods, the expected value of such awards on vesting and the likelihood of the performance targets applicable to such awards being met, while retaining the discretion to make any buy out award the Committee determines is necessary and appropriate. The Committee may also require the appointee to purchase shares in Vesuvius to a pre-agreed level prior to vesting of any such awards. The value of any buy out award will be capped, to ensure its maximum value is no higher than the value of the awards that the individual forfeited on joining Vesuvius. Any such awards will be subject to clawback.

With respect to the appointment of a new Chairman or Non-executive Director, appointment terms will be consistent with those currently adopted. Variable pay will not be considered. With respect to Non-executive Directors, fees will be consistent with the policy at the time of appointment.

Exit Payment Policy

Vesuvius has the option to make a payment in lieu of part or all of the required notice period for Executive Directors. Any such payment in lieu will consist of the base salary, pension contributions and value of benefits to which the Director would have been entitled for the duration of the remaining notice period, net of statutory deductions in each case. Half of any payments in lieu of notice would be made in a lump sum, the remainder in equal monthly instalments commencing in the month in which the midpoint of their forgone notice period falls (and are reduced or extinguished by salary from any role undertaken by the departing executive in this time). Executive Directors are subject to certain non-compete covenants for a period of nine months, and non-solicitation covenants for a period of 12 months, following the termination of their employment. Their service agreements are governed by English law.

Neither of the Executive Director's contracts contains any change of control provisions and they both contain a duty to mitigate should the Director find an alternative paid occupation in any period during which the Company must otherwise pay compensation on early termination.

The table below summarises how the awards under the annual bonus and Vesuvius Share Plan are typically treated in different leaver scenarios and on a change of control. Whilst the Committee retains overall discretion on determining 'good leaver' status, it typically defines a 'good leaver' in circumstances such as retirement with agreement of the Company, ill health, disability, death, redundancy, or part of the business in which the individual is employed or engaged ceasing to be part of the Group. Final treatment is subject to the Committee's discretion.

Event	Timing	Calculation of vesting/payment
Annual Incentive Plan		
Good leaver	Paid at the same time as to continuing employees	Annnual bonus is paid only to the extent that any performance conditions have been satisfied and is prorated for the proportion of the financial year worked before cessation of employment
Bad leaver	Not applicable	Individuals lose the right to their annual bonus
Change of Control	Paid on the effective date of change of control	Annual bonus is paid only to the extent that any performance conditions have been satisfied and is prorated for the proportion of the financial year worked
Vesuvius Share Plan		
Good Leaver	On normal vesting date (or earlier at the Committee's discretion)	Unvested awards vest to the extent that any performance conditions have been satisfied and a prorata reduction applies to the value of the awards to take into account the proportion of vesting period not served
Bad leaver	Unvested awards lapse	Unvested awards lapse on cessation of employment
Change of Control [1]	On the date of the event	Unvested awards vest to the extent that any performance conditions have been satisfied and a prorata reduction applies for the proportion of the vesting period not served

NOTE

1. In certain circumstances, the Committee may determine that unvested awards under the Vesuvius Share Plan will not vest on a change of control but will instead be replaced by an equivalent grant of a new award, as determined by the Committee, in the new company.

If employment is terminated by the Company, the Committee retains discretion to settle amounts reasonably due to the Executive Director, for example to meet the legal fees incurred by the Executive Director in connection with the termination of employment, where the Company wishes to enter into a settlement agreement (as provided for below) and where the individual must seek independent legal advice. The Company would pay any amounts to which the departing Director was legally entitled. In certain circumstances, the Committee may approve new contractual arrangements with departing Executive Directors including (but not limited to) settlement, confidentiality, restrictive covenants and/or consultancy arrangements. This would only be used where the Committee believed it was in the best interests of the Company to do so.

Service contracts

The Committee will periodically review the contractual terms for new Executive Directors to ensure these reflect best practice. Service contracts currrently operate on a rolling basis and are limited to a 12 month notice period.

François Wanecq is employed as Chief Executive of Vesuvius pursuant to the terms of a service agreement made with Cookson Group plc dated 17 October 2012. Chris O'Shea is employed as Chief Financial Officer pursuant to the terms of a service agreement with Cookson Group plc dated 10 September 2012. Both service agreements were assigned to Vesuvius upon completion of the Demerger on 19 December 2012. Each Executive Director's appointment is terminable by Vesuvius on not less than 12 months' written notice, and by each Executive Director on not less than six months' written notice.

Considerations of conditions elsewhere in the Group in developing policy

The Company does not consult directly with employees on Executive Directors' remuneration arrangements. However, the Remuneration Committee will take into account the pay and employment conditions of other Group employees when determining Executive Directors' remuneration, particularly when determining base salary increases. The Remuneration Committee will also obtain information on the remuneration paid for comparable roles at other relevant companies to provide a point of reference for determining remuneration policy.

Directors' Remuneration Report continued

Remuneration policy for Executive Directors compared to other employees

The Remuneration Policy for Executive Directors is designed in line with the remuneration philosophy set out at the beginning of this report – which also underpins remuneration for the wider Group. Remuneration arrangements for Executive Directors draw on the same elements as those for other employees – base salary, fixed benefits, and retirement benefits – with performance-related pay extending down into the management cadres and beyond. However, given that remuneration structures for other employees need to reflect both seniority and local market practice, they differ from the policy for Executive Directors. In particular, Executive Directors receive a higher proportion of their remuneration in performance-related pay and share-based payments and individual percentages of fixed versus variable remuneration and participation in share-based structures decline with seniority.

The process for delivering salary increases on a 2-3 year cycle for Executive Directors is also applied to members of the Group Executive Committee and their direct managerial reports. While all employees receive an annual performance appraisal, other employees continue to receive salary reviews on an annual basis.

As with Executive Directors, middle and senior managers participate in the Annual Incentive Plan. For operational employees, any potential award is based upon achieving three measures relating to Group performance, business unit performance, and individual achievement of personal objectives. For functional employees, the award is predominantly based on Group performance, with the remainder awarded against achievement of personal objectives. The awards for middle and senior managers are also adjusted to reflect the level of performance by the business with regard to its working capital management.

For certain senior and middle managers awards are made under the Vesuvius Medium Term Plan ("**MTP**"). Awards under the MTP are based on the same measures and targets as the Annual Incentive Plan for those managers. Middle managers participate in the MTP at varying percentage levels, with awards being made in cash. Senior managers have their MTP awards made over Vesuvius shares. In each case, awards are granted following the end of the relevant financial year. The MTP share awards vest on the second anniversary of the date of grant, subject to continuing employment. From 2014 onwards members of the Group Executive Committee (who in 2013 were included in the above MTP in shares) will instead participate in the Vesuvius Share Plan and receive awards of Performance Shares, which will vest in accordance with the same measures and targets as those for Executive Directors. Levels of awards will differ from those of Executive Directors.

Consideration of shareholder views

Vesuvius is committed to open and transparent dialogue with its shareholders on remuneration as well as other governance matters. As Chair of the Committee, Jane Hinkley welcomes shareholder engagement and is available for any discussions investors wish to have on remuneration matters. During 2013, Jane Hinkley undertook several meetings with investors for the discussion of remuneration matters, including changes to the EPS measure for the Vesuvius Share Plan and on the change of Remuneration Committee Chair. The feedback was useful and was considered by the Committee. In setting our remuneration policy, we have made no material changes to the way in which the policy has functioned for Executive Directors in 2013 and hence we have not undertaken specific shareholder consultation on the policy contained in this document.

Shareholding Policy (Audited)

The Remuneration Committee encourages Executive Directors to build and hold a shareholding in the Company equivalent in value to at least one times base salary. To this end, Executive Directors will normally be expected to retain at least 50% (measured as the value after tax) of any Performance Share Awards vesting under the Vesuvius Share Plan, until this criterion has been met. New Executive Directors will be allowed four years in which to acquire this shareholding.

As at 31 December 2013, using the Company's share price at 31 December 2013 of 510p, the Executive Directors' shareholdings against this guideline were as follows:

Director	Actual share ownership as a percentage of salary at 31 December 2013	Policy share ownership as a percentage of salary	Policy met?
François Wanecq	1,122%	100%	Yes
Chris O'Shea	88%	100%	Yes (in the build-up period)

Clawback Arrangements

The Executive Directors are subject to clawback arrangements. In the event that a misstatement is identified in the Company's consolidated financial statements which requires the restatement of a prior year's accounts in order to ensure compliance with the requirements of International Financial Reporting Standards or any applicable law, then such portion as the Remuneration Committee deems appropriate of any variable executive remuneration – being all Annual Incentive and Performance Share awards made under the Vesuvius Share Plan – resulting from a measure of financial performance affected by the misstatement will be subject to clawback provisions. The misstatement must be identified and notified to the individual in writing within three years after the end of the relevant performance period.

External Appointments

Whilst neither of the Executive Directors serves as a Non-executive Director of any other quoted company, subject always to consent being granted by the Company for them to take up such an appointment, were they to so serve, the Company would allow them to retain any fees they received for the performance of their duties.

Policy for Non-executive Directors

The Company seeks to appoint Non-executive Directors who have relevant professional knowledge, and have gained experience in a relevant industry and geographical sectors, to support diversity of expertise at the Board and match the wide geographic spread of the Company's activities.

Non-executive Directors attend Board, Committee and other meetings, held mainly in the UK, together with an annual strategy review to debate the Company's strategic direction. All Non-executive Directors are expected to familiarise themselves with the scale and scope of the Company's business and to maintain their specific technical skills and knowledge.

The Board sets the level of fees paid to the Non-executive Directors after considering the role and responsibilities of each Director and the practice of other companies of a similar size and international complexity. The Non-executive Directors do not participate in Board discussions on their own remuneration. No variable remuneration is available to Non-executive Directors. Non-executive Directors receive reimbursement of reasonable expenses incurred in attending the Board, Committee and other ad hoc meetings.

Alignment/Purpose	Operation	Opportunity	Performance
Fees			
To attract and retain Non-executive Directors of the necessary skill and experience by offering market competitive fees. No eligibility for participation in incentive schemes, bonus schemes or retirement plans.	Fees are reviewed biannually by the Board. Non-executive Directors are paid a base fee for the performance of their role, payable in cash, plus additional fees for committee chairmanship or acting as the Senior Independent Director. The Chairman is paid a single fee and receives administrative support from the Company.	Non-executive Directors and the Chairman will be paid market appropriate fees, with any increase reflecting changes in the market or adjustments to a specific Non-executive Director's role. No eligibility for bonuses, retirement benefits or to participate in the Group's employee share plans. Overall fees paid to Non-executive Directors will remain within the aggregate limit stated in our Articles, currently £500,000.	None.

Terms of Service

The terms of service of the Chairman and the Non-executive Directors are contained in letters of appointment. Each Non-executive Director is appointed subject to their election at the Company's first Annual General Meeting following their appointment and re-election at subsequent Annual General Meetings. None of the Non-executive Directors is entitled to receive compensation for loss of office at any time. During the first year of his appointment the Chairman is entitled to 12 months' notice from the Company; thereafter, he is entitled to six months' notice from the Company. All Non-executive Directors are subject to retirement, and election or re-election, in accordance with the Company's Articles of Association. The current policy is for Non-executive Directors to serve on the Board for a maximum of nine years, with review at the end of the three and six years, subject always to mutual agreement and annual performance evaluation. The Board retains discretion to extend the tenure of Non-executive Directors beyond this time, subject to the requirements of Board balance and independence being satisfied.

The table below shows the date of appointment for each of the continuing Non-executive Directors:

Non-executive Director	Date of Appointment
John McDonough	31 October 2012
Nelda Connors	1 March 2013
Christer Gardell	31 October 2012
Jeff Hewitt[1]	31 October 2012
Jane Hinkley	3 December 2012

NOTE

1. Jeff Hewitt previously served as a Non-executive Director of Cookson Group plc from June 2005.

Directors' Remuneration Report

Annual Report on Remuneration
Committee Members

Jane Hinkley (Committee Chair)
Nelda Connors
Jeff Hewitt

The Remuneration Committee

The Remuneration Committee (the "Committee") comprises all independent Non-executive Directors of the Company, and as such complies with the obligations of the UK Corporate Governance Code for composition of Remuneration Committees. Each of the members brings a broad experience of international businesses and an understanding of their challenges to the work of the Committee. I was appointed to the Committee on 3 December 2012 and became its Chair following the AGM held in June 2013. Nelda Connors joined the Committee on her appointment on 1 March 2013. Jeff Hewitt brings his significant experience of Vesuvius to the Committee, and both Nelda and I add extensive international business experience to the Committee's deliberations. John Sussens and Jan Oostervelt retired from the Committee on their retirement as Directors of the Company at the AGM held on 4 June 2013. The Company Secretary is Secretary to the Committee. Members' biographies are on page 51.

Meetings

The Committee met seven times during the year with full attendance, other than in respect of one meeting where Nelda Connors was prevented from attending due to adverse weather conditions in the US disrupting her travel. The Group Chairman, Chief Executive, CFO and Group VP HR were invited to each meeting, together with Christer Gardell, our non-independent Non-executive Director, though none of them participated in discussions regarding their own remuneration. This attendance supported the work of the Committee, giving critical insight into the operational demands of the business and their application to the overall strategy of remuneration within the Group. I reported the outcome of our meetings to the Board.

The Committee operates under formal terms of reference which were reviewed and updated during the year and approved by the Board. The terms of reference are available on the Group website (www.vesuvius.com). The Committee and its members are also empowered to obtain outside legal or other independent professional advice (at the cost of the Company) in relation to its deliberations (powers which were not exercised during the year) and to secure the attendance at its meetings of any employee or other parties should it be considered necessary.

Role and Responsibilities

The Committee is responsible for:

- Setting the appropriate remuneration for the Chairman, the Executive Directors and the Company Secretary;
- Recommending and monitoring the level and structure of remuneration for senior management, being the first layer of management below Board level and their direct reports; and
- Overseeing the operation of any Executive share incentive plan.

A copy of the Remuneration Committee's Terms of Reference is available on the Group's website (www.vesuvius.com).

Key activities in 2013

During the year, the overall objectives for the Committee were to set the tone for remuneration in Vesuvius' first year as an independent public company.

In addition to the usual routine Committee matters, the Committee discussed and agreed changes in the following material key matters:

- Receiving the proposed vesting schedules and reviewing the appropriateness of the out-turn of share-based awards against overall financial performance to ensure that awards made under the 2010 LTIP and Deferred Share Bonus Plan were in line with financial performance;
- Reviewing, debating and approving financial performance criteria for Annual Incentive (cash bonus) awards and changes to the performance metrics for EPS under the Vesuvius Share Plan to compare with nominal global Gross Domestic Product growth rather than an absolute target;
- Aligning share-based incentive awards for members of the Group Executive Committee to those for Executive Directors, by including them in the Vesuvius Share Plan;
- Approving the payment of incentive awards in shares rather than cash to senior managers in the MTP; and
- Adopting longer-term horizons (of 2-3 years) for base salary increases for Executive Directors and senior managers.

Regulatory Compliance

The Remuneration Policy set out on pages 68 to 75 of this report has been prepared in accordance with the Companies Act 2006 and The Large and Medium-sized Companies and Groups (Accounts and Reports) (Amendment) Regulations 2013. It also meets the requirements of the UK Listing Authorities Listing Rules and the Disclosure and Transparency Rules. The Annual Report on Remuneration sets out how the provisions of the UK Corporate Governance Code are applied by the Company in relation to matters of remuneration. We are happy to confirm that the Company has complied with these governance rules in the year under review.

Share Usage

Under the rules of the Vesuvius Share Plan, as approved by shareholders on 26 November 2012, the Company has the discretion to satisfy awards either by the transfer of existing shares or by the allotment of newly issued shares, Treasury shares or other shares. Awards made to senior managers by the Company over shares pursuant to the Medium Term Plan must be satisfied out of shares held for this purpose by the Company's employee share ownership trust ("ESOT"). The decision on how to satisfy awards is taken by the Board, which considers the most prudent and appropriate sourcing arrangement for the Company.

At 31 December 2013 the Company held 7,271,174 ordinary shares in Treasury. As at 31 December 2013, 1,025,484 Vesuvius shares were held in the ESOT. The Trustee of the ESOT purchases shares in the open market or can subscribe for newly issued shares as required, to meet obligations for the provision of shares to satisfy options and awards that vest.

The Vesuvius Share Plan complies with the current ABI guidelines on headroom which provide that overall dilution under all plans should not exceed 10% over a ten year period in relation to the Company's issued share capital, with a further limitation of 5% in any ten year period on discretionary schemes.

Directors' Remuneration Report continued

Directors Remuneration – Audited

In the year under review, the Chief Executive received a base salary of £550,000 per annum, and the Chief Financial Officer received a base salary of £340,000 per annum. The table below sets out the total remuneration received by Executive Directors in the financial year under review:

	François Wanecq		Chris O'Shea	
	2013 (£000)	**2012 (£000)**	**2013 (£000)**	**2012 (£000)**
Total salary[1]	**550**	530	**340**	76
Taxable benefits[2]	**388**	73	**16**	3
Pension[3]	**165**	159	**102**	23
Total fixed pay[4]	**1,103**	762	**458**	102
Annual Bonus[5]	**687**	–	**340**	76
Long-term incentives	**713[6]**	365[7]	**258[8]**	–
Total variable pay[9]	**1,400**	365	**598**	76
Other remuneration	**–**	–	**–**	–
Total[10]	**2,503**	1,227	**1,056**	178
Total 2013 Executive Director remuneration	**3,559**			

During the year under review, Non-executive Directors' fees were set at £45,000 per annum. Supplementary fees of £15,000 per annum were payable to the Chairmen of the Audit and Remuneration Committees. A supplementary fee of £5,000 per annum was also payable to the Senior Independent Director. The Chairman was paid a fee of £185,000 per annum. Neither the Chairman, nor the other Non-executive Directors are members of the Group's pension plans, nor do they participate in the Group's incentive schemes. The table below sets out the fees received by Non-executive Directors in the financial year under review:

	2013			2012		
	Total fees (£000)[1]	**Taxable Benefits (£000)[2]**	**Total (£000)**	**Total fees (£000)[1]**	**Taxable Benefits (£000)[2]**	**Total (£000)**
John McDonough	**185**	**–**	**185**	32	–	32
Nelda Connors	**37**	**–**	**37**	–	–	–
Christer Gardell	**45**	**–**	**45**	24	–	24
Jeff Hewitt	**63**	**–**	**63**	55	–	55
Jane Hinkley	**54**	**–**	**54**	4	–	4
Jan Oosterveld	**19**	**–**	**19**	40	–	40
John Sussens	**28**	**–**	**28**	55	–	55
Total 2013 Non-executive Director remuneration			**431**			
Total 2013 Director remuneration			**3,990**			

NOTES

1. Base salary (or fees, as appropriate) earned during the financial year ended 31 December 2013.
2. Benefits comprise car allowance, private medical care, life assurance, disability and health insurance (including a one-off relocation allowance for François Wanecq of £361,871).
3. Executive Directors receive a pension allowance of 30% of base salary.
4. The sum of basic salary, benefits and pension.
5. The Annual Incentive cash bonus payments to be made to the Executive Directors for their performance in the year under review, pay out at the maximum amount, being 125% of base salary for the Chief Executive and 100% of base salary for the Chief Financial Officer. This reflected the performance of the Company in the year under review against the target set for the Annual Incentive. In 2013 the maximum financial performance target was Group Headline Earnings per share of 30.0p. Group Headline Earnings per share for the financial year ended 31 December 2013 was 31.9p, thus justifying the maximum incentive payment.
6. The Cookson Group 2011 LTIP nil-cost awards consisted of both a Performance Share award and a Matching Share Award. The vesting of the award is based upon 50% relative TSR performance and 50% on Headline EPS performance. The TSR performance was based upon Cookson's TSR from 1 January 2011 to 18 December 2012 to which was added to the Vesuvius TSR from 19 December 2012 to 31 December 2013 for a combined figure, being 84.3% (between Median and Upper Quintile), which allows vesting of 28.4% of the Performance Share Award and 1:0.621 for the Matching Share Award. Following the demerger, the 2013 EPS targets, as previously reported, were set at 48.6p at threshold. Headline EPS for the year ended 31 December 2013 was 31.9p. Hence there is no vesting of either the Performance Share Award or the Matching Share Award for EPS performance (and all awards lapse). The Cookson Group LTIP 2011 award (whose performance period ended 31 December 2013) for François Wanecq will vest on 1 April 2014. Following the above performance, 42,105 Performance shares and 91,752 Matching Shares will vest, (and 106,155 Performance Shares and 240,685 Matching Shares will lapse) which, at an average Vesuvius share price (from 1 October 2013 to 31 December 2013) of 478p, provides a total gain of £639,836. Overall, of the total shares awarded, 27.8% will vest (being 133,857 shares) with the balance lapsing (being 346,840 shares). In addition, a further award of shares (15,402 shares, with a market value (at an average market price of 478p) of £73,621) will be made to cover dividends accrued between the date of grant and the date of vesting in accordance with the rules of the Plan. Consequently, in total François Wanecq will receive 149,259 shares under entitlements from the 2011 LTIP to the value of £713,457.
7. The Cookson Group 2010 LTIP nil cost award for François Wanecq vested on 8 April 2013 and 104,272 Vesuvius shares vested at a share price of 330p, a gain of £344,097. The performance period was 1 January 2010 to 31 December 2012 and overall, 67.2% of the shares vested with the balance lapsing. In addition, the Remuneration Committee also awarded a further 6,392 shares to the value of the dividends paid on the shares between grant date and the date of vesting, with a further market value of £21,094. As part of the same Cookson Group 2010 LTIP award and, in accordance with the demerger agreement, 110,101 shares in Alent plc also vested on 8 April 2013 with a gain of £363,333 at a market price of 362p.
8. See notes 1 and 2 of the Restricted Share Award on page 80 for more details.
9. The sum of annual bonus and the value of long-term incentives.
10. The sum of basic salary, benefits, pension, annual bonus and long-term incentives where the performance period ended during the financial year.

Pension Arrangements – Audited

In accordance with their service agreements, Messrs Wanecq and O'Shea are entitled to a pension allowance of 30% of base salary, which they can use to participate in Vesuvius' pension arrangements, invest in their own pension arrangements or take as a cash supplement (or any combination of the aforementioned options).

	Pension Allowance (£)	
Director	**2013**	**2012**
François Wanecq	**165,000**	159,015
Chris O'Shea	**102,000**	22,885

Outstanding Longer-term Pay — Audited

Awards were made to the Executive Directors under the Vesuvius Share Plan on 22 April 2013. The proportion of shares that will vest is based on the Company's performance against specified performance conditions. Vesting of 50% of shares awarded is based upon the Company's three-year TSR performance relative to that of the constituent companies of the FTSE 250 (excluding Investment Trusts), and 50% on Headline EPS growth, as compared with the compound annual growth in Nominal Global Gross Domestic Product over a three-year period. The two measures operate independently. The awards granted are as follows:

	François Wanecq **Chief Executive**	**Chris O'Shea** **Chief Financial Officer**
Type of interest awarded	Performance Shares	Performance Shares
Basis for award	Maximum entitlement of 200% of salary	Maximum entitlement of 200% of salary
Number of shares	341,509 shares	211,115 shares
Face value of award	£1,100,000	£680,000
% that would vest at median performance	25%	25%
End of performance period	31 December 2015	31 December 2015
Performance measures	50% on relative TSR ranking and 50% on EPS growth	50% on relative TSR ranking and 50% on EPS growth

Vesuvius Share Plan - performance targets

TSR ranking relative to FTSE 250 excluding Investment trusts

	Vesting Percentage
Below Median	0%
Median	12.50%
Upper Quintile	50%
Between Median and Upper Quintile	Pro rata between 12.5% and 50%

Annual Compound Headline EPS Growth above global GDP

	Vesting Percentage
Below 7%	0%
7%	12.50%
At or above 15%	50%
Between 7% and 15%	Pro rata between 12.5% and 50%

Directors' Remuneration Report continued

Cookson LTIP Allocation

Details of François Wanecq's allocation of shares under the Cookson LTIP are shown in the table below.

2011 and 2012 LTIP Awards (as adjusted for the Demerger from awards over shares in Cookson Group plc into awards over shares in Vesuvius plc).

Grant and Type of award	Total share allocations as at 31 Dec 2012	Additional shares allocated during the year	Shares vested during the year	Total share allocation 31 Dec 2013	Market price of the shares on the day before award (as adjusted for the demerger (p))	Performance period	Earliest vesting date
1 April 2011[1]							
Performance shares	148,260	–	–	148,260	365.80	1 Jan 11 - 31 Dec 13	1 Apr 2014
Matching shares	332,437	–	–	332,437	365.80	1 Jan 11 - 31 Dec 13	1 Apr 2014
5 April 2012[2]							
Performance shares	150,075	–	–	150,075	365.80	1 Jan 12 - 31 Dec 14	5 Apr 2015
Matching shares	61,212	–	–	61,212	365.80	1 Jan 12 - 31 Dec 14	5 Apr 2015
Total	691,984	–	–	691,984			

NOTES

1. The Cookson Group 2011 LTIP nil-cost awards consisted of both a Performance Share award and a Matching Share Award. See note 6 on page 78 of this report for full details.
2. In 2012 François Wanecq received a potential maximum allocation of Performance Shares worth one times his base salary, being 79,619 Cookson Group plc shares (which at the demerger were rolled over into Vesuvius shares at a rate of 1 to 1.88492, giving a Performance Share Award over 150,075 Vesuvius shares). Under the Matching Share award element of the LTIP he used his entire 2011 Annual Incentive payment to purchase 7,856 Cookson Group plc shares, and received a maximum allocation of 32,475 Matching Shares based on this amount which had a maximum potential value on the date of award of c.40% of his base salary. The allocations were made to François Wanecq on 5 April 2012 and were calculated based upon the closing mid-market price of Cookson Group plc's shares on the day before the awards were made. Cookson Group plc's mid-market closing price on 4 April 2012 was 689.5p. At the demerger, the awards over 32,475 Cookson Group plc shares made to François Wanecq, were rolled over into Vesuvius plc shares at a rate of 1 to 1.88492, giving a Matching Share Award over 61,212 Vesuvius shares.

Restricted Share Award

Details of the restricted share award that Chris O'Shea received upon joining Cookson Group plc (as adjusted for the Demerger from awards over Cookson Group plc shares into awards over shares in Vesuvius plc) are given in the table below.

Date of award	Total share allocations as at 31 December 2012[1]	Shares vested during the year[2]	Total share allocations as at 31 Dec 2013	Market price of the shares on the day before award (as adjusted for the demerger (p))	Earliest vesting date
5 November 2012					
Restricted Share Award	108,805	54,402	54,403	312.48	11 Oct 2014

NOTES

1. On his appointment, Chris O'Shea was granted a restricted share award with a face value of 100% of base salary. Half of the award vested on the first anniversary of his date of joining and the remainder will vest on the second anniversary, subject to him remaining employed by the Company and not under notice of termination. No other performance conditions apply to this award.
2. Of the 54,402 shares that vested, 25,621 were sold for tax and social security payments, 28,781 were retained, as required under the Shareholding Policy (see above). In addition, the Remuneration Committee also awarded a further 1,685 shares to the value of the dividends paid on the shares between his date of joining and the date of vesting (of which 891 were retained after tax and social security payments). The second and final tranche of Restricted Shares (54,403 ordinary shares, excluding dividends) will vest on 11 October 2014, (assuming continued employment and not being under notice of termination).

Payments to Past Directors – Audited

There were no payments made to a past Director during the year ended 31 December 2013.

Loss of Office Payments – Audited

During the year to 31 December 2013, no payments were made to any Director for loss of office.

Annual Changes in Chief Executive pay vs. Employee Pay

The table below shows the percentage change in the remuneration of the Chief Executive - comprising salary, taxable benefits and annual bonus - and comparable data of UK salaried employees. The UK salaried employee workforce was chosen as a fair representation of a suitable comparator group as François Wanecq, the Chief Executive, is based in the UK (albeit with a global role and responsibilities) and levels of pay vary widely across the Group depending on geography and local market conditions.

	Chief Executive			UK salaried employee workforce (average per capita)
	2013 (£000s)	**2012 (£000s)**	**% change**	**% change**
Salary	**550**	530	3.8%	3.6%
Taxable benefits	**27**[1]	59	(54%)	7.6%
Annual Bonus	**687**	0	–[2]	13.0%

NOTES

1. The figure used for comparison excludes the sum of £361,871 relating to one-off relocation expenses (2012: £13,631) paid during 2013 for François Wanecq.
2. In 2012, based on Group performance, no bonus was paid to François Wanecq. In the year ended 31 December 2013, a full bonus was paid. Thus the percentage change in bonus does not present a meaningful comparison.

Annual spend on Employee Pay vs. Other Distribution

The charts below shows the annual spend on all employees (including Executive Directors) compared to distributions made to shareholders for 2012 and 2013:

Relative importance of spend on pay (2013)

Relative importance of spend on pay (2012)

	Expenditure (£m)		
Spend on pay elements	**2013**	**2012**	**Difference in expenditure**
Group remuneration of continuing operations	**318.8**	316.6	**+0.7%**
Dividends	**40.7**	39.6[1]	**+2.8%**
Share buyback	**30.0**	-	**n/a**

NOTE

1. Dividends relating to 2012 are for the Vesuvius share of the Cookson Group plc interim dividend (£13.2m Vesuvius share of £20.9m Cookson dividend) plus the Vesuvius final dividend (£26.4m).

Directors' Remuneration Report continued

Chief Executive Pay and TSR Performance Graph

The chart below shows Vesuvius' TSR performance since the demerger which was effective on 19 December 2012. Consequently, the illustrative chart below shows the relevant period from 19 December 2012 to 31 December 2013.

Performance Graph and table

The following graph compares Vesuvius TSR performance to that of the same investment in the FTSE 250 Index (excluding Investment Trusts). This Index has been chosen as the comparator index to reflect the size, international scope and diversity of the Company. TSR is the measure of the returns that a company has provided for its shareholders, reflecting share price movements and assuming reinvestment of dividends. A spot rate has been used for this chart.

Chief Executive Pay - Financial Year Ending	**31 December 2013**	**31 December 2012**
Total Remuneration (single figure, (£000's))	**£2,503**	£1,227
Annual variable pay (% of maximum)	**100%**	0%[1]
Long-term variable pay (% of maximum)	**28%**	67%

NOTE
1. Annual bonus was zero for the 2012 financial year.

NOTE
The above chart shows only one year of comparison, as Vesuvius plc was listed on 19 December 2012.

Operation of Policy in Following Year – 2014

It is the Remuneration Committee's intention that the operation of the policy should remain broadly similar to the current year. No increase has been made to the Executive Director's base salary, cash bonus potential has remained the same (with challenging targets set for maximum pay-out, based on Group Headline Earnings per share) and awards under the Vesuvius Share Plan will be made at 200% of base salary, on the basis of measures for 50% relative TSR and 50% EPS, as with 2013. We will report on these matters in our Annual Report on Remuneration in the 2014 Annual Report.

Prior to seeking shareholder approval to any changes in this Policy, the Remuneration Committee will discuss any proposed material changes by consulting with shareholders.

Directors' service contracts

Each of the Executive Directors, who both put themselves up for re-election at the Annual General Meeting to be held on 15 May 2014, are employed under ongoing service contracts with the Company. These contracts do not have a fixed term of appointment. A copy of each Executive Director's service contract is available at the registered office for inspection.

Statement of Directors' Shareholding

The interests of Directors and their connected persons in ordinary shares as at 31 December 2013, including any interests in share options and shares provisionally awarded under the Vesuvius Share plan and the previous Cookson LTIP Award are presented below:

	Beneficial holding	Not subject to performance conditions	Subject to performance conditions
Executive Directors			
François Wanecq	1,210,386	–	1,033,493
Chris O'Shea	58,597	54,402	211,115
Non-executive Directors			
John McDonough (Chairman)	100,000	–	–
Nelda Connors	–	–	–
Christer Gardell	–	–	–
Jeff Hewitt	15,284	–	–
Jane Hinkley	12,000	–	–

Advice Provided to the Remuneration Committee

In March 2013, the Committee appointed the external advisers Towers Watson ("Towers") to assist with its work. The appointment was made following a competitive tender process conducted by the Committee Chairman and Company Secretary. The full Committee approved the selection of Towers. The Committee is also advised by the Chief Executive, the Vice President Human Resources, the Company Secretary, and by the law firm Clifford Chance LLP ("Clifford Chance"). Towers was appointed directly by the Remuneration Committee to provide advice on executive remuneration matters, including remuneration structure and policy, updates on market practices and trends, and guidance on the implementation and operation of long-term incentive plans. Clifford Chance was appointed by the Company Secretary to advise on the share-based incentives. Towers has also provided the Remuneration Committee with remuneration benchmarking data for certain Executive Directors and has provided ongoing calculations of Total Shareholder Return to enable the Committee to be updated on performance of long-term share incentive plans. Clifford Chance provides advice on the operation of executive share plans and the drafting of relevant documentation for incentive plans to the wider Group. Towers is a signatory to the Remuneration Consultants Group Code of Conduct in relation to Executive Remuneration Consulting in the UK.

In addition to work undertaken for the Committee, Towers provides other remuneration and benchmarking advice to the Company, and Clifford Chance provides legal advice to the Company. The Remuneration Committee does not believe that the provision of any of these services to the Company compromises the independence or integrity of the advice that it receives from Towers and Clifford Chance LLP. During the year Towers' fees, charged on a time spent basis, amounted to £111,876. Their work was split between advice relating to the demerger (£8,333), general advice to the Remuneration Committee (£30,563), with the remainder (£72,980) relating to advice on the content and preparation of the Directors Remuneration Report and fees for quarterly monitoring of TSR for awards outstanding under Long Term Incentive Plans. The Committee has considered and concluded that it is satisfied that the advice provided on executive remuneration matters is objective and independent and that no conflict of interest arises as a result of other services provided to the Company.

Statement on Shareholder Voting

Vesuvius was listed on the London Stock Exchange on 19 December 2012 and its first AGM was held on 4 June 2013. In respect of the resolution put to shareholders at the last AGM to approve the Directors' Remuneration Report, Vesuvius received 97% of votes for and 3% of votes against. 16,116 votes were withheld. At the AGM on 15 May 2014, shareholders will be invited to vote on the Remeuneration Policy set out on pages 68 to 75 in this Report, and, also, to give an advisory vote on the Annual Report on Remuneration.

Jane Hinkley
Chair, Remuneration Committee
4 March 2014

Directors' Report

The Directors submit their Annual Report together with the audited accounts of the Group and of the Company, Vesuvius plc, registered in England and Wales No. 8217766, for the year ended 31 December 2013.

The Companies Act 2006 requires the Company to provide a Directors' Report for Vesuvius plc for the year ended 31 December 2013. The information that fulfils this requirement and which is incorporated by reference into, and forms part of this report is included in the following sections of the Annual Report:

- the Corporate Governance Report
- Financial Instruments: the information on financial risk management objectives and policies contained in Notes 22 and 30 to the consolidated financial statements
- details on Greenhouse Gas emissions, set on pages 44 and 45.

This Directors' Report and the Strategic Report contained in pages 10 to 47 together represent the management report for the purpose of compliance with DTR 4.1.8R of the UK Listing Authority's Disclosure and Transparency Rules. The Company does not have any overseas branches within the meaning of the Companies Act 2006.

Going concern

Information on the business environment in which the Group operates, including the factors that are likely to impact the future prospects of the Group, is included in the Chief Executive's review and the Strategic Report. The principal risks and uncertainties that the Group faces throughout its global operations are shown on pages 18 to 19. The financial position of the Group, its cash flows, liquidity position and debt facilities are also described in the Strategic Report. In addition, Notes 22 and 30 to the consolidated Financial Statements set out the Group's objectives, policies and processes for managing its capital; financial risks; financial instruments and hedging activities; and its exposures to credit, market (both currency and interest rate-related) and liquidity risk. Further details of the Group's cash balances and borrowings are included in Notes 15, 16 and 30 to the consolidated Financial Statements.

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 2013 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 and the Company.

Research and Development

The Group's investment in research and development ("R&D") during the year under review amounted to £26.7 million (representing 1.8% of Group revenue (2012:1.6%). Further details of the Group's R&D activities can be found in the Innovation section on page 34 and 35 of the Strategic Report.

Dividends

An interim dividend of 4.75 pence (2012: 7.5 pence, which was the interim dividend of Cookson Group plc) per Vesuvius ordinary share was paid on 7 October 2013 to Vesuvius shareholders. The Board is recommending a final dividend in respect of 2013 of 10.25 pence per ordinary share which, if approved, will be paid on 23 May 2014 to shareholders on the register at 25 April 2014.

Accountability and audit

A responsibility statement of the Directors and a statement by the Auditor about its reporting responsibilities can be found on pages 88 and 89 respectively. The Directors fulfil the responsibilities set out in their statement within the context of an overall control environment of central strategic direction and delegated operating responsibility. As at the date of this report, so far as each Director of the Company is aware, there is no relevant audit information of which the Company's Auditor is unaware and each Director hereby confirms that they have taken all the steps that they ought to have taken as a Director in order to make themselves aware of any relevant audit information and to establish that the Company's Auditor is aware of that information.

Auditor Reappointment

KPMG LLP has expressed its willingness to continue in office as Auditor of the Company, and consequently, resolutions for the reappointment of KPMG as Auditor of the Company and to authorise the Directors to determine its remuneration are to be proposed at the AGM.

Directors

The Directors of the Company are Ms Connors who was appointed on 1 March 2013, Ms Hinkley, who was appointed on 3 December 2012, Messrs Gardell, Hewitt, McDonough, who were appointed on 31 October 2012, and Messrs O'Shea and Wanecq whose contracts were assigned to the Company on 19 December 2012. John Sussens and Jan Oostervelt were Directors of the company until 4 June 2013. Biographical information for the continuing Directors is given on pages 50 and 51. All Directors will retire at the AGM and offer themselves for re-election. Further information on the remuneration of, and contractual arrangements with, the Executive Directors and Non-executive Directors is given on pages 67 to 83 in the Directors' Remuneration Report. The Non-executive Directors do not have service agreements.

Directors' Indemnities

The Directors have been granted Qualifying Third Party Indemnity Provisions by the Company and the directors of the Group's UK Pension Plan Trustee Board (none of whom are Directors of Vesuvius plc) have been granted Qualifying Pension Scheme Indemnity Provisions by Vesuvius Plans Trustees Ltd. The indemnities for Directors of Vesuvius plc have been in force since the date of their appointment. The Pension Trustee indemnities were in force throughout the last financial year and remain in force.

Annual General Meeting

The Annual General Meeting of the Company will be held at The Lincoln Centre, 18 Lincoln's Inn Fields, London WC2A 3ED on Thursday 15 May 2014 at 11.00 am.

Employment Policies

A fundamental concept embodied in the Company's Code of Conduct is that Vesuvius' goals can only be met through the efforts of its employees. Vesuvius recognises that job satisfaction requires working environments that motivate employees to be productive and innovative and provide opportunities for employee training and development to maximise personal potential and develop careers within the Group. Vesuvius is managed on a decentralised basis and it is the responsibility of the Vice President Human Resources, together with the relevant operational managers, to adopt employment policies and practices that best suit the size, style and geographical location of their operations. This management structure allows the Group's operations to respond competitively to changes in the marketplace and to develop and retain a strong sense of identity, whilst benefiting from being a part of a major international group.

Vesuvius values the involvement of its employees and keeps them informed on matters affecting them as employees and factors relevant to Group performance. Decisions on recruitment, career development, training, promotion and other employment related issues are made solely on the grounds of individual ability, achievement, expertise and conduct. These principles are operated on a non-discriminatory basis, without regard to race, colour, nationality, culture, ethnic origin, religion, sex, sexual orientation, age, disability or any other reason not related to job performance or prohibited by applicable law. Vesuvius gives full and fair consideration to applications for employment from disabled persons. Should an employee become disabled during their employment with Vesuvius, every effort is made to enable them to continue their service with the Group.

Greenhouse Gas Emissions

Information on our reporting of greenhouse gas emissions, and the methodology used to record these, is set out on pages 44 and 45 of the Sustainability section of the Strategic Report.

Donations

In accordance with Company policy, no political donations were made in 2013.

Change of Control Provisions

The terms of the Group's committed bank facility and US Private Placement Loan Notes contain provisions entitling the counterparties to exercise termination or other rights in the event of a change of control on takeover of the Company. A number of the arrangements to which the Company and its subsidiaries are party, such as other debt arrangements and share incentive plans, may alter or terminate on a change of control in the event of a takeover. In the context of the Group as a whole, these other arrangements are not considered to be significant.

Share Capital

As at the date of this report, the Company had an issued share capital of 278,485,071 ordinary shares of 10p each, being the total number of Vesuvius plc shares with voting rights. The Company cancelled its one Deferred Share of £1 and also redeemed its full holding of 50,000 Redeemable Preference Shares on 11 December 2013.

Further information relating to the Company's issued share capital can be found in Note 7 to the Company Financial Statements.

The Company's Articles specify that, subject to the authorisation of an appropriate resolution passed by a general meeting of the Company, Directors can allot relevant securities under Section 551 of the Companies Act, up to the aggregate nominal amount specified by that Act. In addition, the Articles state the Directors can seek the authority of shareholders in general meeting to allot equity securities for cash without first being required to offer such shares to existing ordinary shareholders in proportion to their existing holdings in connection with a rights issue and in other circumstances up to an aggregate nominal amount as specified in Section 561 of the Companies Act.

At the Annual General Meeting on 4 June 2013, the Directors were authorised to issue relevant securities up to an aggregate nominal amount of £9,282,835, and to be empowered to allot equity securities for cash on a non pre-emptive basis up to an aggregate nominal amount of £1,392,425, at any time up to the earlier of the date of the 2014 Annual General Meeting or 30 June 2014. The Directors propose to renew these authorities at the 2014 Annual General Meeting for a further year. In the year ahead, other than in respect of Vesuvius's ability to satisfy rights granted to employees under its various share-based incentive arrangements, the Directors have no present intention of issuing any share capital of Vesuvius.

Pensions

In each country in which the Group operates, the pension arrangements in place are considered to be consistent with good employment practice in that particular area. Independent advisers are used to ensure that the plans are operated in accordance with local legislation and the rules of each plan. Group policy prohibits direct investment of pension fund assets in the Company's shares. Outside the UK, the US, Germany and Belgium, the majority of pension plans in the Group are of a defined contribution nature.

The Group's UK defined benefits plan (the "UK Plan") and the main US defined benefits plan are closed to new entrants and have ceased providing future benefits accrual, with all eligible employees instead being provided with benefits through defined contribution arrangements.

Directors' Report continued

Cookson Group plc was the principal employer of the UK Plan. Following the demerger, the UK Plan remained with Vesuvius and all pension liabilities of the Alent plc ("Alent") employers who participated in the UK Plan immediately prior to the demerger were discharged in full. Cookson had agreed, with the Trustee of the UK Plan, a mitigation package in light of the loss of support from the Alent participating employers. That mitigation package comprised a £38m payment to the UK Plan. See Note 31 to the consolidated financial statements for further information.

For the Group's closed UK Plan a Trustee Board exists comprising employees, former employees and an independent trustee. The Board currently comprises seven trustee directors, of whom three are member-nominated. The administration of the plan is outsourced. The Company is mindful of its obligations under the Pensions Act 2004 and of the need to comply with the guidance issued by the Pensions Regulator. Regular dialogue is maintained between the Company and the Trustee Board of the UK Plan to ensure that both Company and Trustee are apprised of the same financial and other information about the Group and the UK Plan. This is pertinent to each being able to contribute to the effective functioning of the UK Plan. The latest full valuation of the UK Plan showed a funding surplus, as a result of which Company contributions ceased in July 2013. However, the Company has agreed to make voluntary contributions of £2.0m per annum at least until the next valuation date in recognition of the potential funding strain resulting from the ongoing derisking initiatives likely to be undertaken in the short term.

The Group's worldwide net pension deficit at 31 December 2013 was £48 million (31 December 2012: £69m). The decrease arose largely as a result of asset returns and Company contributions.

On 19 July 2012, the Trustee of the UK Plan and Pension Insurance Corporation ("PIC") announced that they had signed a pension insurance buy-in agreement covering all of the pensioner members of the UK Plan. An extension to this agreement was signed in December 2012 which is expected to result in the transfer to PIC of up to £30 million of additional pensioner liabilities over the period to December 2015. This eliminates inflation, interest rate, investment and longevity risk in respect of around 65% of Vesuvius' total UK pension liabilities.

Current active employees in the UK are offered membership of a defined contribution plan, which is operated on a contract basis, with oversight by a governance committee.

All US retirement plan assets are held in trust for the exclusive benefit of plan participants and their beneficiaries. An independent financial institution acts as the Trustee. The trust assets are protected by law and by Federal Government Regulation and are subject to annual audit by an independent accountant, the Internal Revenue Service and the Department of Labour. Further details of pension arrangements are given in Note 31 to the consolidated financial statements.

Share Plans

Vesuvius operates a number of share-based incentive plans which have been carried over from Cookson Group plc. For the majority of these plans the Group can satisfy entitlements either by the acquisition of existing shares or by the issue of new shares. Existing shares are held in an employee share ownership trust ("ESOT"). The trustee of the ESOT purchases shares in the open market as required, to enable the Group to meet liabilities for the issue of shares to satisfy awards that vest. The trustee does not register votes in respect of these shares and has waived the right to receive any dividends.

In 2013 the trustee of the ESOT purchased 851,736 ordinary shares of 10p each in Vesuvius plc with a nominal value of £0.9 million at an average price, including transaction costs of 479.77 pence per share, a cash cost of £4.1 million to satisfy the actual and potential vesting of awards under the Group's share-based payment plans. Subsequent to the year-end, the ESOT purchased a further 82,152 shares at an average price, including transaction costs, of 503.52 pence per share. See Note 26 to the consolidated Financial Statements for further information.

Adjustments were made to outstanding share-based incentives as appropriate following the demerger of Cookson Group plc including to the number of shares granted under options and awards and any relevant performance conditions. Such adjustments were made in accordance with the rules of the relevant plans. Participants in the Cookson Group Executive Share Option Scheme were notified in February 2013 that, under the rules of this scheme, they had one month in which to exercise their outstanding options following the demerger. The Cookson shares that they acquired were compulsorily exchanged for Vesuvius shares pursuant to a new article which was incorporated into the articles of association of Cookson Group plc as part of the demerger. The number of Vesuvius shares which they acquired was increased to reflect the fact that they were not able to acquire any Alent shares. Consequently, during the year, 45,613 Vesuvius shares were issued to participants in the Cookson Group plc share option plans (pursuant to the provisions of those plans and the terms of the Demerger Agreement), which plans have now terminated for new awards.

Authority for Purchase of Own Shares

Subject to the provisions of Company law and any other applicable regulations, the Company may purchase its own shares. At the General Meeting of the Company held on 4 June 2013 Vesuvius shareholders gave authority to the Company to make market purchases of up to 27,848,507 Vesuvius ordinary shares, representing 10% of the Company's issued ordinary share capital as at the latest practicable day prior to the publication of the Notice of AGM. This authority expires on 30 June 2014 or the date of the AGM to be held in 2014, whichever is the earlier. The Directors will seek renewal of this authority at the forthcoming AGM.

During the year under review, the Company acquired 7,271,174 ordinary shares, representing a nominal value of £727,117 and 2.6% of the entire called up share capital of the Company prior to the purchase. These shares were purchased pursuant to the Board's commitment to return the majority of the net proceeds of the disposal of the Precious Metals Processing division to shareholders. These shares are currently held as treasury shares, The Company has not subsequently disposed of any of the repurchased shares. During the year, the Company did not make any acquisitions by nominee, nor did it dispose of any shares previously acquired. The Company does not have a lien over any of its shares.

Restrictions on Transfer of Shares and Voting

The Company's Articles of Association ("Articles") do not contain any specific restrictions on the size of a holding or on the transfer of shares. The Directors are not aware of any agreements between holders of the Company's shares that may result in restrictions on the transfer of securities or voting rights. No person has any special rights with regard to the control of the Company's share capital and all issues shares are fully paid. As set out above, the Company placed 7,271,174 ordinary shares in treasury during the year under review. This is a summary only and the relevant provisions of the Articles should be consulted if further information is required.

Amendment of Articles of Association

The Company may make amendments to the Articles by way of special resolution in accordance with the Companies Act.

Interests in the Company's Shares

The Company has been notified in accordance with DTR 5 of the Disclosure and Transparency Rules of interests of 3%, or more, of its issued ordinary shares:

	28 February 2014 %
Cevian Capital	21.02
Artisan Partners	10.82
Franklin Templeton	8.76
Pelham Capital Management CfD	6.07
LSV Asset Management	4.00
Dimensional Fund Advisors	3.96
Aberforth Partners	3.87
T Rowe Price Global Investments	3.30
Legal & General Investment Management	3.21
BlackRock	3.10

The interests of Directors and their connected persons in the ordinary shares of the Company as disclosed in accordance with the Listing Rules of the UK Listing Authority are as set out on page 83 of the Directors' Remuneration Report and details of the Directors' long-term incentive awards are set out on page 80.

The Directors' Report has been approved by the Board and is signed on its behalf by:

Henry Knowles
Company Secretary
4 March 2014

Statement of Directors' Responsibilities in respect of the Annual Report and Financial Statements

The Directors of Vesuvius plc are responsible for preparing the Annual Report and the Group and parent company (the "Company") financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare Group and Company financial statements for each financial year. Under that law they are required to prepare the Group financial statements in accordance with IFRSs as adopted by the European Union and applicable law and have elected to prepare the Company financial statements in accordance with UK Accounting Standards and applicable law ("UK Generally Accepted Accounting Practice").

Under company law the Directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and Company and of their profit or loss for that period. In preparing each of the Group and Company financial statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and estimates that are reasonable and prudent;
- for the Group financial statements, state whether they have been prepared in accordance with IFRSs as adopted by the European Union;
- for the Company financial statements, state whether applicable UK Accounting Standards have been followed, subject to any material departures disclosed and explained in the Company financial statements; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Group and the Company will continue in business.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions and disclose with reasonable accuracy at any time the financial position of the Company and enable them to ensure that its financial statements comply with the Companies Act 2006. They have general responsibility for taking such steps as are reasonably open to them to safeguard the assets of the Group and to prevent and detect fraud and other irregularities.

Under applicable law and regulations, the Directors are also responsible for preparing a Strategic Report, Directors' Report, Directors' Remuneration Report and Corporate Governance Report that comply with that law and those regulations.

The Directors are responsible for the maintenance and integrity of the corporate and financial information included on the Company's website. Legislation in the UK governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Responsibility Statement of the Directors in respect of the Annual Financial Report

Each of the Directors, whose names and functions are set out on pages 50 to 51, confirms that to the best of their knowledge:

- the financial statements, prepared in accordance with the applicable set of accounting standards, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and the undertakings included in the consolidation taken as a whole; and
- the Directors' Report and Strategic Report include a fair review of the development and performance of the business and the position of the Company and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face.

In addition, the Directors consider that the Annual Report, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Company's performance, business model and strategy.

On behalf of the Board

Chris O'Shea
4 March 2014

Independent Auditor's Report to the Members of Vesuvius plc Only

Opinions and conclusions arising from our audit

1 Our opinion on the financial statements is unmodified

We have audited the financial statements of Vesuvius plc for the year ended 31 December 2013 which comprise the Group income statement, the Group statement of comprehensive income, the Group statement of cash flows, the Group and Company balance sheets, the Group statement of changes in equity, and the related notes. In our opinion:

- the financial statements give a true and fair view of the state of the Group's and of the parent company's affairs as at 31 December 2013 and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with International Financial Reporting Standards as adopted by the European Union;
- the parent company financial statements have been properly prepared in accordance with UK Accounting Standards; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006 and, as regards the Group financial statements, Article 4 of the IAS Regulation.

2 Our assessment of risks of material misstatement

In arriving at our audit opinion above on the financial statements the risks of material misstatement that had the greatest effect on our audit were as follows:

Recognition of a US deferred tax asset (£29.2 million):

Refer to page 62 (Audit Committee Report), page 98 (accounting policy) and page 105 (financial disclosures).

The risk: The Group has recognised a deferred tax asset in respect of unutilised losses and other temporary differences arising in the US. In addition the Group has losses and other temporary differences for which no deferred tax asset has been recognised in these financial statements. The recognition or otherwise of a deferred tax asset in respect of these losses and other temporary differences is based on judgement in respect of the timing and quantum of expected future profits and the ability of the Group to offset any of its accumulated losses against these expected profits. This is one of the key judgemental areas on which our audit concentrated.

Our response: In this area, our audit procedures included, among others, using our own tax specialists to assist in assessing and challenging the assumptions and judgements made by the Directors. In assessing the level of deferred tax asset balances recognised in the Group balance sheet we compared the assumptions used in respect of future taxable profit forecasts in respect of the relevant components to the Group's long-term forecasts. We considered, amongst other things, historical levels of US tax profits, the historical accuracy of forecasts, and the growth forecasts used by the Group. This included critically assessing the assumptions and judgements made by the Directors in those growth forecasts, by using our knowledge of the Group and the industry in which it operates and by comparing certain assumptions to externally derived data. We also assessed the adequacy of the Group's disclosures setting out the basis of the deferred tax balance and the level of estimation involved.

Current tax provisions (£45.0 million):

Refer to page 62 (Audit Committee Report), page 98 (accounting policy) and page 105 (financial disclosures).

The risk: Provisions for tax contingencies require the Directors to make judgements and estimates in relation to income tax issues and exposures. This is one of the key judgemental areas that our audit concentrated on due to the Group operating in a number of tax jurisdictions, the complexities of transfer pricing and other international tax legislation, and the time taken for tax matters to be agreed with the tax authorities.

Our response: In this area our audit procedures included, among others, the use of our own global tax specialists to assess the Group's tax positions, and its correspondence with the relevant tax authorities to analyse and challenge the assumptions used to determine tax provisions based on our knowledge and experience of the application of international and local legislation by the relevant authorities and courts. We also considered the adequacy of the Group's disclosures in respect of tax and uncertain tax positions.

Provisions (£56.1 million):

Refer to page 62 (Audit Committee Report), pages 98 and 136 (accounting policy) and page 136 (financial disclosures).

The risk: Provisions are measured at the Directors' best estimate of the Group's ultimate liability to settle an obligation arising from a past event. In providing for known or probable costs, resulting from indirect tax, legal, regulatory, or environmental requirements, the Directors use their judgement, experience, and where appropriate receive external advice, in order to make provisions in the financial statements for such matters. This is one of the key areas on which our audit concentrated as a result of the impact that a material legal, regulatory, or environmental claim might have on the Group's financial position and result for the year.

Our response: In this area our audit procedures included, among others; obtaining an understanding from the Directors of the basis for their best estimates, challenging the basis used with reference to the latest available corroborative information and in light of our understanding of the business gained throughout the audit process, and obtaining third party confirmations. In addition we met with the Group's in-house legal counsel to discuss the nature of ongoing claims, and obtained formal confirmations from the Group's external legal advisers for all significant litigation. We also assessed whether the Group's disclosures about provisions, contingent liabilities, and the movements in the year were appropriate.

3 Our application of materiality and an overview of the scope of our audit

The materiality for the Group financial statements as a whole was set at £7.0 million. This has been determined with reference to a benchmark of Group profit before taxation (of which it represents 6.7%), which we consider to be one of the principal considerations for members of the Company in assessing the financial performance of the Group.

We agreed with the Audit Committee to report to it all corrected and uncorrected misstatements we identified through our audit with a value in excess of £0.4 million, in addition to other audit misstatements below that threshold which we believe warranted reporting on qualitative grounds.

Audits for Group reporting purposes were performed by component auditors in the following countries: Germany, the UK, Switzerland, India, China, Mexico, Poland, Belgium, and Italy. In addition, specified audit procedures were performed for Group reporting purposes by component auditors in the US and Brazil. Combined, these audits and specified audit procedures covered 72% of the Group's revenue, 74% of the Group's profit before tax, and 83% of the Group's total assets. The segmental disclosure in Note 5 sets out the individual significance of specific geographical locations.

The audits and procedures undertaken for Group reporting purposes at the key reporting components of the Group were all performed to materiality levels set by, or agreed with, the Group audit team. These local materiality levels were set individually for each component and ranged from £0.1 million to £6.7 million.

Detailed instructions were sent to all the auditors in these locations. These instructions covered the significant areas that should be covered by the component audit teams (which included the relevant risks of material misstatement detailed above) and set out the information required to be reported back to the Group audit team. The Group audit team visited key reporting components in the following countries: Brazil, China, the UK, the US, Germany, and Mexico. Telephone meetings were also held with the auditors at these locations and all other key reporting component locations that were not visited.

For those components for which audits or specified audit procedures for Group reporting purposes are not performed, the Group audit team communicates with the component auditors regularly throughout the year particularly in relation to any control findings that may impact on the overall strategy for the Group audit. Local statutory audits are performed at the majority of these components but generally these are to be completed after the date of this report.

4 Our opinion on other matters prescribed by the Companies Act 2006 is unmodified

In our opinion:

- the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the Companies Act 2006; and
- the information given in the Strategic Report and the Directors' Report for the financial year for which the financial statements are prepared is consistent with the financial statements.

5 We have nothing to report in respect of the matters on which we are required to report by exception

Under ISAs (UK and Ireland) we are required to report to you if, based on the knowledge we acquired during our audit, we have identified other information in the annual report that contains a material inconsistency with either that knowledge or the financial statements, a material misstatement of fact, or that is otherwise misleading.

In particular, we are required to report to you if:

- we have identified material inconsistencies between the knowledge we acquired during our audit and the Directors' statement that they consider that the annual report and financial statements taken as a whole is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's performance, business model and strategy; or
- the Audit Committee Report does not appropriately address matters communicated by us to the Audit Committee.

Under the Companies Act 2006 we are required to report to you if, in our opinion:
adequate accounting records have not been kept by the parent company, or returns adequate for our audit have not been received from branches not visited by us; or

- the parent company financial statements and the part of the Directors' Remuneration Report to be audited are not in agreement with the accounting records and returns; or
- certain disclosures of Directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

Under the Listing Rules we are required to review:

- the Directors' statement, set out on page 84, in relation to going concern; and
- the part of the Corporate Governance Statement on page 54 to 60 relating to the Company's compliance with the nine provisions of the 2010 UK Corporate Governance Code specified for our review.

We have nothing to report in respect of the above responsibilities.

Scope of report and responsibilities

As explained more fully in the Directors' Responsibilities Statement set out on page 88, the Directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. A description of the scope of an audit of financial statements is provided on the Financial Reporting Council's website at www.frc.org.uk/auditscopeukprivate. This report is made solely to the Company's members as a body and is subject to important explanations and disclaimers regarding our responsibilities, published on our website at www.kpmg.com/uk/auditscopeukco2013a, which are incorporated into this report as if set out in full and should be read to provide an understanding of the purpose of this report, the work we have undertaken and the basis of our opinions.

Paul Korolkiewicz (Senior Statutory Auditor)
for and on behalf of KPMG LLP, Statutory Auditor
Chartered Accountants
15 Canada Square, London, E14 5GL
4 March 2014

Group income statement

FOR THE YEAR ENDED 31 DECEMBER 2013

	Notes	2013 Headline performance £m	2013 Separately reported items £m	2013 Total £m	2012 as restated Headline performance £m	2012 as restated Separately reported items £m	2012 as restated Total £m
Continuing operations							
Revenue	5	**1,510.5**	**—**	**1,510.5**	1,547.5	—	1,547.5
Manufacturing costs		**(1,100.0)**	**—**	**(1,100.0)**	(1,149.3)	—	(1,149.3)
Administration, selling and distribution costs		**(270.5)**	**—**	**(270.5)**	(266.9)	—	(266.9)
Trading profit	5	**140.0**	**—**	**140.0**	131.3	—	131.3
Amortisation of intangible assets	18	**—**	**(17.4)**	**(17.4)**	—	(17.5)	(17.5)
Restructuring charges	7	**—**	**(3.9)**	**(3.9)**	—	(57.0)	(57.0)
Demerger costs	8	**—**	**—**	**—**	—	(15.7)	(15.7)
Operating profit/(loss)		**140.0**	**(21.3)**	**118.7**	131.3	(90.2)	41.1
Net finance costs	11	**(17.3)**	**—**	**(17.3)**	(21.7)	—	(21.7)
Share of post-tax profit of joint ventures		**2.5**	**—**	**2.5**	0.1	—	0.1
Profit/(loss) on disposal of continuing operations	10	**—**	**0.2**	**0.2**	—	(2.3)	(2.3)
Profit/(loss) before tax		**125.2**	**(21.1)**	**104.1**	109.7	(92.5)	17.2
Income tax (costs)/credits	12	**(32.5)**	**38.8**	**6.3**	(29.6)	(2.0)	(31.6)
Profit/(loss) from:							
Continuing operations		**92.7**	**17.7**	**110.4**	80.1	(94.5)	(14.4)
Discontinued operations	25	**—**	**29.9**	**29.9**	—	612.5	612.5
Profit		**92.7**	**47.6**	**140.3**	80.1	518.0	598.1
Profit attributable to:							
Owners of the parent		**87.7**	**47.6**	**135.3**	75.0	518.0	593.0
Non-controlling interests		**5.0**	**—**	**5.0**	5.1	—	5.1
Profit		**92.7**	**47.6**	**140.3**	80.1	518.0	598.1
Earnings per share — pence	13						
Continuing operations — basic				**38.4**			(7.0)
— diluted				**38.3**			(6.9)
Total operations — basic				**49.2**			213.8
— diluted				**49.1**			211.9

Group statement of comprehensive income

FOR THE YEAR ENDED 31 DECEMBER 2013

	Notes	2013 £m	2012 as restated £m
Profit		**140.3**	598.1
Other comprehensive income/(loss), net of income tax			
Items that will not be reclassified subsequently to income statement			
Remeasurement of defined benefit liabilities/assets	31	**10.2**	(106.4)
Income tax relating to items not reclassified	12	**(1.6)**	14.8
Items that may be reclassified subsequently to income statement			
Exchange differences on translation of the net assets of foreign operations		**(55.0)**	(80.8)
Reclassification of exchange differences on disposal of foreign operations		**(6.2)**	31.5
Exchange translation differences arising on net investment hedges	28	**0.3**	14.0
Change in fair value of cash flow hedges	28	**0.4**	2.3
Change in fair value of cash flow hedges transferred to profit for the year	28	**—**	(0.3)
Change in fair value of available-for-sale investments	28	**0.1**	(0.3)
Other comprehensive loss, net of income tax		**(51.8)**	(125.2)
Total comprehensive income		**88.5**	472.9
Total comprehensive income attributable to:			
Owners of the parent		**86.9**	469.5
Non-controlling interests		**1.6**	3.4
Total comprehensive income		**88.5**	472.9

Group statement of cash flows

FOR THE YEAR ENDED 31 DECEMBER 2013

	Notes	2013 £m	2012 as restated £m
Cash flows from operating activities			
Cash generated from operations	14	**160.7**	165.3
Net interest paid		**(11.8)**	(18.7)
Income taxes paid		**(30.4)**	(60.1)
Net cash inflow from operating activities		**118.5**	86.5
Cash flows from investing activities			
Capital expenditure		**(46.3)**	(80.0)
Proceeds from the sale of property, plant and equipment		**1.6**	3.3
Proceeds from the sale of investments		**0.3**	—
Acquisition of subsidiaries and joint ventures, net of cash acquired		**—**	(26.1)
Disposal of subsidiaries and joint ventures, net of cash disposed of	24	**44.1**	(46.2)
Dividends received from joint ventures		**1.3**	1.3
Other investing outflows		**(1.4)**	(3.4)
Net cash outflow from investing activities		**(0.4)**	(151.1)
Net cash inflow/(outflow) before financing activities		**118.1**	(64.6)
Cash flows from financing activities			
(Repayment)/increase in borrowings	16	**(112.2)**	119.1
Settlement of forward foreign exchange contracts		**(1.4)**	(23.7)
Proceeds from the issue of share capital		**0.1**	2.2
Purchase of own shares		**(34.1)**	(19.8)
Borrowing facility arrangement costs		**(0.4)**	(5.0)
Dividends paid to equity shareholders	29	**(39.4)**	(61.2)
Dividends paid to non-controlling shareholders		**(1.1)**	(1.2)
Net cash (outflow)/inflow from financing activities		**(188.5)**	10.4
Net decrease in cash and cash equivalents	16	**(70.4)**	(54.2)
Cash and cash equivalents at 1 January		**124.7**	183.9
Effect of exchange rate fluctuations on cash and cash equivalents		**(1.5)**	(5.0)
Cash and cash equivalents at 31 December	15	**52.8**	124.7

	Continuing operations £m	**Discontinued operations £m**	**2013 Total £m**	Continuing operations £m	Discontinued operations £m	2012 Total £m
Free cash flow						
Net cash inflow from operating activities	**128.4**	**(9.9)**	**118.5**	64.0	22.5	86.5
Additional funding contributions into Group pension plans	**11.0**	**—**	**11.0**	45.2	2.1	47.3
Capital expenditure	**(46.3)**	**—**	**(46.3)**	(56.2)	(23.8)	(80.0)
Proceeds from the sale of property, plant and equipment	**1.6**	**—**	**1.6**	1.4	1.9	3.3
Dividends received from joint ventures	**1.3**	**—**	**1.3**	1.0	0.3	1.3
Dividends paid to non-controlling shareholders	**(1.1)**	**—**	**(1.1)**	(1.2)	—	(1.2)
Free cash flow	**94.9**	**(9.9)**	**85.0**	54.2	3.0	57.2

Group balance sheet
AS AT 31 DECEMBER 2013

	Notes	2013 £m	2012 £m
Assets			
Property, plant and equipment	17	**274.7**	277.8
Intangible assets	18	**717.7**	763.7
Employee benefits — net surpluses	31	**28.7**	23.3
Interests in joint ventures		**15.4**	14.4
Investments		**4.2**	4.6
Income tax recoverable		**4.2**	2.9
Deferred tax assets	12	**43.7**	17.9
Other receivables		**14.3**	14.1
Total non-current assets		**1,102.9**	1,118.7
Cash and short-term deposits	15	**68.4**	129.5
Inventories	21	**181.9**	194.1
Trade and other receivables	20	**313.7**	338.9
Income tax recoverable		**3.5**	2.8
Derivative financial instruments	22	**0.3**	—
Assets classified as held for sale	23	**—**	39.9
Total current assets		**567.8**	705.2
Total assets		**1,670.7**	1,823.9
Equity			
Issued share capital	26	**27.8**	27.8
Retained earnings	27	**2,284.6**	2,212.2
Other reserves	28	**(1,455.8)**	(1,399.0)
Equity attributable to the owners of the parent		**856.6**	841.0
Non-controlling interests		**27.3**	26.8
Total equity		**883.9**	867.8
Liabilities			
Interest-bearing borrowings	30	**309.5**	420.3
Employee benefits — net liabilities	31	**76.6**	92.1
Other payables	33	**18.6**	14.2
Provisions	35	**35.3**	31.8
Deferred tax liabilities	12	**51.0**	60.7
Total non-current liabilities		**491.0**	619.1
Interest-bearing borrowings	30	**15.3**	4.5
Trade and other payables	33	**214.5**	234.2
Income tax payable		**45.0**	45.0
Provisions	35	**20.8**	29.5
Derivative financial instruments	22	**0.2**	0.3
Liabilities directly associated with assets classified as held for sale	23	**—**	23.5
Total current liabilities		**295.8**	337.0
Total liabilities		**786.8**	956.1
Total equity and liabilities		**1,670.7**	1,823.9

The financial statements were approved and authorised for issue by the Directors on 4 March 2014 and signed on their behalf by:

François Wanecq
Chief Executive

Chris O'Shea
Chief Financial Officer

Group statement of changes in equity

FOR THE YEAR ENDED 31 DECEMBER 2013

	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 2012	1,765.1	(1,356.7)	899.3	1,307.7	24.6	1,332.3
Profit (as restated)	—	—	593.0	593.0	5.1	598.1
Other comprehensive income/(loss), net of income tax						
Items that will not be reclassified subsequently to income statement						
Remeasurement of defined benefit liabilities/assets (as restated)	—	—	(106.4)	(106.4)	—	(106.4)
Income tax relating to items not reclassified	—	—	14.8	14.8	—	14.8
Items that may be reclassified subsequently to income statement						
Exchange differences on translation of the net assets of foreign operations	—	(79.1)	—	(79.1)	(1.7)	(80.8)
Reclassification of exchange differences on disposal of foreign operations	—	31.5	—	31.5	—	31.5
Exchange translation differences arising on net investment hedges	—	14.0	—	14.0	—	14.0
Change in fair value of cash flow hedges	—	2.3	—	2.3	—	2.3
Change in fair value of cash flow hedges transferred to profit for the year	—	(0.3)	—	(0.3)	—	(0.3)
Change in fair value of available-for-sale investments	—	(0.3)	—	(0.3)	—	(0.3)
Other comprehensive loss, net of income tax (as restated)	—	(31.9)	(91.6)	(123.5)	(1.7)	(125.2)
Total comprehensive (loss)/income (as restated)	—	(31.9)	501.4	469.5	3.4	472.9
Purchase of own shares	—	—	(19.8)	(19.8)	—	(19.8)
Recognition of share-based payments	—	—	4.8	4.8	—	4.8
Dividends paid (note 29)	—	—	(61.2)	(61.2)	(1.2)	(62.4)
Issue of share capital	12.8	(10.4)	—	2.4	—	2.4
Capital reduction satisfied by transfer of Alent plc	(862.4)	—	—	(862.4)	—	(862.4)
Court approved capital reduction	(887.7)	—	887.7	—	—	—
Total transactions with owners	(1,737.3)	(10.4)	811.5	(936.2)	(1.2)	(937.4)
As at 1 January 2013	**27.8**	**(1,399.0)**	**2,212.2**	**841.0**	**26.8**	**867.8**
Profit	—	—	**135.3**	**135.3**	**5.0**	**140.3**
Other comprehensive income/(loss), net of income tax						
Items that will not be reclassified subsequently to income statement						
Remeasurement of defined benefit liabilities/assets	—	—	**10.2**	**10.2**	—	**10.2**
Income tax relating to items not reclassified	—	—	**(1.6)**	**(1.6)**	—	**(1.6)**
Items that may be reclassified subsequently to income statement						
Exchange differences on translation of the net assets of foreign operations	—	**(51.6)**	—	**(51.6)**	**(3.4)**	**(55.0)**
Reclassification of exchange differences on disposal of foreign operations	—	**(6.2)**	—	**(6.2)**	—	**(6.2)**
Exchange translation differences arising on net investment hedges	—	**0.3**	—	**0.3**	—	**0.3**
Change in fair value of cash flow hedges	—	**0.4**	—	**0.4**	—	**0.4**
Change in fair value of available-for-sale investments	—	**0.1**	—	**0.1**	—	**0.1**
Other comprehensive (loss)/income, net of income tax	—	**(57.0)**	**8.6**	**(48.4)**	**(3.4)**	**(51.8)**
Total comprehensive (loss)/income	—	**(57.0)**	**143.9**	**86.9**	**1.6**	**88.5**
Purchase of own shares	—	—	**(34.1)**	**(34.1)**	—	**(34.1)**
Recognition of share-based payments	—	—	**2.1**	**2.1**	—	**2.1**
Dividends paid (note 29)	—	—	**(39.4)**	**(39.4)**	**(1.1)**	**(40.5)**
Redemption of redeemable preference shares	—	**0.1**	**(0.1)**	—	—	—
Issue of share capital	—	**0.1**	—	**0.1**	—	**0.1**
Total transactions with owners	—	**0.2**	**(71.5)**	**(71.3)**	**(1.1)**	**(72.4)**
As at 31 December 2013	**27.8**	**(1,455.8)**	**2,284.6**	**856.6**	**27.3**	**883.9**

Notes to the consolidated financial statements

1. General information

Vesuvius plc ("Vesuvius" or "the Company") is a public limited company registered in England and Wales and listed on the London Stock Exchange. The nature of the operations and principal activities of the Company and its subsidiary and joint venture companies ("the Group") is set out in the Strategic Report on pages 10 to 47 and its registered address is shown on page 144.

2. Basis of preparation

2.1 Basis of accounting

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards as adopted by the European Union ("IFRS") and, with the exception of defined benefit pension plans, certain provisions and derivative financial instruments, under the historical cost convention.

2.2 Impact of Cookson Group demerger on comparative financial information disclosure

The effect of adopting the principles of reverse acquisition to account for the Scheme of Arrangement, by which the demerger of Cookson Group plc was implemented, results in a continuation of the consolidated financial statements of Cookson, now renamed Vesuvius. As a consequence of this, the comparative financial statements of Vesuvius include the full results of the Alent group of companies up to the date of the demerger becoming effective on 19 December 2012. In preparing the disclosure of the results of Vesuvius for 2012, the following approach has been applied:

(i) The costs incurred by Vesuvius within its central headquarters for 2012 have been allocated in full between the underlying trading results of continuing and discontinued operations in arriving at the results for Vesuvius as a whole.

(ii) As Vesuvius Holdings Limited (formerly Cookson Group plc) remained with Vesuvius plc after the demerger, all of the borrowings and associated financial derivatives entered into by Cookson in the period up to the date of demerger have been treated as belonging to Vesuvius in the comparative financial statements, with the consequence that all of the finance costs relating to those Cookson borrowings have been reported as finance costs of Vesuvius. Borrowings and borrowing costs relating to local debt arrangements established by individual Cookson Group companies other than Cookson Group plc have been reported according to whether they were part of the Alent or Vesuvius group structure. This approach has also been applied to financial assets (net cash) and the related finance income.

(iii) Tax charges in the comparative financial statements have been determined based on the tax charges recorded by Vesuvius companies in local statutory accounts, together with certain adjustments relating to those entities made for Group consolidation purposes. The tax charges recorded in the Group income statement for 2012 have been affected by the tax arrangements within the former Cookson Group and are not necessarily representative of the tax charges that would have been reported had Vesuvius been an independent group throughout 2012, nor of tax charges that may arise thereafter.

As a consequence of the above, the pre-demerger historical financial performance of Vesuvius in its comparative 2012 financial statements comprises the full consolidated financial performance of Cookson Group plc, albeit that in the income statements the total Group results have been analysed between continuing (Vesuvius companies only) and discontinued (Alent and Precious Metals Processing) operations.

The demerger of Alent was reflected in the Vesuvius financial statements as the sale, by Vesuvius, of the consolidated Alent business on 19 December 2012. Hence the 2012 income statement of Vesuvius includes, within "discontinued operations", the trading performance of Alent up to 19 December 2012, together with the profit on the "sale" of Alent. Similarly, the trading results of the Precious Metals Processing division (including the US operations, which were sold in 2012) have been included within discontinued operations in the comparative financial statements.

2.3 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 govern the financial and operating policies of an entity so as to obtain benefits 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 and each component of other comprehensive income 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.

2. Basis of preparation (continued)

2.4 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 2013 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 and the Company.

2.5 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. Foreign operations are included in accordance with the policies set out in note 30.1.

2.6 Disclosure of "Separately reported items"

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 columnar presentation for its Group income statement, to separately identify Headline Performance results, 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. 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.

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 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.

2.7 New and revised IFRS

During the year, the Group has adopted IAS 19 (revised), Employee Benefits ("IAS 19(R)") which makes changes to the recognition, measurement and disclosure of defined benefit pension schemes. The impact can be summarised as follows which has required a restatement of the prior period's consolidated results:

- The net finance cost relating to employee benefits plans has been previously presented gross within finance income and finance expense within the Group income statement. The amount is now considered to be a single finance cost on the net pension liability. Prior period comparatives have been restated.
- IAS 19(R) requires the net pension interest charge to be calculated by applying a high quality corporate bond yield to the net defined benefit liability/asset. This has resulted in the net pension interest charge for 2012 of £0.6m, as previously reported, to become £0.1m with an equal and opposite effect on the remeasurement of the net defined benefit liability in the Group statement of comprehensive income. The impact on the net pension interest charge for 2013 is broadly similar to that for 2012.
- Operating costs have been increased by £1.5m for 2013 (2012: £1.7m), as a result of the requirement to include pension scheme administration costs in operating costs. Such costs include the PFI levy and actuarial, legal and trustee charges which, under the previous IAS 19, were allowed to be included within net finance costs.

In addition, during the period, the Group adopted a number of other new standards and amendments which became effective, none of which had a material impact on the Group's net cash flow, financial position, total comprehensive income or earnings per share. A number of other new and amended IFRS were issued during the year which do not become effective until after 1 January 2014 and which have not been early adopted. None of these are likely to have a material impact on the Group's net cash flows, financial position, total comprehensive income or earnings per share.

Notes to the consolidated financial statements continued

3. Critical judgements in applying accounting policies and key sources of estimation uncertainty

Determining the carrying amount of some assets and liabilities requires estimation of the effect of uncertain future events. The major sources of estimation uncertainty that have a significant risk of resulting in a material adjustment to the carrying amounts of assets or liabilities are noted below.

3.1 Goodwill and other intangible assets

The Directors use their judgement to determine the extent to which goodwill and other capitalised intangible assets have a value that will benefit the performance of the Group over future periods. To assist in making this judgement, the Directors undertake an assessment, at least annually, of the carrying value of the Group's capitalised goodwill and other intangible assets. In the assessment undertaken as at 31 December 2013, further details of which are given in note 19, value in use was derived from discounted five-year cash flow projections, using a growth rate of 2.5% in the years beyond the projection period and pre-tax discount rates. The projection period is, in the opinion of the Directors, an appropriate period over which to view the future results of the Group's businesses for this purpose. Changes to the assumptions used in making these forecasts could significantly alter the Directors' assessment of the carrying value of goodwill and other intangible assets.

3.2 Employee benefits

The Group's financial statements include the costs and obligations associated with the provision of pension and other post-retirement benefits to current and former employees. It is the Directors' responsibility to set the assumptions used in determining the key elements of the costs of meeting such future obligations. These assumptions are set after consultation with the Group's actuaries and include those used to determine regular service costs and the financing elements related to the plans' assets and liabilities. Whilst the Directors believe that the assumptions used are appropriate, a change in the assumptions used could affect the Group's profit and financial position.

3.3 Liability reserves

Vesuvius has extensive international operations and is subject to various legal and regulatory regimes, including those covering taxation and environmental matters. Several of the Group's 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 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. The Directors use their judgement and experience to make reserves in the financial statements for an appropriate amount relating to such matters.

3.4 Taxation

(a) Current tax

Tax benefits are not recognised unless it is probable that they will result in future economic benefits to the Group. In assessing the amount of the benefit to be recognised in the financial statements, the Directors exercise their judgement in considering the effect of negotiations, litigation and any other matters that they consider may impact upon the potential settlement. Any interest and penalties on tax liabilities are provided for in the tax charge. The Group operates internationally and is subject to tax in many different jurisdictions. As a consequence, the Group is routinely subject to tax audits and local enquiries which, by their very nature, can take a considerable period of time to conclude. Provisions are made for known issues based upon the Directors' interpretation of country-specific tax law and their assessment of the likely outcome.

(b) Deferred tax

The Group has recognised deferred tax assets in respect of unutilised losses and other timing differences arising in a number of the Group's businesses, further details of which are given in note 12.4. Account has been taken of future forecasts of taxable profit in arriving at the values at which these assets are recognised. If these forecast profits do not materialise or change, or there are changes in tax rates or to the period over which the losses or timing differences might be recognised, then the value of deferred tax assets will need to be revised in a future period.

The Group also has losses and other timing differences, analysed in note 12.4, for which no deferred tax assets have been recognised in these financial statements, relating either to loss-making subsidiaries where the future economic benefit of the timing difference is not probable or to where the timing difference is of such a nature that its value is dependent on certain types of profit being earned, such as capital profits. If trading or other appropriate profits are earned in future in these companies, these losses and other timing differences may yield benefit to the Group in the form of a reduced tax charge.

4. 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.

4.1 Headline

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

4. Non-GAAP financial measures (continued)

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

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

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

4.5 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.

4.6 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.

4.7 Headline earnings per share
Headline earnings per share is calculated as headline profit before tax and after income tax costs associated with headline performance and profit attributable to non-controlling interests, divided by the weighted average number of ordinary shares in issue during the year.

4.8 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 asset disposals.

4.9 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.

4.10 Average working capital to sales ratio
The average working capital to sales ratio is calculated as the percentage of average working capital balances to the total revenue for the year. Average working capital (comprising inventories, trade receivables and trade payables) is calculated as the average of the 12 previous month-end balances.

4.11 Earnings Before Interest, Tax, Depreciation and Amortisation ("EBITDA")
EBITDA is calculated as the total of trading profit before depreciation charges.

4.12 Net interest
Net interest is calculated as interest payable on borrowings less interest receivable, excluding any item therein considered by the Directors to be exceptional and therefore separately reported.

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

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

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

4.16 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).

4.17 Constant rates
Figures presented at constant rates represent December 2012 numbers retranslated to December 2013 exchange rates.

Notes to the consolidated financial statements continued

5. Segment information

The segment information contained in this note makes reference to several non-GAAP financial measures, definitions for which can be found in note 4.

5.1 Accounting policy

(a) Revenue recognition

Revenue comprises the fair value of the consideration received or receivable for goods supplied and services rendered to customers after deducting rebates, discounts and value-added taxes, and after eliminating sales within the Group. Revenue from the sale of goods is recognised when persuasive evidence exists, usually in the form of an executed sales agreement, that the significant risks and rewards of ownership have been transferred to the customer, recovery of the consideration is probable, there is no continuing management involvement with the goods, and the amount of revenue can be measured reliably. A provision for anticipated returns is made based primarily on historical return rates. Where a contractual arrangement consists of two or more separate elements that can be provided to customers either on a stand-alone basis or as an extra, such as the provision of supplementary materials with equipment, revenue is recognised for each element as if it were an individual contractual arrangement.

(b) Research and development costs

Expenditure on research activities is recognised in the income statement as an expense in the year in which it is incurred. Expenditure on development activities is capitalised if the product or process is technically and commercially feasible and the Group has sufficient resources to complete development. All other development expenditure is recognised in the income statement as an expense in the year in which it is incurred. Capitalised development expenditure is stated at cost less accumulated amortisation and impairment losses.

5.2 Business segments

Operating segments for continuing operations

For reporting purposes, the Group is organised into two main business segments: Steel and Foundry and the senior executive management of each of these business segments reports to the Chief Executive of the Group. It is the Vesuvius Board which makes the key operating decisions in respect of these segments. The information used by the Vesuvius Board to review performance and determine resource allocation between the business segments is presented with the Group's activities segmented between the two business segments, Steel and Foundry. Taking into account the basis on which the Group's activities are reported to the Vesuvius Board, the Directors believe that these two business segments are the appropriate way to analyse the Group's results. The principal activities of each of these segments are described in the Strategic Report on pages 24 to 31.

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.

Discontinued operations

Discontinued operations in 2012 include the results of the Alent group of companies for the period up to 19 December 2012, when they were demerged from Vesuvius, together with the results of the US Precious Metals Processing business for the period up to 1 May 2012 when it was sold and the the results of the European Precious Metals Processing business for the whole of the year. The European Precious Metals business was held for sale as at 31 December 2012 and its results for the period up to 31 May, when it was sold, are reported as discontinued operations in 2013.

5. Segment information (continued)

5.3 Income statement

The operating segment results from continuing operations for 2012 and 2013 are presented below.

	2013		
	Steel £m	**Foundry £m**	**Continuing operations £m**
Segment revenue	**1,017.5**	**493.0**	**1,510.5**
Segment EBITDA	**114.1**	**65.2**	**179.3**
Segment depreciation	**(25.4)**	**(13.9)**	**(39.3)**
Segment trading profit	**88.7**	**51.3**	**140.0**
Amortisation of intangible assets			**(17.4)**
Restructuring charges			**(3.9)**
Operating profit			**118.7**
Net finance costs			**(17.3)**
Share of post-tax profit of joint ventures			**2.5**
Profit on disposal of continuing operations			**0.2**
Profit before tax			**104.1**
Return on sales margin (%)	**8.7**	**10.4**	**9.3**
Capital expenditure additions (£m)	**28.6**	**18.9**	**47.5**

	2012 as restated		
	Steel £m	Foundry £m	Continuing operations £m
Segment revenue	1,017.3	530.2	1,547.5
Segment EBITDA	108.2	66.2	174.4
Segment depreciation	(25.1)	(18.0)	(43.1)
Segment trading profit	83.1	48.2	131.3
Amortisation of intangible assets			(17.5)
Restructuring charges			(57.0)
Demerger costs			(15.7)
Operating profit			41.1
Net finance costs			(21.7)
Share of post-tax profit of joint ventures			0.1
Loss on disposal of continuing operations			(2.3)
Profit before tax			17.2
Return on sales margin (%)	8.2	9.1	8.5
Capital expenditure additions (£m)	38.5	18.7	57.2

Notes to the consolidated financial statements continued

5. Segment information (continued)

5.6 Geographic analysis

	External revenue		Non-current assets	
	2013 £m	2012 £m	**2013 £m**	2012 £m
United States of America	**294.6**	290.4	**216.0**	209.6
Germany	**216.1**	212.5	**114.4**	106.9
China	**109.5**	102.9	**76.1**	69.6
United Kingdom	**79.2**	78.3	**155.6**	167.6
Brazil	**83.9**	93.4	**56.2**	62.3
India	**86.0**	91.3	**36.4**	41.4
France	**56.0**	61.1	**15.7**	14.7
Spain	**42.6**	43.1	**34.2**	44.7
Rest of the world	**542.6**	574.5	**323.7**	347.9
Continuing operations	**1,510.5**	1,547.5	**1,028.3**	1,064.7

External revenue disclosed in the table above is based upon the geographical location of the operation. The Group's customers are widely dispersed around the world and no single country included within Rest of the World in the table above, for either of the years presented, amounts to more than 10% of the total external revenue of continuing operations. Non-current assets exclude employee benefits net surpluses and deferred tax assets.

5.7 Products and customers

Information relating to the Group's products and services is given in the Strategic Report on pages 10 to 47. The Group is not dependent upon any single customer for its revenue and no single customer, for either of the years presented in the tables above, accounts for more than 10% of the Group's total external revenue.

6. Amounts payable to KPMG LLP and its associates

	2013 £m	2012 £m
Fees payable to the Company's Auditor and its associates for the audit of the Company's annual accounts	**0.3**	0.6
Fees payable to the Company's Auditor and its associates for other services:		
Audit of the Company's subsidiaries	**1.4**	2.4
Tax compliance and advisory	**0.2**	0.6
Corporate finance services relating to the demerger	**—**	2.3
Total Auditor's remuneration	**1.9**	5.9

Total Auditor's remuneration of £1.9m in 2013 all related to continuing operations, of which £1.7m related to audit fees and £0.2m of non-audit fees, the latter comprising £0.1m in respect of the interim review fee and £0.1m for taxation advice (2012: £3.0m, including £1.7m of audit fees and £1.3m of non-audit fees, the latter comprising mainly demerger-related fees). In 2012, £2.9m related to discontinued operations, including £1.6m of non-audit fees.

7. Restructuring charges

The restructuring charge for the year from continuing operations was £3.9m (2012: £57.0m) and arose in connection with initiatives that included redundancy programmes, the downsizing or closure of facilities, the streamlining of manufacturing processes and the rationalisation of product lines. Of the total charge, £0.1m (2012: £46.3m) arose in connection with the actions taken to downsize the Solar Crucibles operations of the Foundry division, the charge in 2013 comprising redundancy and other cash costs of £1.1m, net of the release of a reserve of £1.0m for lease costs no longer required. The net tax credit attributable to the total restructuring charges was £2.6m (2012: £4.6m).

Cash costs of £10.3m (2012: £11.4m) were incurred in the year in respect of the restructuring initiatives of continuing operations commenced both in 2013 and in prior years, leaving provisions made but unspent of £12.9m (note 35) as at 31 December 2013 (2012: £17.1m), of which £4.9m relates to future costs in respect of leases expiring in one to ten years.

8. Demerger costs

The cash costs associated with the preparation and execution of the demerger of the Alent group of businesses from Cookson Group plc, to the extent that they were allocated to Vesuvius, have been separately reported in the income statement in 2012. Costs totalling £15.7m were charged in the year, primarily relating to professional adviser fees for financial, audit, accounting, legal and pensions advice. Fees in connection with the negotiated changes to the former Cookson debt arrangements in order to provide Vesuvius with ongoing borrowing facilities were £2.0m and were, as required by IFRS, capitalised against the associated borrowings and are being amortised over the expected life of those debt arrangements. Tax-related costs of £11.4m were incurred in connection with the transactions necessary to reorganise the legal entity structure of the former Cookson group of companies so as to facilitate the demerger.

9. Employees

9.1 Employee benefits expense

	2013 £m	2012 as restated £m
Wages and salaries	**326.3**	439.0
Social security costs	**48.7**	55.7
Share-based payments (note 32)	**2.6**	4.3
Pension costs — defined contribution pension plans (note 31)	**10.9**	17.0
— defined benefit pension plans (note 31)	**7.1**	(0.3)
Other post-retirement benefits (note 31)	**0.7**	0.9
Total employee benefits expense	**396.3**	516.6

Of the total employee benefits expense of £396.3m (2012: £516.6m), £384.8m (2012: £369.1m) was charged in arriving at trading profit, nil (2012: nil) was credited within gains relating to employee benefits plans, £1.8m (2012: £0.1m) was charged within ordinary net finance costs, and £9.7m (2012: £147.4m) was charged to discontinued operations.

9.2 Average number of employees

	2013 No.	2012 No.
Steel	**7,568**	7,805
Foundry	**3,423**	3,798
Continuing operations	**10,991**	11,603
Discontinued operations	**505**	3,164
Total average number of employees	**11,496**	14,767

Notes to the consolidated financial statements continued

9. Employees (continued)

9.3 Remuneration of key management personnel

The remuneration of the Directors, who are the key management personnel of the Group, is set out below in aggregate for each of the categories specified in IAS 24, Related Party Disclosures. Further information about the remuneration of individual Directors is provided in the audited part of the Directors' Remuneration Report on pages 67 to 83.

	2013 £m	2012 £m
Short-term employee benefits	**1.5**	2.1
Post-employment benefits	**0.3**	0.4
Share-based payments	**0.9**	1.9
Total remuneration of key management personnel	**2.7**	4.4

10. Profit/(loss) on disposal of continuing operations

The net profit on disposal of continuing operations of £0.2m comprised £0.4m profit on the sale of a construction and installation business in Canada, together with a loss relating to a non-core business held for sale as at 31 December 2012. The net loss on disposal of continuing operations in 2012 comprised £4.0m profit on sale of the Andreco-Hurll refractory lining installation business in Australia, together with the write-down of £2.7m related to assets of a non-core business held for sale as at 31 December 2012, plus £3.6m of trailing costs of prior year disposals. The tax charge attributable to these transactions was nil (2012: £1.9m).

11. Net finance costs

11.1 Accounting policy

The ineffective portion of the change in fair value of interest rate swaps designated as cash flow hedges is included within interest payable on loans and overdrafts. Borrowing costs that are directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of that asset. All other borrowing costs are recognised as an expense in the income statement using the effective interest rate method.

11.2 Total net finance costs

	2013 £m	2012 as restated £m
Interest payable on borrowings		
Loans, overdrafts and factoring arrangements	**13.2**	20.6
Obligations under finance leases	**0.2**	0.2
Amortisation of capitalised borrowing costs	**2.6**	1.2
Total interest payable on borrowings	**16.0**	22.0
Interest on net retirement benefits obligations	**1.8**	0.1
Unwinding of discounted provisions	**1.3**	1.4
Finance income	**(1.8)**	(1.8)
Total net finance costs	**17.3**	21.7

12. Income tax

12.1 Accounting policy

Tax expense represents the sum of current tax and deferred tax. Current and deferred tax are recognised in profit or loss except to the extent that they relate to items charged or credited in other comprehensive income or directly to equity, in which case the associated tax is also dealt with in other comprehensive income or directly in equity.

Current tax is based on taxable profit for the year. Taxable profit differs from profit before tax as reported in the income statement because it excludes items of income or expense that are taxable or deductible in other years and it further excludes items that are never taxable or deductible. The Group's liability for current tax is calculated using tax rates and laws that have been enacted, or substantively enacted, by the balance sheet date.

Deferred tax is recognised on differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit and is accounted for using the balance sheet liability method. Deferred tax liabilities are generally recognised for all taxable temporary differences and deferred tax assets are recognised to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilised. Such assets and liabilities are not recognised if the temporary difference arises from the initial recognition of goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit. Deferred tax is calculated at the tax rates that are expected to apply in the period when the liability is settled or the asset is realised, based on tax rates and laws that have been enacted, or substantively enacted, by the balance sheet date.

Deferred tax liabilities are recognised for taxable temporary differences arising on investments in subsidiaries and interests in joint ventures, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. The carrying amount of deferred tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered. Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied by the same taxation authority and the Group intends to settle its current tax assets and liabilities on a net basis.

12.2 Income tax costs

	2013 £m	2012 £m
Current tax		
Overseas taxation	**31.9**	40.4
Adjustments in respect of prior years	**(1.3)**	0.3
Total current tax, continuing operations	**30.6**	40.7
Deferred tax		
Origination and reversal of temporary taxable differences	**(38.3)**	(10.3)
Adjustments in respect of prior years	**1.4**	1.2
Total deferred tax, continuing operations	**(36.9)**	(9.1)
Discontinued operations (note 25)	**—**	31.1
Total income tax costs	**(6.3)**	62.7
Total income tax costs attributable to:		
Continuing operations — Ordinary activities	**32.5**	29.6
— Separately reported items	**(38.8)**	2.0
Discontinued operations (note 25)	**—**	31.1
Total income tax costs	**(6.3)**	62.7

Notes to the consolidated financial statements continued

12. Income tax (continued)

12.2 Income tax costs (continued)

The Group's total income tax costs relating to separately reported items are analysed in the following table:

Separately reported items	2013 £m	2012 £m
US deferred tax asset recognition (note 12.4)	**29.2**	—
Restructuring charges	**2.6**	4.6
Demerger costs	**—**	(11.4)
Amortisation of intangibles	**7.0**	6.7
Disposal of continuing operations	**—**	(1.9)
Total tax credit/(charge) on separately reported items	**38.8**	(2.0)

Tax charged in the Group statement of comprehensive income in the year amounted to £1.6m (2012: £14.8m credit), £1.4m (2012: £14.8m credit) of which related to net actuarial gains and losses on employee benefits plans.

The Group operates in a number of countries that have differing tax rates, laws and practices. Changes in any of these areas could, adversely or positively, impact the Group's tax charge in the future. Continuing losses, or insufficiency of taxable profit to absorb all expenses, in any subsidiary could have the effect of increasing tax charges in the future, relative to 2013, as effective tax relief may not be available for those losses or expenses. Other significant factors affecting the tax charge are described in notes 3.4 and 12.1.

12.3 Reconciliation of income tax costs to profit before tax

	2013 £m	2012 as restated £m
Profit before tax	**104.1**	17.2
Tax at the UK corporation tax rate of 23.25% (2012: 24.5%)	**24.2**	4.2
Overseas tax rate differences	**4.6**	8.8
Withholding taxes	**3.6**	5.8
Amortisation of intangibles	**(2.7)**	(2.4)
Expenses not deductible for tax purposes	**0.8**	14.1
US deferred tax asset not previously recognised	**(29.2)**	—
Deferred tax assets not recognised	**3.8**	11.3
Utilisation of previously unrecognised tax losses	**(11.5)**	(11.7)
Adjustments in respect of prior years	**0.1**	1.5
Total income tax costs	**(6.3)**	31.6

12. Income tax (continued)

12.4 Deferred tax

	Interest £m	Other operating losses £m	Pension costs £m	Intangible assets £m	Timing differences £m	Total £m
As at 1 January 2012	—	5.1	(10.4)	(83.6)	3.2	(85.7)
Exchange adjustments	—	(0.6)	(1.0)	2.9	1.1	2.4
Credit to Group statement of comprehensive income	—	—	14.8	—	—	14.8
(Charge)/credit to Group income statement	—	(1.0)	1.1	2.1	(0.5)	1.7
Transferred to held for sale	—	—	(0.8)	0.1	(1.0)	(1.7)
Business disposals	—	(3.5)	(0.6)	28.9	0.9	25.7
As at 1 January 2013	**—**	**—**	**3.1**	**(49.6)**	**3.7**	**(42.8)**
Exchange adjustments	**—**	**(0.3)**	**—**	**1.3**	**(0.9)**	**0.1**
Credit to Group statement of comprehensive income	**—**	**—**	**(1.4)**	**—**	**(0.2)**	**(1.6)**
Credit/(charge) to Group income statement	**—**	**2.5**	**—**	**7.0**	**(1.7)**	**7.8**
Credit to Group income statement US	**14.5**	**11.3**	**—**	**—**	**3.4**	**29.2**
As at 31 December 2013	**14.5**	**13.5**	**1.7**	**(41.3)**	**4.3**	**(7.3)**

	2013 £m	2012 £m
Recognised in the Group balance sheet as:		
Non-current deferred tax assets	**43.7**	17.9
Non-current deferred tax liabilities	**(51.0)**	(60.7)
Net total deferred tax liabilities	**(7.3)**	(42.8)

At the end of 2013, a deferred tax asset in respect of US temporary differences was recognised. The asset of £29.2m represents the partial recognition of temporary differences arising prior to the demerger of Alent in 2012 and was determined in the light of past and forecast future profit performance of the US businesses of Vesuvius, as required by IAS 12. In view of its material size and nature, the tax credit arising from the recognition of this asset is presented separately from the tax charge on headline performance, in accordance with the principles outlined in note 2.6 above. Subsequent increase, decrease and amortisation of the value of this asset would similarly be expected to be presented in this manner, as the Directors consider that the separate identification of deferred tax for temporary differences arising prior to the demerger would assist both in a better understanding of the financial performance achieved and in making projections of future results of the Group.

Tax loss carry-forwards and other temporary differences of £7.5m (2012: £7.0m) were recognised by subsidiaries reporting a loss in 2012 or 2013. On the basis of approved business plans of these subsidiaries, the Directors consider it probable that the tax loss carry-forwards and temporary differences can be offset against future taxable profits.

The total deferred tax assets not recognised as at 31 December 2013 were £280.0m (2012: £336.6m), as analysed below. In accordance with the accounting policy in note 12.1, these items have not been recognised as deferred tax assets on the basis that their future economic benefit is not probable. In total, there was a decrease of £56.6m (2012: £147.1m) in net unrecognised deferred tax assets during the year.

	2013 £m	2012 £m
Capital losses available to offset future UK capital gains (may be carried forward indefinitely)	**33.0**	38.0
Operating losses	**126.0**	144.3
Unrelieved US interest (may be carried forward indefinitely)	**69.4**	91.8
UK ACT credits (may be carried forward indefinitely)	**13.1**	13.1
US tax credits	**4.2**	3.5
Other timing differences	**34.3**	45.9
Total deferred tax assets not recognised	**280.0**	336.6

Notes to the consolidated financial statements continued

12. Income tax (continued)

12.4 Deferred tax (continued)

As at 31 December 2013, the Group had total operating losses carried forward with a tax value of £139.5m (2012: £144.3m).

	2013 £m	2012 £m
Losses available to set against future US taxable income, due to expire 2022 to 2031	**29.6**	34.9
Losses available to set against future UK taxable income (may be carried forward indefinitely)	**77.6**	87.5
Losses available to set against future taxable income in ROW:		
Due to expire within 5 years	**17.1**	7.9
Due to expire between 5 and 20 years	**1.1**	2.0
Carried forward indefinitely	**14.1**	12.0
ROW operating losses	**32.3**	21.9
Total net operating losses	**139.5**	144.3

Total net operating losses of £139.5m (2012: £144.3m) comprised unrecognised losses of £126.0m (2012: £144.3m) and recognised losses of £13.5m (2012: nil).

The above losses available relating to the rest of the world arise in a number of countries, each of which is not individually significant, reflecting the spread of the Group's operations.

As at 31 December 2013, the Group had US tax credits carried forward with a tax value of £4.2m (2012: £3.5m) as follows:

	2013 £m	2012 £m
US research and experimentation credits (due to expire 2021 to 2033)	**1.1**	1.0
US foreign tax credits (due to expire 2014 to 2023)	**3.1**	2.5
US tax credits	**4.2**	3.5

There are no temporary differences associated with investments in subsidiaries and interests in joint ventures for which deferred tax liabilities have not been recognised.

From 1 April 2013, the UK corporation tax rate reduced to 23% from 24%. Further UK corporation tax rate reductions to 21% from 1 April 2014 and 20% from 1 April 2015 were substantively enacted on 2 July 2013. Accordingly, the Group's closing UK deferred tax liability has been provided using a tax rate of 20%. The impact of using this lower tax rate was to increase the exceptional tax credit relating to the amortisation of intangible assets from £4.5m to £7.0m (2012: £4.7m to £6.7m).

13. Earnings per share ("EPS")

13.1 Per share amounts

		Continuing operations pence	Discontinued operations pence	2013 Total pence	Continuing operations as restated pence	Discontinued operations pence	2012 Total as restated pence
Earnings/(loss) per share	**— basic**	**38.4**	**10.8**	**49.2**	(7.0)	220.8	213.8
	— diluted	**38.3**	**10.8**	**49.1**	(6.9)	218.8	211.9
	— headline	**31.9**		**35.8**	27.0		60.1
	— diluted headline	**31.8**		**35.7**	26.8		59.6

13.2 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 £105.4m (2012: £19.5m loss), being the profit for the year of £110.4m (2012: £14.4m loss) less non-controlling interests of £5.0m (2012: £5.1m); basic and diluted EPS from total operations are based on the profit attributable to owners of the parent of £135.3m (2012: £593.0m); headline and diluted headline EPS are based upon headline profit from continuing operations attributable to owners of the parent of £87.7m (2012: £75.0m). The table below reconciles these different profit measures.

	Continuing operations £m	Discontinued operations £m	2013 Total £m	Continuing operations as restated £m	Discontinued operations £m	2012 Total as restated £m
Profit/(loss) attributable to owners of the parent	**105.4**	**29.9**	**135.3**	(19.5)	612.5	593.0
Adjustments for separately reported items:						
Amortisation of intangible assets	**17.4**	**—**	**17.4**	17.5	—	17.5
Restructuring charges	**3.9**	**0.1**	**4.0**	57.0	3.8	60.8
Demerger costs	**—**	**—**	**—**	15.7	10.0	25.7
(Profit)/loss on disposal of continuing operations	**(0.2)**	**—**	**(0.2)**	2.3	—	2.3
Profit on disposal of discontinued operations	**—**	**(19.3)**	**(19.3)**	—	(541.3)	(541.3)
Tax relating to separately reported items	**(38.8)**	**—**	**(38.8)**	2.0	6.7	8.7
Headline profit attributable to owners of the parent	**87.7**	**10.7**	**98.4**	75.0	91.7	166.7

13.3 Weighted average number of shares

	2013 m	2012 m
For calculating basic and headline EPS	**274.8**	277.4
Adjustment for dilutive potential ordinary shares	**0.9**	2.5
For calculating diluted and diluted headline EPS	**275.7**	279.9

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 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 EPS, or increase loss per share, from continuing operations.

Notes to the consolidated financial statements continued

14. Cash generated from operations

	Continuing operations £m	Discontinued operations £m	2013 Total £m	Continuing operations as restated £m	Discontinued operations £m	2012 Total as restated £m
Operating profit	**118.7**	**10.6**	**129.3**	41.1	103.2	144.3
Adjustments for:						
Amortisation of intangible assets	**17.4**	—	**17.4**	17.5	—	17.5
Restructuring charges	**3.9**	**0.1**	**4.0**	57.0	3.8	60.8
Demerger costs	—	—	—	15.7	10.0	25.7
Depreciation	**39.3**	—	**39.3**	43.1	9.8	52.9
EBITDA	**179.3**	**10.7**	**190.0**	174.4	126.8	301.2
Decrease/(increase) in inventories	**4.8**	—	**4.8**	39.5	(7.2)	32.3
(Increase)/decrease in trade receivables	**(3.5)**	—	**(3.5)**	13.6	(10.9)	2.7
Decrease in trade payables	**(4.5)**	—	**(4.5)**	(31.6)	(8.7)	(40.3)
Decrease/(increase) in other working capital balances	**19.0**	**(3.5)**	**15.5**	(8.6)	(24.8)	(33.4)
Net decrease/(increase) in trade and other working capital	**15.8**	**(3.5)**	**12.3**	12.9	(51.6)	(38.7)
Net operating (outflow)/inflow related to assets and liabilities classified as held for sale	—	**(17.1)**	**(17.1)**	0.7	0.4	1.1
Outflow related to restructuring charges	**(10.3)**	—	**(10.3)**	(11.4)	(20.5)	(31.9)
Outflow related to demerger costs	**(3.2)**	—	**(3.2)**	(12.5)	(6.6)	(19.1)
Additional pension funding contributions	**(11.0)**	—	**(11.0)**	(45.2)	(2.1)	(47.3)
Cash generated from operations	**170.6**	**(9.9)**	**160.7**	118.9	46.4	165.3

15. Cash and cash equivalents

	2013 £m	2012 £m
Short-term deposits	—	8.2
Cash at bank and in hand	**68.4**	121.3
Cash and short-term deposits	**68.4**	129.5
Bank overdrafts	**(15.6)**	(4.8)
Cash and cash equivalents in the Group statement of cash flows	**52.8**	124.7

Short-term deposits include demand deposits and short-term highly liquid investments with maturities of three months or less that are readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value. Bank overdrafts that are repayable on demand and form an integral part of the Group's cash management are included as a component of cash and cash equivalents for the purpose of the Group statement of cash flows.

16. Reconciliation of movement in net debt

	Balance as at 1 January 2013 £m	Foreign exchange adjustments £m	Non-cash movements £m	Cash flow £m	Balance as at 31 December 2013 £m
Cash and cash equivalents					
Short-term deposits	**8.2**	**(0.1)**	—	**(8.1)**	—
Cash at bank and in hand	**121.3**	**(2.0)**	—	**(50.9)**	**68.4**
Bank overdrafts	**(4.8)**	**0.6**	—	**(11.4)**	**(15.6)**
				(70.4)	
Borrowings, excluding bank overdrafts					
Current	**(1.8)**	—	—	**0.3**	**(1.5)**
Non-current	**(423.4)**	**0.8**	—	**111.9**	**(310.7)**
				112.2	
Capitalised borrowing costs	**5.2**	—	**(2.6)**	**0.4**	**3.0**
Net debt	**(295.3)**	**(0.7)**	**(2.6)**	**42.2**	**(256.4)**

Net debt is a measure of the Group's net indebtedness to banks and other external financial institutions and comprises the total of cash and short-term deposits and current and non-current interest-bearing borrowings.

17. Property, plant and equipment

17.1 Accounting policy

Freehold land is carried at cost less accumulated impairment losses. Other items of property, plant and equipment are carried at cost less accumulated depreciation and accumulated impairment losses. Costs are capitalised only when it is probable that they will result in future economic benefits flowing to the Group and when they can be measured reliably. All other repairs and maintenance expenditure is charged to the Group income statement in the period in which it is incurred.

Freehold land is not depreciated as it has an infinite life. Depreciation on other items of property, plant and equipment begins when the asset is available for use and is charged to the Group income statement on a straight-line basis so as to write off the cost less residual value of the asset over its estimated useful life as follows:

Asset category		Estimated useful life
Freehold property		between 10 and 50 years
Leasehold property		the term of the lease
Plant and equipment	— motor vehicles and information technology equipment	between 1 and 5 years
	— other	between 5 and 15 years

The depreciation method used, residual values and estimated useful lives are reviewed and changed, if appropriate, at least at each year-end. As described in note 19.1, an asset's carrying amount is immediately written down to its recoverable amount if its carrying amount is greater than its estimated recoverable amount. Gains and losses arising on disposals are determined by comparing sales proceeds with carrying amount and are recognised in the Group income statement.

Notes to the consolidated financial statements continued

17. Property, plant and equipment (continued)

17.2 Movement in net book value

	Freehold property £m	Leasehold property £m	Plant and equipment £m	Construction in progress £m	Total £m
Cost					
As at 1 January 2012	200.0	21.0	643.7	47.8	912.5
Exchange adjustments	(8.8)	(0.5)	(26.0)	(1.6)	(36.9)
Capital expenditure additions	10.2	0.8	41.8	28.1	80.9
Business combinations	5.5	—	4.2	—	9.7
Disposals	(9.7)	(0.1)	(74.6)	—	(84.4)
Business disposals	(2.8)	—	—	—	(2.8)
Reclassifications	(2.0)	2.5	23.9	(24.4)	—
Demerger of Alent plc	(52.4)	(16.8)	(133.2)	(18.2)	(220.6)
Transferred to assets classified as held for sale	(6.6)	(3.3)	(19.1)	—	(29.0)
As at 1 January 2013	**133.4**	**3.6**	**460.7**	**31.7**	**629.4**
Exchange adjustments	**(6.4)**	**(0.1)**	**(15.1)**	**(1.6)**	**(23.2)**
Capital expenditure additions	**4.5**	**0.2**	**23.3**	**19.5**	**47.5**
Disposals	**(0.1)**	**—**	**(19.6)**	**(0.3)**	**(20.0)**
Reclassifications	**14.8**	**—**	**3.0**	**(17.8)**	**—**
As at 31 December 2013	**146.2**	**3.7**	**452.3**	**31.5**	**633.7**
Accumulated depreciation and impairment losses					
As at 1 January 2012	83.0	10.1	420.0	—	513.1
Exchange adjustments	(3.7)	(0.3)	(16.1)	—	(20.1)
Depreciation charge	5.0	2.0	45.9	—	52.9
Disposals	(3.9)	—	(35.4)	—	(39.3)
Business disposals	(0.7)	—	—	—	(0.7)
Reclassifications	(1.4)	1.4	—	—	—
Demerger of Alent plc	(29.9)	(9.4)	(99.4)	—	(138.7)
Transferred to assets classified as held for sale	(0.9)	(1.7)	(13.0)	—	(15.6)
As at 1 January 2013	**47.5**	**2.1**	**302.0**	**—**	**351.6**
Exchange adjustments	**(2.0)**	**(0.1)**	**(9.9)**	**—**	**(12.0)**
Depreciation charge	**4.8**	**0.3**	**34.2**	**—**	**39.3**
Disposals	**—**	**—**	**(19.9)**	**—**	**(19.9)**
Reclassifications	**4.2**	**—**	**(4.2)**	**—**	**—**
As at 31 December 2013	**54.5**	**2.3**	**302.2**	**—**	**359.0**
Net book value as at 31 December 2013	**91.7**	**1.4**	**150.1**	**31.5**	**274.7**
Net book value as at 31 December 2012	85.9	1.5	158.7	31.7	277.8
Net book value as at 1 January 2012	117.0	10.9	223.7	47.8	399.4

The net book value of assets held under finance leases as at 31 December 2013, 31 December 2012 and 1 January 2012 was not material.

18. Intangible assets

Intangible assets comprise goodwill and other intangible assets that have been acquired through business combinations.

18.1 Accounting policy

(a) Goodwill

Goodwill arising in a business combination is initially recognised as an asset at cost, measured as the excess of the aggregate of the acquisition-date fair value of the consideration transferred and the amount of any non-controlling interest acquired over the net of the acquisition-date fair value amounts of the identifiable assets acquired and liabilities assumed. When the excess is negative, a bargain purchase gain is recognised immediately in profit or loss. Goodwill is subsequently measured at cost less accumulated impairment losses, with impairment testing carried out annually, or more frequently when there is an indication that the cash-generating unit to which the goodwill has been allocated may be impaired. On disposal of a business, the attributable amount of goodwill is included in the calculation of the profit or loss on disposal.

(b) Other intangible assets

Intangible assets other than goodwill are recognised on business combinations if they are separable, or if they arise from contractual or other legal rights, and their value can be measured reliably. They are initially measured at cost, which is equal to the acquisition-date fair value, and subsequently measured at cost less accumulated amortisation charges and accumulated impairment losses. Other intangible assets are subject to impairment testing when there is an indication that an impairment loss may have been incurred and are amortised over their estimated useful lives.

18.2 Movement in net book value

	2013			2012		
	Goodwill £m	**Other intangible assets £m**	**Total £m**	Goodwill £m	Other intangible assets £m	Total £m
Cost						
As at 1 January	**579.6**	**266.4**	**846.0**	904.0	273.1	1,177.1
Exchange adjustments	**(24.3)**	**(6.1)**	**(30.4)**	(37.4)	(6.7)	(44.1)
Business combinations	**—**	**—**	**—**	14.0	—	14.0
Transferred to assets classified as held for sale	**—**	**—**	**—**	(6.0)	—	(6.0)
Demerger of Alent plc	**—**	**—**	**—**	(295.0)	—	(295.0)
As at 31 December	**555.3**	**260.3**	**815.6**	579.6	266.4	846.0
Accumulated amortisation and impairment losses						
As at 1 January	**—**	**82.3**	**82.3**	6.1	66.3	72.4
Exchange adjustments	**—**	**(1.8)**	**(1.8)**	(0.1)	(1.5)	(1.6)
Amortisation charge for the year	**—**	**17.4**	**17.4**	—	17.5	17.5
Transferred to assets classified as held for sale	**—**	**—**	**—**	(6.0)	—	(6.0)
As at 31 December	**—**	**97.9**	**97.9**	—	82.3	82.3
Net book value as at 31 December	**555.3**	**162.4**	**717.7**	579.6	184.1	763.7

18.3 Analysis of goodwill by cash-generating unit ("CGU")

Goodwill acquired in a business combination is allocated to each of the Group's CGUs expected to benefit from the synergies of the combination. For the purposes of impairment testing, the Directors consider that the Group has two CGUs: the Steel and Foundry divisions. These CGUs represent the lowest level within the Group at which goodwill is monitored.

	2013 £m	2012 £m
Steel	**355.1**	374.5
Foundry	**200.2**	205.1
Total goodwill	**555.3**	579.6

Notes to the consolidated financial statements continued

18. Intangible assets (continued)

18.4 Analysis of other intangible assets

Other intangible assets arose in 2008 on the acquisition of Foseco plc and are being amortised on a straight-line basis over their estimated useful lives. The assets acquired and their remaining useful lives are shown below.

		Remaining useful life years	Net book value as at 31 December 2013 £m
Foseco	— customer relationships (useful life: 20 years)	14.3	**76.7**
	— trade name (useful life: 20 years)	14.3	**51.5**
	— intellectual property rights (useful life: 10 years)	4.3	**34.2**
Total			**162.4**

19. Impairment of tangible and intangible assets

19.1 Accounting policy

At each balance sheet date, the Directors review the carrying value of the Group's tangible and other intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If such indication exists, the recoverable amount of the asset is estimated in order to determine the extent, if any, of the impairment loss. Where it is not feasible to estimate the recoverable amount of an individual asset, the Directors estimate the recoverable amount of the CGU to which the asset belongs.

Goodwill acquired in a business combination is allocated to each of the Group's CGUs expected to benefit from the synergies of the combination and the Directors carry out annual impairment testing of the carrying value of each CGU, to assess the need for any impairment of the carrying value of the associated goodwill and other intangible and tangible assets.

For the purpose of impairment testing, the recoverable amount of an asset or CGU is the higher of (i) its fair value less costs to sell and (ii) its value in use. If the recoverable amount of a CGU is less than its carrying amount, the resulting impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the CGU and then to the other assets of the CGU pro rata on the basis of the carrying amount of each asset in the CGU. An impairment loss recognised for goodwill is not reversed in a subsequent period. An impairment loss recognised in a prior year for an asset other than goodwill may be reversed where there has been a change in the estimates used to measure the asset's recoverable amount since the impairment loss was recognised. The value in use calculations of the Group's CGUs are based on detailed business plans covering a three year period from the balance sheet date, higher level assumptions covering a further two year period and perpetuity calculations beyond this five year projection period. The cash flows in the calculations are discounted to their current value using pre-tax discount rates.

19.2 Key assumptions

The key assumptions used in determining value in use are return on sales, growth rates and discount rates. Return on sales assumptions are based on historical financial information, adjusted to factor in the anticipated impact of restructuring and rationalisation plans already announced at the balance sheet date.

Growth rates are determined with reference to: current market conditions; external forecasts and historical trends for the Group's key end-markets of steel production and foundry castings; and expected growth in output within the industries in which each major Group business unit operates. A perpetuity growth rate of 2.5% (2012: 2.5%) has been applied based on the long-term growth rates experienced in the Group's end-markets and external forecasts. The Group's projections are based on historical trends and external forecasts. Discount rates are calculated for each CGU, reflecting market assessments of the time value of money and the risks specific to each CGU. The pre-tax discount rate used for the Steel CGU was 11.7% (2012: 12.2%) and for the Foundry CGU was 13.7% (2012: 15.4%). Under a sensitivity analysis undertaken on the 2013 impairment testing, a 1.0% increase in each of the CGU discount rates, combined with a 2.0% perpetuity growth rate, still left each CGU with significant headroom of recoverable amount over its carrying value.

19.3 Goodwill impairment

In assessing goodwill for potential impairment as at 31 December 2013, the Directors made use of detailed calculations of the recoverable amount of the Group's CGUs as at 31 December 2013. Those calculations resulted in recoverable amounts significantly higher than the carrying values of each of the Group's CGUs and consequently no impairment charges were recognised.

20. Trade and other receivables

20.1 Accounting policy

Trade and other receivables are initially recognised at fair value and subsequently measured at amortised cost, using the effective interest method, less impairment losses.

20.2 Analysis of trade and other receivables

	2013			2012		
	Gross £m	**Impairment £m**	**Net £m**	Gross £m	Impairment £m	Net £m
Trade receivables — current	**197.0**	**(1.3)**	**195.7**	195.7	(3.2)	192.5
— 1 to 30 days past due	**44.0**	**(0.6)**	**43.4**	45.8	(0.8)	45.0
— 31 to 60 days past due	**17.3**	**(0.1)**	**17.2**	17.2	(0.2)	17.0
— 61 to 90 days past due	**8.3**	**(0.3)**	**8.0**	8.4	(1.4)	7.0
— over 90 days past due	**30.5**	**(21.5)**	**9.0**	42.4	(22.4)	20.0
Trade receivables	**297.1**	**(23.8)**	**273.3**	309.5	(28.0)	281.5
Other receivables			**17.3**			27.0
Prepayments and accrued income			**23.1**			30.4
Total trade and other receivables			**313.7**			338.9

All of the Group's operating companies have policies and procedures in place to assess the creditworthiness of the customers with whom they do business. Where objective evidence exists that a trade receivable balance may be impaired, provision is made for the difference between its carrying amount and the present value of the estimated cash that will be recovered. Evidence of impairment may include such factors as the customer being in breach of contract, or entering bankruptcy or financial reorganisation proceedings. Impairment provisions are assessed on an individual customer basis for all significant outstanding balances and collectively for all remaining balances, based upon historical loss experience. Historical experience has shown that the Group's trade receivable provisions are maintained at levels that are sufficient to absorb actual bad debt write-offs, without being excessive.

20.3 Movements on impairment provisions

	2013 £m	2012 £m
As at 1 January	**28.0**	27.7
Exchange adjustments	**0.3**	(1.0)
Charge for the year	**4.0**	11.1
Receivables written off during the year as uncollectable	**(8.5)**	(4.4)
Transferred to assets classified as held for sale	**—**	(1.3)
Demerger of Alent plc business	**—**	(4.1)
As at 31 December	**23.8**	28.0

Write-offs shown in the table above are charged or credited as appropriate within administration, selling and distribution costs or discontinued activities in the Group income statement. Of the total provision for impairment of trade receivables at 31 December 2013 of £23.8m (2012: £28.0m) shown in the table above, £22.6m (2012: £24.2m) related to balances that were impaired on an individual basis. The ageing analysis of these individually impaired balances is shown in the table below.

Notes to the consolidated financial statements continued

20. Trade and other receivables (continued)

20.3 Movements on impairment provisions (continued)

	2013 £m	2012 £m
Ageing analysis of individually impaired trade receivable balances		
Current	**0.8**	1.3
1 to 30 days past due	**0.3**	0.7
31 to 60 days past due	**0.1**	0.2
61 to 90 days past due	**0.3**	1.4
Over 90 days past due	**21.1**	20.6
Total individually impaired trade receivable balances	**22.6**	24.2

Due to the large number of customers with which the Group transacts its business, none of which represent a significant proportion of the total outstanding trade receivables balance and, considering the level of trade receivable provisions held, the Group is not exposed to any significant concentration of credit risk. There is no significant difference between the fair value of the Group's trade and other receivable balances and the amount at which they are reported in the Group balance sheet.

21. Inventories

21.1 Accounting policy

Inventories are stated at the lower of cost (using the first in, first out method) and net realisable value. Cost comprises expenditure incurred in purchasing or manufacturing inventories together with all other costs directly incurred in bringing the inventory to its present location and condition and, where appropriate, attributable production overheads based on normal activity levels. Net realisable value represents the estimated selling price less all estimated costs of completion and costs to be incurred in marketing, selling and distribution. The amount of any write-down of inventories to net realisable value is recognised as an expense in the year in which the write-down occurs.

21:2 Analysis of inventories

	2013 £m	2012 £m
Raw materials	**61.2**	67.2
Work-in-progress	**14.0**	16.2
Finished goods	**106.7**	110.7
Total inventories	**181.9**	194.1

The cost of inventories recognised as an expense and included in cost of sales in the income statement during the year was £655.7m (2012: £1,206.9m); £43.8m (2012: £517.9m) of this expense related to discontinued operations.

22. Derivative financial instruments

22.1 Accounting policy

The Group uses derivative financial instruments ("derivatives") in the form of forward foreign currency contracts, and interest rate swaps to manage the effects of its exposure to foreign exchange risk, and interest rate risk. The way in which derivatives are used to manage the Group's financial risk is detailed in note 30.

Derivatives are measured at fair value. The fair value of forward foreign currency contracts is calculated using market prices at the balance sheet date. The fair value of an interest rate swap is the estimated amount that the Group would receive or pay to terminate the swap at the balance sheet date, taking into account current interest rates and the creditworthiness of the swap counterparty.

The method of recognising the gain or loss on remeasurement to fair value depends on whether the derivative is designated as a hedging instrument for hedge accounting purposes and, if so, the nature of the item being hedged. Strict conditions have to be satisfied in order to qualify for hedge accounting, including a determination both at inception of the hedge and on an ongoing basis that the hedge is expected to be highly effective in achieving offsetting changes in fair values or cash flows attributable to the hedged risk. The change in fair value of a derivative that is not designated as a hedging instrument for hedge accounting purposes is recognised immediately in the Group income statement. No derivatives are held for speculative purposes.

Cash flow hedges

The effective part of any gain or loss on a derivative that is designated as a cash flow hedge is recognised in other comprehensive income and presented in the hedging reserve in equity. The ineffective part of any gain or loss is recognised immediately within trading profit, or within finance costs in the case of interest rate swaps designated as cash flow hedges. When the transaction that was being hedged is realised and affects profit or loss, the cumulative gain or loss on the derivative is removed from the hedging reserve and recognised in the income statement in the same period.

Fair value hedges

The change in fair value of a derivative that is designated as a fair value hedge is recognised within trading profit in the Group income statement. The carrying amount of the hedged item is adjusted by the change in its fair value that is attributable to the hedged risk and this adjustment is recognised within trading profit in the Group income statement.

Net investment hedges

The effective part of any gain or loss on a derivative that is designated as a hedge of a net investment in a foreign operation is recognised in other comprehensive income and presented in the translation reserve in equity, and is subsequently recognised in the Group income statement as part of the profit or loss on disposal of the net investment. The ineffective portion of the gain or loss is recognised immediately within trading profit in the Group income statement.

22.2 Analysis of derivative financial instruments

	2013		2012	
	Assets £m	**Liabilities £m**	Assets £m	Liabilities £m
Cash flow hedges	**0.3**	**—**	—	0.1
Other derivatives — not designated for hedge accounting purposes	**—**	**0.2**	—	0.2
Total derivative financial instruments	**0.3**	**0.2**	—	0.3

All of the fair values shown in the table above are classified under IFRS 13 as Level 2 measurements which have been calculated using quoted prices from active markets, where similar contracts are traded and the quotes reflect actual transactions in similar instruments. Cash flows in respect of the cash flow hedges shown in the table above will all occur in 2014. All of the derivative assets and liabilities reported in the table above will mature within a year of the balance sheet date.

Notes to the consolidated financial statements continued

23. Assets and liabilities held for sale

There were no assets or liabilities held for sale as at 31 December 2013.

As at 31 December 2012, all European operations of the Group's Precious Metals Processing division and a non-core business of the Group's Steel division were both in the process of being disposed of and were classified as held for sale. The assets in the table below are stated after a write-down of £2.7m to bring their carrying value down to their fair value less cost to sell.

	2013 £m	2012 £m
Property, plant and equipment	—	12.2
Inventories	—	9.2
Trade and other receivables	—	16.8
Deferred tax	—	1.7
Total assets held for sale	—	39.9
Trade and other payables	—	(22.9)
Provisions	—	(0.6)
Net assets held for sale	**—**	16.4

24. Business disposals

	Continuing operations £m	**Discontinued operations £m**	**Total £m**
Net consideration:			
Net proceeds received	2.4	58.7	**61.1**
Disposal costs payable	(3.3)	(1.5)	**(4.8)**
Total net consideration	(0.9)	57.2	**56.3**
Assets and liabilities disposed of:			
Property, plant and equipment	0.4	—	**0.4**
Cash and debt	1.9	10.4	**12.3**
Assets previously classified as held for sale	2.5	46.9	**49.4**
Liabilities previously classified as held for sale	(5.9)	(14.8)	**(20.7)**
Recycled foreign exchange	—	(6.2)	**(6.2)**
Net (liabilities)/assets disposed of	(1.1)	36.3	**35.2**
Disposal provisions charged to the income statement	—	(1.6)	**(1.6)**
Profit on disposal of operations	0.2	19.3	**19.5**
Net cash received from disposals:			
Net proceeds received	2.4	58.7	**61.1**
Cash and cash equivalents disposed of	(1.9)	(10.4)	**(12.3)**
Disposal costs paid in relation to prior year's disposals	(0.5)	—	**(0.5)**
Disposal costs paid in relation to closure cost provisions	(3.2)	(1.5)	**(4.7)**
Net cash (outflow)/inflow from disposal of subsidiaries	(3.2)	46.8	**43.6**
Recognition in the Group statement of cash flows:			
Disposal of subsidiaries net of cash disposed of	(2.7)	46.8	**44.1**
Within other investing outflows, including additional costs for prior year's disposals	(0.5)	—	**(0.5)**
Net cash (outflow)/inflow from disposal of subsidiaries	(3.2)	46.8	**43.6**

Further details of the profit on disposal of continuing operations are given in note 10.

25. Discontinued operations

Discontinued operations in 2013 comprise only the post-tax results of the European Precious Metals Processing business for the period up to 31 May 2013 when it was sold, together with the profit arising on its disposal. The European Precious Metals Processing business was sold to Heimerle + Meule for consideration received of €56.8m plus €8.2m for working capital delivered. Included in the profit on disposal is a credit of £6.2m for recycled foreign exchange differences which had previously been taken directly to reserves in the Group accounts relating to the businesses sold. As at 31 December 2012, the net assets of the European Precious Metals Processing business of £19.4m were classified as held for sale in the Group balance sheet (note 23).

In 2012, discontinued operations comprised: (i) the post-tax results of the Alent group of companies for the period up to 19 December 2012, when they were demerged from Vesuvius, together with the profit on demerger of Alent; (ii) the post-tax results of the US Precious Metals Processing business for the period up to 1 May 2012 when it was sold, together with the loss arising on its disposal; and (iii) the post-tax results of the European Precious Metals Processing business, which was held for sale as at 31 December 2012, for the whole of the year. Prior year comparatives in the Group income statement have been restated accordingly.

Further details, along with the effects of the disposals on the financial position of the Group, can be found in note 24.

25.1 Results of discontinued operations

	Notes	**2013 £m**	2012 £m
Revenue		**65.0**	888.0
Expenses		**(54.4)**	(785.7)
Profit before tax		**10.6**	102.3
Income tax costs		**—**	(31.1)
Profit on disposal of discontinued operations	24	**19.3**	541.3
Profit for the year attributable to owners of the parent		**29.9**	612.5
Earnings per share — pence			
Basic		**10.8**	220.8
Diluted		**10.8**	218.8

The profit before tax of £10.6m in 2013 includes the release of £10.2m of a provision relating to a VAT case which was resolved in Vesuvius' favour.

25.2 Cash flows from discontinued operations

	2013 £m	2012 £m
Net cash (outflow)/inflow from:		
— operating activities	**(9.9)**	22.5
— investing activities	**—**	(80.7)
— financing activities	**—**	0.4
Net cash (outflow)/inflow for the year	**(9.9)**	(57.8)

Notes to the consolidated financial statements continued

26. Issued share capital

26.1 Accounting policy

Equity instruments issued by the Company are recorded at the proceeds received, net of direct issue costs.

26.2 Analysis of issued share capital

The issued ordinary share capital of the Company as at 31 December 2013 was 278.5m shares of £0.10 each, of this, 7.3m shares were held in treasury and 1.0m were held by the Cookson Group ESOP. Further information relating to the Company's share capital is given in note 7 attached to the Company's financial statements.

27. Retained earnings

	Reserve for own shares £m	Share option reserve £m	Other retained earnings as restated £m	Total retained earnings as restated £m
As at 1 January 2012	(7.8)	10.0	897.1	899.3
Profit for the year	—	—	593.0	593.0
Remeasurement of defined benefit liabilities/assets	—	—	(106.4)	(106.4)
Purchase of own shares	(19.8)	—	—	(19.8)
Disposal of own shares	22.4	—	(22.4)	—
Recognition of share-based payments	—	4.8	—	4.8
Release of share option reserve on exercised and lapsed options	—	(9.3)	9.3	—
Income tax on items recognised in other comprehensive income	—	—	14.8	14.8
Dividends paid	—	—	(61.2)	(61.2)
Court approved capital reduction	—	—	887.7	887.7
As at 1 January 2013	**(5.2)**	**5.5**	**2,211.9**	**2,212.2**
Profit for the year	**—**	**—**	**135.3**	**135.3**
Remeasurement of defined benefit liabilities/assets	**—**	**—**	**10.2**	**10.2**
Purchase of own shares	**(34.1)**	**—**	**—**	**(34.1)**
Disposal of own shares	**3.9**	**—**	**(3.9)**	**—**
Recognition of share-based payments	**—**	**2.1**	**—**	**2.1**
Release of share option reserve on exercised and lapsed options	**—**	**(4.0)**	**4.0**	**—**
Income tax on items recognised in other comprehensive income	**—**	**—**	**(1.6)**	**(1.6)**
Redemption of redeemable preference shares	**—**	**—**	**(0.1)**	**(0.1)**
Dividends paid (note 29)	**—**	**—**	**(39.4)**	**(39.4)**
As at 31 December 2013	**(35.4)**	**3.6**	**2,316.4**	**2,284.6**

The reserve for own shares shown in the table above comprises 7.3m treasury shares purchased by the Company during 2013, plus 1.0m ordinary shares of £0.10 each of the Company held by Cookson Investments (Jersey) Limited as Trustee of the Cookson Group ESOP.

On 19 December 2012, Vesuvius plc undertook a court approved capital reduction, creating £887.7m of distributable reserves. Further information is given in note 7 to the Company's financial statements.

28. Other reserves

	Other reserves £m	Translation reserve £m	Total £m
As at 1 January 2012	(1,490.9)	134.2	(1,356.7)
Exchange differences on translation of the net assets of foreign operations	—	(79.1)	(79.1)
Reclassification of exchange differences on disposal of foreign operations	—	31.5	31.5
Exchange translation differences arising on net investment hedges	—	14.0	14.0
Change in fair value of cash flow hedges	2.3	—	2.3
Change in fair value of cash flow hedge transferred to profit for the year	(0.3)	—	(0.3)
Change in fair value of available-for-sale investments	(0.3)	—	(0.3)
Issue of share capital	(10.4)	—	(10.4)
As at 1 January 2013	**(1,499.6)**	**100.6**	**(1,399.0)**
Exchange differences on translation of the net assets of foreign operations	**—**	**(51.6)**	**(51.6)**
Reclassification of exchange differences on disposal of foreign operations	**—**	**(6.2)**	**(6.2)**
Exchange translation differences arising on net investment hedges	**—**	**0.3**	**0.3**
Change in fair value of cash flow hedges	**0.4**	**—**	**0.4**
Change in fair value of available-for-sale investments	**0.1**	**—**	**0.1**
Redemption of redeemable preference shares	**0.1**	**—**	**0.1**
Issue of share capital	**0.1**	**—**	**0.1**
As at 31 December 2013	**(1,498.9)**	**43.1**	**(1,455.8)**

Within Other reserves as at 31 December 2013 is £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.

The translation reserve in the table above comprises all foreign exchange differences attributable to the owners of the parent. These exchange differences arise from the translation of the financial statements of foreign operations and from the translation of financial instruments that hedge the Group's net investment in foreign operations. In addition to foreign exchange differences attributable to the owners of the parent, the Group statement of comprehensive income includes foreign exchange differences attributable to non-controlling interests.

On 11 December 2013, Vesuvius plc redeemed the 50,000 outstanding redeemable preference shares with a nominal value of £1 each for £50,000. The consideration was satisfied by the cancellation of the undertaking to pay given by the holder of the preference shares at the time of issue.

29. Dividends

A final dividend for the year ended 31 December 2012 of £26.4m (2011: £40.3m), equivalent to 9.5 pence (2011: 14.5 pence) per ordinary share, was paid in June 2013 (June 2012) and an interim dividend for the year ended 31 December 2013 of £13.0m (2012: £20.9m), equivalent to 4.75 pence (2012: 7.5 pence) per ordinary share, was paid in October 2013 (October 2012).

A proposed final dividend for the year ended 31 December 2013 of £27.7m, equivalent to 10.25 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 23 May 2014 to ordinary shareholders on the register at 25 April 2014.

Notes to the consolidated financial statements continued

30. Financial risk management

30.1 Accounting policy

(a) Non-derivative financial instruments

Loans and borrowings are initially recognised at fair value plus directly attributable transaction costs. After initial recognition they are measured at amortised cost, using the effective interest method.

(b) Foreign currencies

The individual financial statements of each Group entity are prepared in their functional currency, which is the currency of the primary economic environment in which that entity operates. For the purpose of the consolidated financial statements, the results and financial position of each entity are translated into pounds sterling, which is the presentational currency of the Group.

Reporting foreign currency transactions in functional currency

Transactions in currencies other than the entity's functional currency (foreign currencies) are initially recorded at the rates of exchange prevailing on the dates of the transactions. At each subsequent balance sheet date:

(i) Foreign currency monetary items are retranslated at the rates prevailing at the balance sheet date. Exchange differences arising on the settlement or retranslation of monetary items are recognised in the Group income statement; and

(ii) Non-monetary items measured at historical cost in a foreign currency are not retranslated.

Translation from functional currency to presentational currency

When the functional currency of a Group entity is different from the Group's presentational currency (pounds sterling), its results and financial position are translated into the presentational currency as follows:

(i) Assets and liabilities are translated using exchange rates prevailing at the balance sheet date;

(ii) Income and expense items are translated at average exchange rates for the year, except where the use of such average rates does not approximate the exchange rate at the date of a specific transaction, in which case the transaction rate is used; and

(iii) All resulting exchange differences are recognised in other comprehensive income and presented in the translation reserve in equity and are reclassified to profit or loss in the period in which the foreign operation is disposed of.

Net investment in foreign operations

Exchange differences arising on a monetary item that forms part of a reporting entity's net investment in a foreign operation are initially recognised in other comprehensive income and presented in the translation reserve in equity and reclassified to profit or loss on disposal of the net investment.

30.2 Financial risk factors

The Group's treasury department, acting in accordance with policies approved by the Board, is principally responsible for managing the financial risks faced by the Group. The Group's activities expose it to a variety of financial risks, the most significant of which are market risk and liquidity risk.

(a) Market risk

Market risk is the risk that either the fair values or the cash flows of the Group's financial instruments may fluctuate because of changes in market prices. The Group is principally exposed to market risk through fluctuations in exchange rates ("currency risk") and interest rates ("interest rate risk").

Currency risk

The Group is exposed to currency risk on its borrowings and financial assets (being cash and short-term deposits) that are denominated in currencies other than pounds sterling. The Group's general policy is proportionally to match the currency profile of its core borrowings with the currency profile of its earnings and net assets. This is achieved, where necessary, by the use of forward foreign exchange contracts ("FX swaps"). The currency profile of the Group's borrowings and financial assets, reflecting the effect of the FX swaps, is shown in the table below.

30. Financial risk management (continued)

30.2 Financial risk factors (continued)

	2013					2012				
	Borrowings before FX swaps £m	**FX swaps £m**	**Borrowings after FX swaps £m**	**Financial assets £m**	**Net debt £m**	Borrowings before FX swaps £m	FX swaps £m	Borrowings after FX swaps £m	Financial assets £m	Net debt £m
Sterling	**25.9**	**86.4**	**112.3**	**(0.7)**	**111.6**	176.4	51.1	227.5	(14.9)	212.6
United States dollar	**193.0**	**(86.4)**	**106.6**	**(0.6)**	**106.0**	156.8	(51.1)	105.7	(4.8)	100.9
Euro	**101.3**	**—**	**101.3**	**(6.3)**	**95.0**	91.8	—	91.8	(36.7)	55.1
Chinese renminbi	**—**	**—**	**—**	**(18.6)**	**(18.6)**	—	—	—	(20.8)	(20.8)
Other	**7.6**	**—**	**7.6**	**(42.2)**	**(34.6)**	5.0	—	5.0	(52.3)	(47.3)
Capitalised borrowing costs	**(3.0)**	**—**	**(3.0)**	**—**	**(3.0)**	(5.2)	—	(5.2)	—	(5.2)
As at 31 December	**324.8**	**—**	**324.8**	**(68.4)**	**256.4**	424.8	—	424.8	(129.5)	295.3

Based upon the currency profile shown in the table above, while not impacting reported profit, the change in net debt arising from a 10% strengthening of sterling would increase reported equity by £21.0m (2012: £8.0m) and a corresponding 10% weakening of sterling would reduce equity by £25.7m (2012: £9.8m).

The tables below show the net unhedged monetary assets and liabilities of Group companies that are not denominated in their functional currency and which could give rise to exchange gains and losses in the Group income statement.

	Net unhedged monetary assets/(liabilities)					
	Sterling £m	**US dollar £m**	**Euro £m**	**Renminbi £m**	**Other £m**	**Total £m**
Functional currency						
Sterling	**—**	**6.2**	**(4.0)**	**(1.3)**	**0.9**	**1.8**
United States dollar	**—**	**—**	**2.9**	**—**	**(1.1)**	**1.8**
Euro	**(0.1)**	**2.1**	**—**	**—**	**0.1**	**2.1**
Chinese renminbi	**(0.3)**	**3.3**	**(1.3)**	**—**	**(0.1)**	**1.6**
Other	**(0.3)**	**3.3**	**9.8**	**2.0**	**6.5**	**21.3**
As at 31 December 2013	**(0.7)**	**14.9**	**7.4**	**0.7**	**6.3**	**28.6**

	Net unhedged monetary assets/(liabilities)					
	Sterling £m	US dollar £m	Euro £m	Renminbi £m	Other £m	Total £m
Functional currency						
Sterling	—	5.0	(1.5)	—	1.4	4.9
United States dollar	—	—	1.0	—	(0.1)	0.9
Euro	(0.6)	1.3	—	—	0.3	1.0
Chinese renminbi	—	3.7	(0.6)	—	—	3.1
Other	(1.4)	(2.8)	13.3	2.7	7.4	19.2
As at 31 December 2012	(2.0)	7.2	12.2	2.7	9.0	29.1

Notes to the consolidated financial statements continued

30. Financial risk management (continued)

30.2 Financial risk factors (continued)

Interest rate risk

The Group's interest rate risk principally arises in relation to its borrowings. Where borrowings are held at floating rates of interest, fluctuations in interest rates expose the Group to variability in the cash flows associated with its interest payments and where borrowings are held at fixed rates of interest, fluctuations in interest rates expose the Group to changes in the fair value of its borrowings. The Group's policy is to maintain a mix of fixed and floating rate borrowings, within certain parameters agreed from time to time by the Board, in order to optimise interest cost and reduce volatility in reported earnings.

As at 31 December 2013, the Group had $310m and €30m (£212.1m in total) of US Private Placement Loan Notes outstanding, which carry a fixed rate of interest, representing two-thirds of the Group's total borrowings outstanding at that date. The interest rate profile of the Group's borrowings and net debt is detailed in the tables below.

	Financial liabilities (gross borrowings)				
	Fixed rate £m	**Floating rate £m**	**Total £m**	**Financial assets £m**	**Net debt £m**
Sterling	**—**	**25.9**	**25.9**	**(0.7)**	**25.2**
United States dollar	**187.2**	**5.8**	**193.0**	**(0.6)**	**192.4**
Euro	**24.9**	**76.4**	**101.3**	**(6.3)**	**95.0**
Chinese renminbi	**—**	**—**	**—**	**(18.6)**	**(18.6)**
Other	**—**	**7.6**	**7.6**	**(42.2)**	**(34.6)**
Capitalised borrowing costs	**(1.5)**	**(1.5)**	**(3.0)**	**—**	**(3.0)**
As at 31 December 2013	**210.6**	**114.2**	**324.8**	**(68.4)**	**256.4**

	Financial liabilities (gross borrowings)				
	Fixed rate £m	Floating rate £m	Total £m	Financial assets £m	Net debt £m
Sterling	—	176.4	176.4	(14.9)	161.5
United States dollar	153.8	3.0	156.8	(4.8)	152.0
Euro	—	91.8	91.8	(36.7)	55.1
Chinese renminbi	—	—	—	(20.8)	(20.8)
Other	—	5.0	5.0	(52.3)	(47.3)
Capitalised borrowing costs	(1.2)	(4.0)	(5.2)	—	(5.2)
As at 31 December 2012	152.6	272.2	424.8	(129.5)	295.3

The floating rate financial liabilities shown in the tables above bear interest at the inter-bank offered rate of the appropriate currency, plus a margin. The fixed rate financial liabilities of £210.6m (2012: £152.6m) have a weighted average interest rate of 4.6% (2012: 4.7%) and a weighted average period for which the rate is fixed of 7.3 years (2012: 6.6 years). The financial assets attract floating rate interest at the inter-bank offered rate of the appropriate currency, less a margin.

30. Financial risk management (continued)

30.2 Financial risk factors (continued)

Based upon the interest rate profile of the Group's financial assets and liabilities shown in the tables above, a 1% increase in market interest rates would increase both the net finance costs charged in the Group income statement and the net interest paid in the Group statement of cash flows by £0.5m (2012: £1.4m) and a 1% reduction in market interest rates would decrease both the net finance costs charged in the Group income statement and the net interest paid in the Group statement of cash flows by £0.5m (2012: £1.4m). Similarly, a 1% increase in market interest rates would result in a decrease of £12.6m (2012: £9.2m) in the fair value of the Group's net debt and a 1% decrease in market interest rates would result in an increase of £13.6m (2012: £9.8m) in the fair value of the Group's net debt.

(b) Liquidity risk

Liquidity risk is the risk that the Group might have difficulties in meeting its financial obligations. The Group manages this risk by ensuring that it maintains sufficient levels of committed borrowing facilities and cash and cash equivalents to ensure that it can meet its operational cash flow requirements and any maturing financial liabilities, while at all times operating within its financial covenants. The level of operational headroom provided by the Group's committed borrowing facilities is reviewed at least annually as part of the Group's three-year planning process. Where this process indicates a need for additional finance, this is normally addressed 12 to 18 months in advance by means of either additional committed bank facilities or raising finance in the capital markets.

As at 31 December 2013, the Group had committed borrowing facilities of £637.1m (2012: £578.8m), of which £328.6m (2012: £157.7m) were undrawn. These undrawn facilities are due to expire in April 2016. The Group's borrowing requirements are met by US Private Placement Loan Notes ("USPP") and a multi-currency committed syndicated bank facility of £425.0m (2012: £425.0m). The USPP facility was fully drawn as at 31 December 2013 and amounted to £212.1m ($310m and €30m), of which $110m is repayable in 2017, $140m in 2020, €15m in 2021, $30m in 2023, €15m in 2025 and $30m in 2028. The syndicated bank facility is repayable in April 2016.

The maturity analysis of the Group's gross borrowings is shown in the tables below.

	Non-current		Current		Total	
	2013 £m	2012 £m	**2013 £m**	2012 £m	**2013 £m**	2012 £m
Loans and overdrafts	**308.7**	421.3	**15.7**	4.9	**324.4**	426.2
Obligations under finance leases	**2.0**	2.3	**1.4**	1.5	**3.4**	3.8
Capitalised borrowing costs	**(1.2)**	(3.3)	**(1.8)**	(1.9)	**(3.0)**	(5.2)
Total interest-bearing borrowings	**309.5**	420.3	**15.3**	4.5	**324.8**	424.8

	2013 £m	2012 £m
Interest-bearing borrowings repayable		
On demand or within one year	**17.2**	6.4
In the second year	**1.1**	1.2
In the third year	**97.1**	0.8
In the fourth year	**66.7**	267.6
In the fifth year	**—**	67.7
After five years	**145.7**	86.3
Capitalised borrowing costs	**(3.0)**	(5.2)
Total interest-bearing borrowings	**324.8**	424.8

Capitalised borrowing costs shown in the tables above, which have been recognised as a reduction in borrowings in the financial statements, amounted to £3.0m as at 31 December 2013 (31 December 2012: £5.2m), of which £1.5m (2012: £1.2m) related to the USPP and £1.5m (2012: £4.0m) related to the syndicated bank facility.

Notes to the consolidated financial statements continued

30. Financial risk management (continued)

30.3 Capital management

The Company considers its capital to be equal to the sum of its total equity and net debt. It monitors its capital using a number of key performance indicators, including free cash flow, average working capital to sales ratios, net debt to EBITDA ratios and RONA (note 4). The Group's objectives when managing its capital are:

- to ensure that the Group and all of its businesses are able to operate as going concerns and ensure that the Group operates within the financial covenants contained within its debt facilities;
- to maximise shareholder value through maintaining an appropriate balance between the Group's equity and net debt;
- to have available the necessary financial resources to allow the Group to invest in areas that may deliver acceptable future returns to investors; and
- to maintain sufficient financial resources to mitigate against risks and unforeseen events.

The Group operated comfortably within the requirements of its debt covenants throughout the year and has substantial liquidity headroom within its committed debt facilities. Details of the Group's covenant compliance and committed debt facilities can be found in the Strategic Report on page 14.

31. Employee benefits

31.1 Accounting policy

The net surplus or net liability recognised in the Group balance sheet for the Group's defined benefit plans is the present value of the defined benefit obligation at the balance sheet date, less the fair value of the plan assets. The defined benefit obligation is calculated by independent actuaries using the projected unit credit method and by discounting the estimated future cash flows using interest rates on high quality corporate bonds that have terms to maturity approximating the terms of the related pension liability. Any asset recognised in respect of a surplus arising from this calculation is limited to the sum of unrecognised past service costs plus the present value of available refunds and reductions in future contributions to the plan.

The expense for the Group's defined benefit plans is recognised in the Group income statement as shown in note 31.7. Actuarial gains and losses arising on the assets and liabilities of the plans are reported within the Group statement of comprehensive income; and gains and losses arising on settlements and curtailments are recognised in the Group income statement in the same line as the item that gave rise to the settlement or curtailment or, if material, separately reported as a component of operating profit.

31.2 Group post-retirement plans

The Group operates a number of pension plans around the world, both of the defined benefit and defined contribution type, and accounts for them in accordance with IAS 19(R).

The Group's principal defined benefit pension plans are in the UK and the US, the benefits of which are based upon the final pensionable salaries of plan members. The assets of these plans are held separately from the Group in trustee-administered funds. The trustees are required to act in the best interests of the plans' beneficiaries. The principal risks faced by these plans comprise: (i) the risk that the value of the plan assets is not sufficient to meet all plan liabilities as they fall due; (ii) the risk that plan beneficiaries live longer than envisaged, causing liabilities to exceed the available plan assets; and (iii) the risk that the market-based factors used to value plan liabilities changes materially adversely to increase plan liabilities over the value of available plan assets. The Group also has defined benefit pension plans in other territories but, with the exception of those in Germany, these are not individually material in relation to the Group as a whole.

(a) Defined benefit pension plans – UK

The Group's main defined benefit pension plan in the UK ("the UK Plan") is closed to new members and to future benefit accrual.

Following the demerger of Cookson Group plc, the UK Plan remains with Vesuvius. The Alent employers who participated in the UK Plan ceased to participate with effect from the demerger and their pension liabilities in the UK Plan were discharged in full by apportioning the pension liabilities of the Alent participating employers to Vesuvius, combined with a mitigation payment into the UK Plan to compensate for the loss of support from the Alent participating employers, which reduced the financial covenant of the employers supporting the UK Plan. The mitigation payment agreed with the UK Plan Trustee was equal to approximately 25% of the UK Plan's Section 75 deficit calculated as at completion of the demerger and amounted to £38.0m, of which £34.0m was paid in December 2012 and £4.0m in January 2013.

31. Employee benefits (continued)

31.2 Group post-retirement plans (continued)

A full actuarial valuation of the UK Plan is carried out every three years by an independent actuary for the UK Plan Trustee and the last full valuation was carried out as at 31 December 2012. At that date, the market value of plan assets was £501.9m and this represented a funding level of 102% of the accrued plan benefits at the time of £490.4m. Calculated on a "buy-out" basis (using an estimation of the cost of buying out the UK Plan benefits with an insurance company), the liabilities at that date were £610.1m, representing a funding level of 82%. Under the rules of the UK Plan, the Trustee has the power to set the funding contributions, having consulted with the Company. Under a schedule of contributions agreed by the Company and Trustee, the Company made "top-up" payments of £7.0m per annum up to July 2013, after which they ceased as a result of the funding surplus evidenced by the 2012 funding valuation. The level of "top-up" payments will be reviewed based on the UK Plan's next triennial valuation as at 31 December 2015, which should be available in mid-2016. Notwithstanding the latest funding valuation surplus, the Company has agreed to make voluntary contributions of £2.0m per annum at least until the next valuation date in recognition of the potential funding strain resulting from the ongoing de-risking initiatives likely to be undertaken in the short term.

On 19 July 2012, the UK Plan Trustee announced that it had entered into a pension insurance buy-in agreement with Pension Insurance Corporation ("PIC") to insure approximately 60% of the UK Plan's total liabilities. Under this arrangement, the UK Plan Trustee paid an insurance premium of £318.8m to PIC, wholly from the assets of the UK Plan, which will secure a stream of income exactly matching future ongoing pension payments. This arrangement eliminated the inflation, interest rate, investment and longevity risk for Vesuvius in respect of these liabilities. Post buy-in, the UK Plan now carries an asset in the form of the insurance contract, which is valued (in both the funding and IAS 19(R) valuations) at an amount which matches exactly that of the liabilities which it covers, thereby removing any funding or balance sheet volatility relating to this part of the UK Plan's liabilities. Therefore, the only risks remaining in the UK Plan relate to deferred members and the small number of pensioner members not covered by the insurance policy. The Group continues to fund the UK Plan on the basis of the funding valuation.

For plan funding purposes, the UK Plan's pensioner liabilities are valued using more prudent assumptions than those required under IAS 19(R) for accounting purposes. On a funding basis – sometimes called the "economic" or "ongoing" basis – the insurance premium paid to PIC represented some £10m less than the amount reserved in the UK Plan against these liabilities. This means that the funding level of the UK Plan – the measure which determines the level of additional contributions required to be made by Vesuvius – improved by some £10m as a result of the buy-in. On an accounting basis, the pensioner liabilities are valued using a higher discount rate (as required by IAS 19(R)), which provides a much lower valuation of those liabilities. As a consequence, the accounting valuation of the insurance contract compared with the actual premium paid to PIC resulted in a reduction in the asset portfolio valuation of some £50m. IAS 19(R) requires this loss to be reported in the Group statement of comprehensive income, not the income statement.

In December 2012, an extension to the PIC buy-in agreement was signed, under which the UK Plan Trustee agrees to transfer to PIC all new pensioner liabilities arising from July 2012 to December 2015 for a premium payment by the UK Plan which is calculated to be consistent with the pricing terms of the original buy-in agreement, but reflecting changes in market conditions and differences in the duration of the liabilities transferred. The agreement covers up to £30m of liabilities, with the future premium payments to be met from the existing assets of the UK Plan. For 2013, the impact of this agreement extension has been an estimated increase of £1m to the UK Plan liabilities in respect of the pensioner benefits to be transferred to PIC in early 2014. The estimate of loss which this represents has been reported in the Group statement of comprehensive income for 2013.

(b) Defined benefit pension plans – US

The Group has a number of defined benefit pension plans in the US, providing retirement benefits based on final salary or a fixed benefit. The Group's principal US defined benefit pension plans are closed to new members and also to future benefit accrual for existing members. Actuarial valuations of the US defined benefit pension plans are carried out every year and the last full valuation was carried out as at 31 December 2012. At that date the market value of the plan assets was £69.4m, representing a funding level of 66% of funded accrued plan benefits at that date (using the projected unit method of valuation) of £104.6m. Funding levels for the Group's US defined benefit pension plans are normally based upon annual valuations carried out by independent qualified actuaries and are governed by US government regulations.

(c) Defined benefit pension plans – Germany

The Group has a number of defined benefit pension arrangements in Germany which are unfunded, as is common practice in that country. The net liability of the German plans at 31 December 2013 was £32.6m.

(d) Defined contribution pension plans

The total expense for the Group's defined contribution plans in the Group income statement amounted to £10.9m (2012 as restated: £11.5m continuing operations) and represents the contributions payable for the year by the Group to the plans.

Notes to the consolidated financial statements continued

31. Employee benefits (continued)

31.3 Post-retirement liability valuation

The main assumptions used in calculating the costs and obligations of the Group's defined benefit pension plans, as detailed below, are set by the Directors after consultation with independent professionally qualified actuaries.

(a) Mortality assumptions

The mortality assumptions used in the actuarial valuations of the Group's UK, US and German defined benefit pension liabilities are summarised in the table below and have been selected to reflect the characteristics and experience of the membership of those plans.

For the UK Plan, the assumptions used have been derived from the Self-Administered Pension Schemes ("SAPS") All table, with future longevity improvements in line with the "core" mortality improvement tables published in 2013 by the Continuous Mortality Investigation ("CMI"), with a long-term rate of improvement of 1.5% per annum. For the Group's US plans, the assumptions used have been based on the standard RP-2000 fully generational tables with projection scale BB, a change from 2012 when the tables used were the RP2000CH mortality tables, projected 64 years for non-pensioners and 33 years for pensioners using projection scale AA. The change is aimed at allowing more explicitly for differences in mortality levels and future trends in mortality for people born in different years. The Group's major plans in Germany have been valued using the Heubeck-Richttafein 2005G mortality tables.

		2013			2012		
Life expectancy of pension plan members		**UK years**	**US years**	**Germany years**	UK years	US years	Germany years
Age to which current pensioners are expected to live	— Men	**87.5**	**85.1**	**84.7**	87.5	84.6	84.6
	— Women	**89.8**	**87.3**	**88.8**	89.7	86.9	88.7
Age to which future pensioners are expected to live	— Men	**88.9**	**87.2**	**87.4**	89.2	86.6	87.3
	— Women	**92.1**	**89.2**	**91.3**	91.6	89.1	91.2

(b) Other main actuarial valuation assumptions

		2013			2012		
		UK % p.a.	**US % p.a.**	**Germany % p.a.**	UK % p.a.	US % p.a.	Germany % p.a.
Discount rate		**4.40**	**4.50**	**3.75**	4.35	3.75	3.30
Price inflation	— using RPI for UK	**3.60**	**2.50**	**2.00**	3.20	2.50	2.00
	— using CPI for UK	**2.60**	**n/a**	**n/a**	2.50	n/a	n/a
Rate of increase in pensionable salaries		**n/a**	**n/a**	**2.75**	n/a	n/a	2.75
Rate of increase to pensions in payment		**3.30**	**n/a**	**1.90**	3.00	n/a	1.90

The discount rate used to determine the liabilities of the UK Plan for IAS 19(R) accounting purposes is required to be determined by reference to market yields on high quality corporate bonds. The UK discount rate in the above table is based on the Aon Hewitt AA-rated corporate bond yield in conjunction with the most recent projected cash flow data relating to the UK Plan liabilities; the US discount rate is based on the Citigroup pension discount curve; and the German discount rate is based on the yield on the iBoxx over 10 year euro corporates AA index.

The assumptions for price inflation are set by reference to the difference between yields on longer-term conventional government bonds and index-linked bonds, except for CPI, for which no appropriate bonds exist, which is assumed to be 1.0 point lower than RPI-based inflation.

(c) Sensitivity analysis of the impact of changes in significant IAS 19(R) actuarial assumptions

The following table analyses, for the Group's main UK, US and German pension plans, the theoretical estimated impact on plan liabilities resulting from changes to the most significant actuarial assumptions used for IAS 19(R) valuation purposes, whilst holding all other assumptions constant.

Following the agreement of buy-in agreements for the UK plan pensioner liabilities in 2012, as noted above, and the fact that US pensions are not inflation linked, the rate of increase in pensionable salaries and of pensions in payment are not significant to the valuation of the Group's overall pensions liabilities.

31. Employee benefits (continued)

31.3 Post-retirement liability valuation (continued)

(c) Sensitivity analysis of the impact of changes in significant IAS 19(R) actuarial assumptions (continued)

As stated above, during 2012 the UK Plan entered into pension insurance buy-in agreements which eliminate the inflation, interest rate, investment and longevity risk in respect of the pensioner liabilities covered by the agreements. Therefore, for the liabilities so covered, which represent some 65% of the total liabilities of the UK Plan, any changes in the valuation assumptions which impact the value of those liabilities, also impacts on the associated annuity assets in an equal and opposite way, thereby fully mitigating the valuation risk. This is also reflected in the following table.

		Impact on plan liabilities		
Assumption	Change in assumption	UK	US	Germany
Discount rate	Increase/decrease by 0.1%			
	— impact on plan liabilities	Decrease/increase by 1.5%	Decrease/increase by 1.1%	Decrease/increase by 1.7%
	— impact on plan assets	Decrease/increase by 1.1%	n/a	n/a
Price inflation	Increase/decrease by 0.1%			
	— impact on plan liabilities	Increase/decrease by 1.0%	n/a	Increase/decrease by 0.7%
	— impact on plan assets	Increase/decrease by 0.8%	n/a	n/a
Mortality	Increase by one year			
	— impact on plan liabilities	Increase/decrease by 3.5%	Increase by 3.2%	Increase by 3.0%
	— impact on plan assets	Increase/decrease by 4.3%	n/a	n/a

31.4 Defined benefit obligation

The liabilities of the Group's defined benefit pension and other post-retirement plans for IAS 19(R) accounting purposes are measured by discounting the best estimate of the future cash flows to be paid out by the plans using the projected unit method, in which the calculation of plan liabilities makes allowance, where appropriate, for projected increases in benefit-related earnings.

The average duration of the obligations to which the liabilities of the Group's principal pension plans relate is 18 years for the UK, 16 years for Germany and 10 years for the US.

	Defined benefit pension plans					Other post-retirement benefit plans	
	UK £m	US £m	Germany £m	ROW £m	Total £m	£m	Total £m
Present value as at 1 January 2013	**446.3**	**104.6**	**33.0**	**40.3**	**624.2**	**7.3**	**631.5**
Exchange differences	**—**	**(1.3)**	**0.7**	**(0.5)**	**(1.1)**	**(0.2)**	**(1.3)**
Current service cost	**—**	**0.5**	**1.1**	**2.4**	**4.0**	**0.5**	**4.5**
Interest cost	**19.0**	**4.0**	**1.1**	**1.3**	**25.4**	**0.2**	**25.6**
Transfer	**—**	**—**	**—**	**(1.9)**	**(1.9)**	**1.9**	**—**
Remeasurement of liabilities:							
— demographic changes	**(0.2)**	**0.2**	**—**	**—**	**—**	**—**	**—**
— financial assumptions	**16.8**	**(8.6)**	**(2.5)**	**(2.0)**	**3.7**	**(0.2)**	**3.5**
— experience (gains)/losses	**(3.7)**	**(2.1)**	**0.4**	**1.0**	**(4.4)**	**—**	**(4.4)**
Contributions from members	**—**	**—**	**—**	**0.1**	**0.1**	**—**	**0.1**
Benefits paid	**(20.1)**	**(5.9)**	**(1.2)**	**(2.4)**	**(29.6)**	**(1.4)**	**(31.0)**
Present value as at 31 December 2013	**458.1**	**91.4**	**32.6**	**38.3**	**620.4**	**8.1**	**628.5**

Notes to the consolidated financial statements continued

31. Employee benefits (continued)

31.4 Defined benefit obligation (continued)

	Defined benefit pension plans					Other post-retirement benefit plans	
	UK £m	US £m	Germany £m	ROW £m	Total as restated £m	£m	Total as restated £m
Present value as at 1 January 2012	422.7	188.9	35.3	42.6	689.5	8.9	698.4
Exchange differences	—	(8.1)	(1.0)	(1.7)	(10.8)	(0.3)	(11.1)
Current service cost	0.3	0.4	0.8	2.2	3.7	0.6	4.3
Interest cost	19.7	7.4	1.5	1.5	30.1	0.3	30.4
Transferred to payables	(2.4)	—	—	—	(2.4)	—	(2.4)
Transferred to held for sale	—	—	(4.5)	—	(4.5)	—	(4.5)
Business disposals	—	(55.9)	(4.3)	(3.7)	(63.9)	(1.6)	(65.5)
Settlements	(15.7)	(31.4)	—	(3.9)	(51.0)	—	(51.0)
Remeasurement of liabilities:							
— demographic changes	4.5	—	—	0.4	4.9	—	4.9
— financial assumptions	21.7	12.4	6.7	4.8	45.6	0.4	46.0
— experience (gains)/losses	15.6	0.3	—	0.6	16.5	0.2	16.7
Contributions from members	—	—	—	0.1	0.1	—	0.1
Benefits paid	(20.1)	(9.4)	(1.5)	(2.6)	(33.6)	(1.2)	(34.8)
Present value as at 31 December 2012	446.3	104.6	33.0	40.3	624.2	7.3	631.5

31.5 Fair value of plan assets

	2013				2012			
	UK £m	**US £m**	**ROW £m**	**Total £m**	UK £m	US £m	ROW £m	Total £m
As at 1 January	**468.4**	**69.4**	**24.9**	**562.7**	487.5	124.1	28.1	639.7
Exchange differences	—	**(1.3)**	**(0.5)**	**(1.8)**	—	(5.4)	(1.4)	(6.8)
Return on plan assets	**20.2**	**2.7**	**0.9**	**23.8**	22.9	5.7	1.0	29.6
Business disposals	—	—	—	—	—	(39.1)	(2.0)	(41.1)
Settlements	—	—	—	—	(16.2)	(24.2)	(4.3)	(44.7)
Remeasurement of assets	**10.2**	**(1.9)**	**1.0**	**9.3**	(46.8)	5.4	0.9	(40.5)
Contributions from employer	**7.8**	**4.6**	**2.9**	**15.3**	42.5	11.5	4.2	58.2
Contributions from members	—	—	**0.1**	**0.1**	—	—	0.1	0.1
Administration expenses paid	**(1.1)**	**(0.4)**	—	**(1.5)**	(1.5)	(0.2)	—	(1.7)
Benefits paid	**(20.0)**	**(5.0)**	**(2.3)**	**(27.3)**	(20.0)	(8.4)	(1.7)	(30.1)
As at 31 December	**485.5**	**68.1**	**27.0**	**580.6**	468.4	69.4	24.9	562.7

The Group's pension plans in Germany are unfunded, as is common practice in that country, and accordingly there are no assets associated with these plans.

31. Employee benefits (continued)

31.6 Balance sheet recognition

The amount recognised in the Group balance sheet in respect of the Group's defined benefit pension plans and other post-retirement benefit plans is analysed in the following tables, which all relate to continuing operations. All equity securities and bonds have quoted prices in active markets.

	Defined benefit pension plans					Other post-retirement benefit plans	2013 Total
	UK £m	US £m	Germany £m	ROW £m	Total £m	£m	£m
Equities	**29.9**	**13.7**	**—**	**2.1**	**45.7**	**—**	**45.7**
Bonds	**—**	**47.7**	**—**	**1.4**	**49.1**	**—**	**49.1**
Risk-mitigation derivatives	**2.3**	**—**	**—**	**—**	**2.3**	**—**	**2.3**
Insurance contracts	**257.8**	**—**	**—**	**20.3**	**278.1**	**—**	**278.1**
Other assets	**195.5**	**6.7**	**—**	**3.2**	**205.4**	**—**	**205.4**
Fair value of plan assets	**485.5**	**68.1**	**—**	**27.0**	**580.6**	**—**	**580.6**
Present value of funded obligations	**(456.8)**	**(82.2)**	**—**	**(38.1)**	**(577.1)**	**—**	**(577.1)**
	28.7	**(14.1)**	**—**	**(11.1)**	**3.5**	**—**	**3.5**
Present value of unfunded obligations	**(1.3)**	**(9.2)**	**(32.6)**	**(0.2)**	**(43.3)**	**(8.1)**	**(51.4)**
Total net surpluses/(liabilities)	**27.4**	**(23.3)**	**(32.6)**	**(11.3)**	**(39.8)**	**(8.1)**	**(47.9)**
Recognised in the Group balance sheet as:							
Net surpluses	**28.7**	**—**	**—**	**—**	**28.7**	**—**	**28.7**
Net liabilities	**(1.3)**	**(23.3)**	**(32.6)**	**(11.3)**	**(68.5)**	**(8.1)**	**(76.6)**
Total net surpluses/(liabilities)	**27.4**	**(23.3)**	**(32.6)**	**(11.3)**	**(39.8)**	**(8.1)**	**(47.9)**

	Defined benefit pension plans					Other post-retirement benefit plans	2012 Total
	UK £m	US £m	Germany £m	ROW £m	Total £m	£m	£m
Equities	85.6	26.0	—	1.8	113.4	—	113.4
Bonds	—	42.0	—	1.5	43.5	—	43.5
Risk-mitigation derivatives	(13.0)	—	—	—	(13.0)	—	(13.0)
Insurance contracts	273.3	—	—	18.5	291.8	—	291.8
Other assets	122.5	1.4	—	3.1	127.0	—	127.0
Fair value of plan assets	468.4	69.4	—	24.9	562.7	—	562.7
Present value of funded obligations	(445.1)	(93.7)	—	(38.3)	(577.1)	—	(577.1)
	23.3	(24.3)	—	(13.4)	(14.4)	—	(14.4)
Present value of unfunded obligations	(1.2)	(10.9)	(33.0)	(2.0)	(47.1)	(7.3)	(54.4)
Total net surpluses/(liabilities)	22.1	(35.2)	(33.0)	(15.4)	(61.5)	(7.3)	(68.8)
Recognised in the Group balance sheet as:							
Net surpluses	23.3	—	—	—	23.3	—	23.3
Net liabilities	(1.2)	(35.2)	(33.0)	(15.4)	(84.8)	(7.3)	(92.1)
Total net surpluses/(liabilities)	22.1	(35.2)	(33.0)	(15.4)	(61.5)	(7.3)	(68.8)

Notes to the consolidated financial statements continued

31. Employee benefits (continued)

31.6 Balance sheet recognition (continued)

(a) UK Plan asset allocation

As at 31 December 2013, of the UK Plan's total assets, excluding risk-mitigation derivatives, 53% were represented by the bulk annuity insurance contracts covering the UK Plan's pension liabilities; 6% were allocated to equities; 10% to infrastructure and property investments; 26% to cash; and 5% to other assets. In addition, the UK Plan holds a liability driven investment portfolio of financial derivative contracts which reduces the risk that the UK Plan's assets would fall materially relative to the value of its economic liabilities.

(b) Defined benefit contributions in 2014

In 2014, the Group is expected to make aggregate contributions into its defined benefit pension and other post-retirement benefits plans of around £8m; of this, £6m is voluntary.

31.7 Income statement recognition

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

	2013			2012		
	Defined benefit pension plans £m	**Other post-retirement benefit plans £m**	**Total £m**	Defined benefit pension plans as restated £m	Other post-retirement benefit plans £m	Total as restated £m
Current service cost	**(4.0)**	**(0.5)**	**(4.5)**	(3.7)	(0.6)	(4.3)
Administration expenses	**(1.5)**	—	**(1.5)**	(1.7)	—	(1.7)
Restructuring charge	—	—	—	(0.1)	—	(0.1)
Net interest cost	**(1.6)**	**(0.2)**	**(1.8)**	(0.5)	(0.3)	(0.8)
Gains relating to employee benefits plans	—	—	—	6.3	—	6.3
Total net charge	**(7.1)**	**(0.7)**	**(7.8)**	0.3	(0.9)	(0.6)

The total net charge of £7.8m (2012: £0.6m) 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:

	2013 £m	2012 as restated £m
In arriving at trading profit — within other manufacturing costs	**(1.9)**	(1.8)
— within administration, selling and distribution costs	**(4.1)**	(3.1)
In arriving at profit from operations — restructuring charges	—	(0.1)
In arriving at profit before tax — within net finance costs	**(1.8)**	(0.1)
Continuing operations — charge	**(7.8)**	(5.1)
Discontinued operations	—	4.5
Total net charge	**(7.8)**	(0.6)

In accordance with IAS 19(R), which took effect from 1 January 2013, pension administration costs of £1.7m for 2012 have been reclassified to trading profit, whereas previously these were charged within net finance costs. As further required by IAS 19(R), the net finance cost relating to employee benefit plans must be calculated by applying a high quality corporate bond yield to the net defined benefit obligation, whereas previously it was usual for the expected return on pension plan assets to be a higher rate than the discount rate applied to the plan liabilities. This has resulted in the net pension interest charge for 2012 of £0.6m, as previously reported, to become £0.1m, with an equal and opposite effect on the remeasurement of the net defined benefit liability in the Group statement of comprehensive income. The financial impact of implementing IAS 19(R) on the results for 2013 has been broadly similar to that in 2012.

32. Share-based payments

In accordance with IFRS 2, *Share-based Payment*, the disclosures in this note are only in respect of those options granted after 7 November 2002 that had not vested by 1 January 2005.

32.1 Income statement recognition

The total expense recognised in the Group income statement is shown below.

	2013 £m	2012 £m
Long-Term Incentive Plan	**2.4**	3.7
Other plans	**0.2**	0.6
Total expense	**2.6**	4.3

The Group operates a number of different share-based payment plans, the most significant of which is the Long-Term Incentive Plan ("LTIP"), details of which can be found between pages 68 to 83 of the Directors' Remuneration Report. The Group's other share-based payment plans are not considered significant in the context of the Group's results or financial position.

32.2 Details of outstanding options

					Outstanding awards
	As at 1 January 2013 no.	**Granted no.**	**Exercised no.**	**Forfeited/ lapsed no.**	**As at 31 December 2013 no.**
LTIP	**2,575,362**	**587,729**	**(607,847)**	**(278,734)**	**2,276,510**
Weighted average exercise price	**nil**	**nil**	**nil**	**nil**	**nil**
Other plans	**290,536**	**8,658**	**(165,354)**	**(13,017)**	**120,823**
Weighted average exercise price	**51p**	**nil**	**81p**	**288p**	**nil**

For the options exercised during 2013, the share price at the date of exercise was 332p for LTIP schemes and 332p or 451p for other plans.

							Outstanding awards
	As at 1 January 2012 no.	Granted no.	Exercised no.	Forfeited/ lapsed no.	Demerger adjustment no.	Business disposals no.	As at 31 December 2012 no.
LTIP	6,633,906	806,811	(4,680,111)	(263,060)	2,618,579	(2,540,763)	2,575,362
Weighted average exercise price	nil	nil	nil	nil	n/a	nil	nil
Other plans	464,190	125,118	(225,761)	(32,706)	330,340	(370,645)	290,536
Weighted average exercise price	175p	nil	241p	283p	n/a	nil	51p

For options exercised during 2012, the share price at the date of exercise was 705p.

	2013			2012		
	Awards exercisable as at 31 December 2013 no.	**Weighted average outstanding contractual life of awards years**	**Range of exercise prices pence**	Awards exercisable as at 31 December 2012 no.	Weighted average outstanding contractual life of awards years	Range of exercise prices pence
LTIP	**—**	**2.4**		—	1.9	
Weighted average exercise price	**—**		**n/a**	—		n/a
Other plans	**—**	**1.1**		59,179	1.2	
Weighted average exercise price	**—**		**nil**	288p		nil–288p

Notes to the consolidated financial statements continued

32. Share-based payments (continued)

32.3 Options granted under the LTIP during the year

	2013 EPS element	2013 TSR element	2012 EPS element	2012 TSR element
Fair value of options granted (per share)	**322p**	**188p**	648p	488p
Share price on date of grant (per share)	**322p**	**322p**	710p	710p
Expected volatility	**n/a**	**38.6%**	n/a	47.0%
Risk-free interest rate	**n/a**	**0.3%**	n/a	0.6%
Exercise price (per share)	**nil**	**nil**	nil	nil
Expected term (years)	**4**	**4**	4	4
Expected dividend yield	**0%**	**0%**	0%	0%

Share price volatility for options granted in 2013 and 2012 is based upon weekly movements in the Company's (formerly Cookson's) share price over a period prior to the grant date that is equal in length to the expected term of the award.

33. Trade and other payables

33.1 Accounting policy

Trade and other payables are initially recognised at fair value and subsequently measured at amortised cost, using the effective interest method.

33.2 Analysis of trade and other payables

	2013 £m	2012 £m
Non-current		
Accruals and other payables	**18.5**	14.1
Deferred purchase consideration	**0.1**	0.1
Total non-current other payables	**18.6**	14.2
Current		
Trade payables	**117.5**	126.6
Other taxes and social security	**31.8**	37.8
Accruals and other payables	**65.2**	69.8
Total current trade and other payables	**214.5**	234.2

There is no significant difference between the fair value of the Group's trade and other payables balances and the amount at which they are reported in the Group balance sheet.

34. Leases

34.1 Accounting policy

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases. Rentals payable under operating leases are charged to the income statement on a straight-line basis over the term of the lease. Benefits received and receivable as an incentive to enter into an operating lease are also spread on a straight-line basis over the lease term.

34.2 Operating lease commitments

The future aggregate minimum lease payments under non-cancellable operating leases are payable as follows:

	2013 £m	2012 £m
Not later than one year	**8.4**	9.5
Later than one year and not later than five years	**17.6**	18.8
Later than five years	**6.4**	10.1
Total operating lease commitments	**32.4**	38.4

The Group's property, plant and equipment assets are either purchased outright or held under lease contracts. Where the terms of the lease transfer substantially all the risks and rewards of ownership of the asset to the Group, the asset is capitalised in the Group balance sheet and the corresponding liability to the lessor is recognised as a finance lease obligation. Where all the risks and rewards of ownership are not transferred to the Group, the lease is classified as an operating lease and neither the asset nor the corresponding liability to the lessor is recognised in the Group balance sheet. The net book value of the Group's property, plant and equipment assets held under finance lease contracts at 31 December 2013 and 31 December 2012 was not material.

The cost incurred by the Group in the year in respect of assets held under operating leases, all of which was charged within trading profit, amounted to £14.4m (2012: £24.2m).

Notes to the consolidated financial statements continued

35. Provisions

35.1 Accounting policy

Provisions are recognised when the Group has a present obligation as a result of a past event and it is probable that the Group will be required to settle that obligation. Provisions are measured at the Directors' best estimate of the expenditure required to settle the obligation at the balance sheet date. Where the effect of the time value of money is material, provisions are discounted using a pre-tax discount rate that reflects both the current market assessment of the time value of money and the specific risks associated with the obligation. Where discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

35.2 Analysis of provisions

	Disposal and closure costs £m	Restructuring charges £m	Other £m	Total £m
As at 1 January 2013	**30.1**	**17.1**	**14.1**	**61.3**
Exchange adjustments	**(0.5)**	**(0.4)**	**—**	**(0.9)**
Net charge to Group income statement	**1.6**	**6.2**	**(3.2)**	**4.6**
Unwind of discount	**1.0**	**0.3**	**—**	**1.3**
Cash spend	**(1.8)**	**(10.3)**	**(0.5)**	**(12.6)**
Transferred from other payables	**—**	**—**	**2.4**	**2.4**
As at 31 December 2013	**30.4**	**12.9**	**12.8**	**56.1**

Of the total provision balance as at 31 December 2013 of £56.1m (2012: £61.3m), £35.3m (2012: £31.8m) is recognised in the Group balance sheet within non-current liabilities and £20.8m (2012: £29.5m) within current liabilities.

The provision for disposal and closure costs includes the Directors' current best estimate of the costs to be incurred both in the fulfilment of obligations incurred in connection with former Group businesses, resulting from either disposal or closure, together with those related to the demolition and clean-up of closed sites. The provision comprises amounts payable in respect of known or probable costs resulting both from legal or other regulatory requirements, or from third-party claims, including claims relating to product liability. As the settlement of many of the obligations for which provision is made is subject to legal or other regulatory process, the timing of the associated cash outflows is subject to some uncertainty, but the majority of the amounts provided are expected to be utilised over the next ten years and the underlying estimates of costs are regularly updated to reflect changed circumstances with regard to individual matters.

The provision for restructuring charges includes the costs of all of the Group's initiatives to rationalise its operating activities. The balance of £12.9m as at 31 December 2013 comprises £4.9m in relation to onerous lease provisions in respect of leases terminating between one and ten years, and £8.0m in relation to future expenditure on restructuring initiatives which is expected to be paid out over the next two years.

Other provisions comprise 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 provision is made is subject to legal or other regulatory process, the timing of the associated outflows is subject to some uncertainty, but the majority of amounts provided are expected to be utilised over the next five years and the underlying estimates of costs are regularly updated to reflect changed circumstances with regard to individual matters.

Where insurance cover exists for any of these known or probable costs, a related asset is recognised in the Group balance sheet only when its realisation is virtually certain. As at 31 December 2013, £10.4m (2012: £10.2m) was recorded in receivables in respect of associated insurance reimbursements, of which £8.1m (2012: £7.9m) is non-current. The amounts reported in the table above as charged to the Group income statement represent only that part of the total income statement charge reported as a movement on provisions. Other components of the charge, such as asset write-offs, are reported as a reduction in the carrying value of the relevant balance sheet item.

36. Off-balance sheet arrangements

In compliance with current reporting requirements, certain arrangements entered into by the Group in its normal course of business are not reported in the Group balance sheet. Of such arrangements, those considered material by the Directors include: future lease payments in relation to assets used by the Group under non-cancellable operating leases (note 34); and trade receivable balances that have been subject to non-recourse factoring arrangements.

Under its non-recourse factoring arrangements, the Group sells trade receivables balances to a third-party factoring company in exchange for a cash payment from the factoring company, net of fees. All the risks and rewards of the trade receivables subject to these arrangements are transferred to the factoring company and, accordingly, the trade receivables are derecognised in the Group balance sheet. Such arrangements are used from time to time by the Group to manage the recovery of cash from its trade receivables. As at 31 December 2013, the Group balance sheet included £11.9m (2012: £18.6m) of cash that would otherwise have been reported as trade receivables if these arrangements were not in place. Factoring fees incurred during the year ended 31 December 2013, which are written off to the Group income statement within ordinary finance costs, amounted to £0.4m (2012: £0.5m).

37. Contingent liabilities

Guarantees given by the Group under property leases of operations disposed of amounted to £2.7m (2012: £3.4m). Details of guarantees given by the Company, on behalf of the Group, are given in note 10 to the Company financial statements.

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 (see note 35 for further information).

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.

Cookson Precious Metals Ltd, a subsidiary of Vesuvius, was engaged in transactions involving the purchase of scrap platinum between August 2007 and October 2009. Vesuvius had been informed by HMRC that, in HMRC's view, certain external third parties within the supply chain for those transactions deliberately failed to account to HMRC for VAT. Such fraud is commonly known as Missing Trader Intra-Community Fraud. HMRC have undertaken an investigation to assess whether, as a consequence of any fraudulent actions of those third parties, they could argue that the ability of Vesuvius to retain VAT recovered on the relevant transactions should be limited. HMRC's investigation has been concluded in respect of most of the VAT loss under investigation, with no associated liability for VAT or interest or penalties arising.

Certain subsidiary companies of Vesuvius plc and Alent plc are defendants in two actions, brought by MacDermid (incorporated in the United States), which are pending in the Connecticut Superior Court and arising out of corporate activity involving the parties in the autumn of 2006. The first action was commenced in 2009 and the second action was commenced in August 2012. MacDermid claims damages of approximately $62m, plus punitive or exemplary damages, costs and interest which are currently unquantifiable. Both Vesuvius and Alent believe these claims have no merit and are vigorously defending these actions. Each of Vesuvius and Alent anticipates filing motions for summary judgment in both cases by mid-2014 and, if any claims remain pending decisions on those motions, a trial in the first action is anticipated in the first half of 2015. Any liability relating to the MacDermid claim arising following the demerger of Cookson Group will be split equally between Alent plc and Vesuvius plc.

38. Principal subsidiaries and joint ventures

Details of the principal subsidiaries and joint ventures of Vesuvius plc and the countries in which they are incorporated are given in note 5 to the Company financial statements, together with detail of subsidiaries exempt from audit of individual financial statements by virtue of s479A Companies Act 2006.

39. 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.

Company balance sheet

AS AT 31 DECEMBER 2013

	Notes	2013 £m	2012 £m
Fixed assets			
Investment in subsidiaries	5	**1,778.9**	1,777.9
Total fixed assets		**1,778.9**	1,777.9
Current assets			
Debtors — amounts falling due within one year		**0.1**	0.1
Cash at bank and in hand		**0.4**	1.5
Total current assets		**0.5**	1.6
Creditors: amounts falling due within one year			
Other creditors	6	**(939.5)**	(863.5)
Net current liabilities		**(939.0)**	(861.9)
Total assets less current liabilities		**839.9**	916.0
Creditors: amounts falling due after more than one year			
Other creditors	6	**—**	(0.1)
Net assets		**839.9**	915.9
Equity capital and reserves			
Issued share capital	7	**27.8**	27.8
Retained earnings		**812.1**	888.1
Shareholders' funds — equity	8	**839.9**	915.9

The Company financial statements were approved and authorised for issue by the Directors on 4 March 2014 and signed on their behalf by:

François Wanecq
Chief Executive

Chris O'Shea
Chief Financial Officer

Notes to the Company financial statements

1. Basis of preparation

1.1 Basis of accounting

Vesuvius plc ("the Company") was incorporated on 17 September 2012 and is registered in England and Wales.

The financial statements of Vesuvius plc are prepared in accordance with the Companies Act 2006 and under the historical cost convention and in accordance with UK GAAP. The Company has not presented a separate profit and loss account, as permitted by Section 408(3) of the Companies Act 2006.

1.2 Going concern

The Directors have a reasonable expectation that the Group and the 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 and the Company.

2. Employee benefits expense

Details of the Directors' remuneration are disclosed in the Directors' Remuneration Report on pages 69 and 78. The Directors' remuneration in 2012 was borne by other Group companies.

3. Audit and non-audit fees

Amounts payable to KPMG LLP in relation to audit and non-audit fees are disclosed within note 6 to the Consolidated Financial Statements.

4. Dividends

A proposed final dividend for the year ended 31 December 2013 of £27.7m, equivalent to 10.25p 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 23 May 2014 to ordinary shareholders on the register at 25 April 2014.

5. Investment in subsidiaries

5.1 Accounting policy

Shares in subsidiaries are stated at cost less any impairment in value.

5.2 Analysis of investment in subsidiaries

	Shares in subsidiaries £m
At incorporation on17 September 2012	—
Additions	2,640.3
Disposals	(862.4)
As at 1 January 2013	**1,777.9**
Additions	**1.0**
As at 31 December 2013	**1,778.9**

The principal subsidiaries and joint ventures of Vesuvius plc and the countries in which they are incorporated are as follows:

Angang Vesuvius Refractory Company Ltd, China (50%)
Cookson America, Inc., USA
Cookson Australia Pty Ltd, Australia
Cookson Ceramics Ltd, England and Wales
Cookson Group Ltd, England and Wales*
Cookson Investments Ltd, England and Wales
Cookson Overseas Ltd, England and Wales
Foseco International Ltd, England and Wales
Foseco (Jersey) Ltd, Jersey
Foseco Ltd, England and Wales'
Vesuvius Advanced Ceramics (Suzhou) Co. Ltd, China
Vesuvius Corporation SA, Switzerland
Vesuvius Crucible Company, USA
Vesuvius GmbH, Germany
Vesuvius USA Corporation, USA
Wilkes-Lucas Ltd, England and Wales
Wuhan Wugang-Vesuvius Advanced Ceramics Co. Ltd, China (50%)
Wuhan Wugang-Vesuvius Advanced CCR Co. Ltd, China (50%)

With the exception of the company marked with an asterisk (*), the ordinary capital of the above companies was owned by a Vesuvius plc subsidiary as at 31 December 2013. All of the above companies are wholly owned, unless otherwise stated. A full list of Group companies will be included in the Company's Annual Return to the Registrar of Companies.

Notes to the Company financial statements continued

5. Investment in subsidiaries (continued)

5.2 Analysis of investment in subsidiaries (continued)

The UK subsidiaries marked with a dagger (†) above, together with the following, are exempt from audit of their individual financial statements by virtue of s479A Companies Act 2006.

Brazil 1 Limited
Cookson Minerals Limited
Cookson Pigments (Holdings) Limited
Foseco (UK) Limited
Foseco Technology Limited
Foseco Transnational Limited
Foseco Steel (Holdings) China Limited
S G Blair & Company Limited
Vesuvius China Limited
Vesuvius Group Limited
Vesuvius Scotland Limited

All of the above companies have the same year-end as Vesuvius plc and all subsidiaries are included in the Consolidated Financial Statements of the Company.

6. Other creditors

	2013 £m	2012 £m
Amounts owed to subsidiary undertakings	**937.7**	862.4
Accruals and other creditors	**1.8**	1.1
Redeemable preference shares	**—**	0.1
Total other creditors	**939.5**	863.6
Less: amounts falling due in more than one year — redeemable preference shares	—	(0.1)
Total amounts falling due within one year	**939.5**	863.5

7. Issued share capital

7.1 Accounting policy

Equity instruments issued by the Company are recorded at the proceeds received, net of direct issue costs.

7.2 Analysis of issued share capital

During 2013 the Company issued 36,319 ordinary shares of £0.10 each for a total consideration of £0.1m.

On 11 December 2013, the Company redeemed the 50,000 outstanding redeemable preference shares with a nominal value of £1 each for £50,000. The consideration was satisfied by the cancellation of the undertaking to pay given by the holder of the preference shares at the time of issue. Also during the year, the Company redeemed the deferred share for no consideration and cancelled it.

On incorporation on 17 September 2012, the Company's share capital consisted of one ordinary share with a par value of £1 ("the subscriber share"). On 18 September 2012, the Company issued 50,000 redeemable non-voting preference shares of £1 each. The preference shares were allotted for cash and remain unpaid by virtue of the holder giving an undertaking to pay up each share pursuant to section 583(2) and 583(3) of the Companies Act 2006.

On 14 December 2012, the Company issued 278,448,752 ordinary shares of 638.5 pence each (£1,777.9m) to the public shareholders of Cookson Group plc in exchange for the entire share capital of Cookson Group plc as part of the Scheme of Arrangement. On the same date, the subscriber share was converted into and redesignated as a deferred share of £1.

On 19 December 2012, the Company demerged the Alent business (formerly the Performance Materials division of Cookson Group plc), whereby the share capital of the Company which amounted to £1,777.9m, was reduced by: (a) cancelling and extinguishing paid-up capital on each of the Vesuvius plc shares in issue immediately prior to the confirmation by the Court of the Vesuvius plc capital reduction, to the extent that the amount paid up on each such Vesuvius plc share shall be 10 pence; and (b) reducing the nominal value of each of the Vesuvius plc shares to 10 pence each.

In respect of the paid-up capital cancelled pursuant to (a) above: £862.4m was repaid, with such repayment being satisfied by the transfer by the Company to Alent plc of the entire share capital of Alent Investments Limited, in consideration of the allotment and issue by Alent plc of one Alent plc share for each Vesuvius plc share held by the Vesuvius plc shareholders at the date of the demerger; and the balance of £887.7m was retained and transferred to the reserves of the Company to be available for future distributions, leaving issued share capital of £27.8m. The total market value of the Alent plc shares issued was £862.4m, being the market value of the Alent business as at 19 December 2012.

7. Issued share capital (continued)

7.2 Analysis of issued share capital (continued)

Following the completion of the sale of the Precious Metals Processing division on 31 May 2013, the Company commenced an on-market share repurchase programme to return cash to shareholders. During the period from 4 June to 31 December 2013, the Company had repurchased 7,271,174 of its own shares for £30.0m. A further 851,736 ordinary shares were purchased during 2013 for £4.1m via Cookson Investments (Jersey) Limited as Trustee of the Cookson Group ESOP.

8. Shareholders' funds

8.1 Accounting policy

Taxation

Both current and deferred tax are calculated using tax rates and laws that have been enacted, or substantively enacted, by the balance sheet date.

Current tax payable is based on the taxable result for the year. Deferred taxation is recognised, without discounting, in respect of all timing differences that have originated, but not reversed, at the balance sheet date, with the exception that deferred taxation assets are only recognised if it is considered more likely than not that there will be suitable future profits from which the reversal of the underlying timing differences can be deducted. Provision is made for the tax that would arise on remittance of the retained earnings of overseas subsidiaries only to the extent that, at the balance sheet date, dividends have been accrued as receivable.

8.2 Reconciliation of movements in Shareholders' funds

	Share capital £m	Other reserves £m	Retained Earnings £m	Total £m
At incorporation on 17 September 2012	—	—	—	—
Profit recognised in the period	—	—	0.4	0.4
Ordinary shares of 638.5 pence allotted during the period	1,777.9	—	—	1,777.9
Demerger of the Alent plc business and court approved capital reduction	(1,750.1)	—	887.7	(862.4)
As at 1 January 2013	**27.8**	**—**	**888.1**	**915.9**
Loss recognised for the year	**—**	**—**	**(4.5)**	**(4.5)**
Issue of new shares	**—**	**0.1**	**—**	**0.1**
Purchase of own shares	**—**	**—**	**(34.1)**	**(34.1)**
Recognition of share-based payments	**—**	**1.9**	**—**	**1.9**
Release of share reserve on exercise and lapsed options	**—**	**(0.2)**	**0.2**	**—**
Dividend paid	**—**	**—**	**(39.4)**	**(39.4)**
Redemption of redeemable preference shares	**—**	**0.1**	**(0.1)**	**—**
As at 31 December 2013	**27.8**	**1.9**	**810.2**	**839.9**

Notes to the Company financial statements continued

9. Share-based payments

9.1 Accounting policy

The Company operates equity-settled share-based payment arrangements for its employees. Equity-settled share-based payments are measured at fair value at the date of grant. The fair value determined at the grant date takes account of the effect of market-based conditions, such as the Total Shareholder Return target upon which vesting for some of the awards is conditional, and is expensed on a straight-line basis over the vesting period with a corresponding increase in equity. The cumulative expense recognised is adjusted for the best estimate of the shares that will eventually vest and for the effect of other non market-based vesting conditions, such as growth in headline earnings per share, which are not included in the fair value determined at the date of grant. For grants with market-based conditions attaching to them, fair value is measured using a form of stochastic option pricing model. For all other grants, fair value is measured using the Black–Scholes model.

9.2 Profit and loss account recognition

The Company operates a number of different share-based payment schemes, the main features of which are detailed between pages 68 to 83 of the Directors' Remuneration Report. £0.9m was charged to the profit and loss account in the year with regard to share-based payments (2012: nil).

9.3 Details of outstanding options

The information in the tables below has been restated to take into account the demerger of the Alent business from the Cookson Group. The number of share options, and other related disclosures, were adjusted with reference to the Vesuvius share price at the date of demerger.

The demerger was effective on 19 December 2012, at which point certain employees previously employed by other Group companies were transferred to Vesuvius plc. The share options attached to these employees, being the options outstanding at the date of transfer, is shown in the 2012 table below.

	Outstanding awards					Awards exercisable	Weighted average outstanding	
	As at 1 January 2013 no.	**Granted no.**	**Exercised no.**	**Forfeited/ lapsed no.**	**As at 31 December 2013 no.**	**as at 31 December 2013 no.**	**contractual life of awards years**	**Range of exercise prices pence**
LTIP	**847,076**	**559,016**	**(110,664)**	**(50,819)**	**1,244,609**	**—**	**2.2**	
Weighted average exercise price	**nil**	**nil**	**nil**	**nil**	**nil**	**—**		**n/a**
Other plans	**108,805**	**1,685**	**(56,087)**	**—**	**54,403**	**—**	**0.8**	
Weighted average exercise price	**nil**	**nil**			**nil**	**—**		**n/a**

For options exercised during 2013, the share price at the date of exercise was 332p for LTIP schemes and 451p for other plans.

	Outstanding awards			Awards exercisable	Weighted average outstanding	
	As at 17 September 2012 no.	Transfers no.	As at 31 December 2012 no.	as at 31 December 2012 no.	contractual life of awards years	Range of exercise prices pence
LTIP	—	847,076	847,076	—	1.3	
Weighted average exercise price	nil	nil	nil	—		n/a
Other plans	—	108,805	108,805	—	1.8	
Weighted average exercise price	nil	nil	nil	—		n/a

Details of options granted during the year prior to the date of transfer can be found in note 32 to the Consolidated Financial Statements.

9. Share-based payments (continued)

9.3 Details of outstanding options (continued)

As at 31 December 2013, the total options exercisable by all Group employees over the £0.10 ordinary shares and capable of being satisfied through new allotments of shares or through shares held by the Company's ESOP were as follows:

	Years of award/grant	Option prices (£)	Latest year of exercise/ vesting	Number of options/ allocations outstanding
Long-Term Incentive Plan	2011-2013	nil	2014/2018	2,276,510
Deferred Share Bonus Plan	2011-2013	nil	2014/2016	66,420
Restricted rights	2012	nil	2014/2014	54,403

FV of options granted under the LTIP during the year:	EPS element	TSR element
Fair value of options granted (per share)	322p	188p
Share price on date of grant (per share)	322p	322p
Expected volatility	n/a	38.6%
Risk-free interest rate	n/a	0.3%
Exercise price (per share)	nil	nil
Expected term (years)	4	4
Expected dividend yield	0%	0%

Share price volatility for options granted in 2013 is based upon weekly movements in the Company's share price over a period prior to the grant date that is equal in length to the expected term of the award.

10. Contingent liabilities

Where the Company enters into financial guarantee contracts to guarantee the indebtedness of other companies within its Group, the Company considers these to be insurance arrangements and accounts for them as such. In this respect, the Company treats the guarantee contract as a contingent liability until such time as it becomes probable that the Company will be required to make a payment under the guarantee. Guarantees provided by the Company as at 31 December 2013 in respect of the liabilities of its subsidiary companies amounted to £467.7m (2012: £565.5m), which includes guarantees of $310m and €30m (2012: $250.0m) in respect of US Private Placement Loan Notes and £96.4m (2012: £267.3m) in respect of drawings under the syndicated bank facility; together with £108.2m (2012: £108.2m) in relation to a guarantee provided to the Company's UK subsidiary which acts as Trustee for the Group's UK pension plan. The guarantee is over all present and future pension liabilities of the plan and the contingent liability amount represents the net deficit on a solvency valuation basis as shown in the most recent triennial valuation.

Vesuvius has extensive international operations and is subject to various legal and regulatory regimes, including those covering taxation and environmental matters. Several of the Company's 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 are aware of a number of issues which are, or may be, the subject of dispute with tax authorities. While the outcome of litigation and other disputes can never be predicted with certainty, having regard to legal advice received and the insurance arrangements of the Company and its subsidiaries, the Directors believe that none of these matters will, either individually or in the aggregate, have a materially adverse effect on the Company's financial condition or results of operations.

11. 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 wholly owned Group subsidiaries are not disclosed in this note.

Five year summary — divisional results from continuing operations

		2013	2012	2011	2010	2009
Steel division						
Revenue	£m	**1,018**	1,018	1,078	980	753
Trading profit [1]	£m	**88.7**	83.1	105.8	102.4	47.2
Return on sales [1]	%	**8.7**	8.2	9.8	10.4	6.3
Employees: year-end	No.	**7,524**	7,601	7,783	7,731	7,138
Foundry division						
Revenue	£m	**493**	530	608	515	378
Trading profit [1]	£m	**51.3**	48.2	75.5	66.8	10.8
Return on sales [1]	%	**10.4**	9.1	12.4	13.0	2.9
Employees: year-end	No.	**3,330**	3,585	3,889	3,936	3,423

[1] The unaudited trading profit numbers reported above for the years before 2011 are stated after deduction of management's estimate of the level of ongoing central costs for Vesuvius as a stand-alone company; and for the years before 2013 they are restated for the impact of IAS 19(R), which has been adopted by the Company in 2013.

Shareholder Information

Enquiries

The Company's share register is managed by Equiniti, who can be contacted regarding shareholding queries at the following address:

Equiniti Limited
Aspect House, Spencer Road
Lancing, West Sussex, BN99 6DA
Tel (UK only) 0871 384 2335
Tel (non-UK) +44 (0)121 415 7047

For the hard of hearing, Equiniti offers a special Textel service which can be accessed by dialling 0871 384 2255 (or +44 (0)121 415 7028 from outside the UK).

All other shareholder enquiries not related to the share register should be addressed to the Company Secretary at the Registered Office or emailed to: shareholder.information@vesuvius.com.

Registered office and group head office

Vesuvius plc
165 Fleet Street
London EC4A 2AE
Tel +44 (0)20 7822 0000
Fax +44 (0)20 7822 0100
(Registered in England & Wales No. 8217766)

Corporate website

Shareholder and other information about the Company can be accessed on the Company's website: www.vesuvius.com.

Shareview

A website, www.shareview.co.uk, is operated by Equiniti, the Company's Registrars, enabling shareholders to access details of their shareholdings online. The website provides information useful to the management of investments together with an extensive schedule of frequently asked questions. In order to gain access to information on shareholdings the shareholder reference number is required, which can be found at the top of the Company's share certificates.

Shareholders can register to receive shareholder communications electronically, including the Company's Report and Accounts, rather than in paper form, using Shareview. The registration process requires input of the shareholder reference number. To ensure that shareholder communications are received in electronic form, "email" should be selected as the mailing preference. Once registered, shareholders will be sent an email notifying them each time that a shareholder communication has been published on the Company's website.

Dealing services

UK resident shareholders can now sell shares on the Internet or by phone using Equiniti's Shareview Dealing facility by either logging on to www.shareview.co.uk/dealing or by calling 0845 603 7037 between 8.00 am and 4.30 pm on any business day (excluding Bank Holidays).

In order to gain access to this service the shareholder reference number is required, which can be found at the top of the Company's share certificates.

Dividend reinvestment plan
The Company offers holders of ordinary shares the opportunity to participate in a dividend reinvestment plan, through which shareholders can use any cash dividend declared to buy additional shares in Vesuvius. Further details, including the terms and conditions of the Plan, are available on the Vesuvius website (www.vesuvius.com) or from Equiniti by calling the Share Dividend Helpline on 0871 384 2268 (or +44 (0)121 415 7047 from outside the UK).

Overseas payment service
Equiniti provides a dividend payment service in over 30 countries that automatically converts payments into the local currency by an arrangement with Citibank Europe PLC. Further details, including an application form and terms and conditions of the service, are available on www.shareview.co.uk or from Equiniti by calling +44 (0)121 415 7047 or writing to Equiniti, Aspect House, Spencer Road, Lancing, West Sussex, BN99 6DA, United Kingdom (please quote Overseas Payment Service with details of the Company and your shareholder reference number).

Financial calendar

2014 Annual General Meeting	15 May 2014
Announcement of 2014 half year results	1 August 2014
Announcement of 2014 full year results	3 March 2015

Boiler room scams
In recent years, many companies have become aware that their shareholders have received unsolicited phone calls or correspondence concerning investment matters. These are typically from overseas based "brokers" who target UK shareholders, offering to buy their shares or sell them what often turn out to be worthless or high risk shares in US or UK investments. These operations are commonly known as "boiler rooms".

Shareholders are advised to be very wary of any unsolicited advice, offers to buy shares at a discount or offers of free company reports. If you receive any unsolicited investment advice:

- Make sure you get the correct name of the person and organisation.
- Check that they are properly authorised by the FSA before getting involved by visiting www.fsa.gov.uk/fsaregister/
- Report the matter to the FSA by calling 0845 606 1234 (or +44 20 7066 1000 from outside the UK).
- If the calls persist, hang up.

More detailed information on this can be found on the FSA website at: www.fsa.gov.uk/pages/consumerinformation/

Analysis of ordinary shareholders

As at 31 December 2013	Investor Type			Shareholdings			
	Private	Institutional and other	Total	1–1,000	1,001–50,000	50,001–500,000	500,001+
Number of holders	3,114	806	3,920	3,098	657	107	58
Percentage of holders	79.44%	20.56%	100%	79.03%	16.76%	2.73%	1.48%
Percentage of shares held	0.96%	99.04%	100%	0.18%	1.62%	6.47%	91.73%

Glossary of Terms

8D	An 8 step Vesuvius methodology to resolve customer, supplier and internal quality issues
ABC	Anti Bribery and Corruption
ABI	Association of British Insurers
AGM	Annual General Meeting
Boiler room	A term for an approach by unscrupulous people trying to buy/sell shares in worthless companies
Capex	Capital expenditure
CE	Chief Executive
CFD	Computational Fluid Dynamics
CFO	Chief Financial Officer
Clifford Chance	A law firm, used for advice to the Remuneration Committee and the Company
Co_2	Carbon dioxide
Co_2e	Carbon dioxide equivalent
Code of Conduct	The Vesuvius code of conduct emphasising the Group's commitment to legal and ethical behaviour
Company	Vesuvius plc
CRC	UK Government's Carbon Reduction Commitment
DRIP	Dividend reinvestment plan
DSBP	Deferred share bonus plan
DTR	The Disclosure and Transparency Rules of the UK Financial Conduct Authority
EBITDA	Earnings before interest, tax, depreciation and amortisation
EMEA	Europe, Middle East and Africa
EPS	Earnings per share
EU	European Union
FEC	Foundry Executive Committee
Fluxes	A range of powders used alongside refractory products in the enclosed continuous casting process for steel production
FRC	Financial Reporting Council
FRS	Financial reporting standards
FTSE250	Equity index whose constituents are the 101st to 350th largest companies listed on the London Stock Exchange in terms of their market capitalisation
Group	Vesuvius plc and its subsidiary companies
GEC	Group Executive Committee
HR	Human Resources
HSE	Health Safety and the Environment
IAS	International Accounting Standard
IFRS	International Financial Reporting Standards
IP	Intellectual property (for example, patents and trademarks)
IR	Investor Relations
ISO	International Standards Organisation
ISO 14000	Internationally recognised series of standards which specify the requirements for an environment management system
ISO 9001: 2008	Internationally recognised standard which specifies the requirements for a quality management system
KPI	Key performance indicator
LTC	Ladle tube changer
LTI	Lost time injury
LTIFR	Lost time injury frequency rate, a KPI which calculates the number of LTIs per million hours worked
LTIP	Long term incentive plan

Median	The middle number in a sorted list of numbers
NED	Non-executive Director
OEM	Original Equipment Manufacture
OHAS 18001	Occupational Health and Safety Advisory Services requirements for an OHS management system
Ordinary share	An ordinary share of 10p in the capital of the Company
QHSE	Quality Health Safety and the Environment
R&D	Research and development
RCT	Robot casting technology
SafetyBreakthorugh	A Vesuvius Safety plan
Scam	To obtain money or other goods from somebody by dishonest means
SIOPA	A safety improvement opportunity with permanent action
Shareholder	Holder of ordinary shares in Vesuvius plc
T3	Total tundish technology system
The Code/UK Code	The UK Corporate Governance code, issued by the Financial Reporting Council in September 2012
Towers; Towers Watson	A third party firm of remuneration consultants used to advise the Remuneration Committee
TSR	Total shareholder return
TurboS	The Vesuvius safety training programme
TurboQ	The Vesuvius quality training programme
UKGAAP	UK Generally Accepted Accounting Principles
WSA	World Steel Association

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