We are

Creators
Ground breakers
Discoverers

Free-thinkers

If I were to sum up the culture of Vesuvius, it would be 'think beyond your limits'.

I joined the Company towards the end of 2016 after completing my PhD in nanotechnology. I wanted to continue in research and Vesuvius' strategy of a strong focus on R&D made it very appealing to me as a company to work for.

I arrived as a scientist and during my three years at the Foundry R&D Centre in Enschede, Vesuvius has provided me with a number of challenging opportunities and the support I needed to fulfil them. Valuable managerial training has enabled me to progress my professional development, honing the skills necessary to be an effective and positive team leader.

Innovation is one of the key pillars of the success of Vesuvius. Within the R&D team of the Foundry Division, we go deep into the fundamental understanding of the feeding systems, identifying problems, key areas of research and new ways to improve performance in our own processes and, by extension, for our customers. I am actively involved in internal and external networking with our other sites, universities and research centres. This is a rich resource for pinpointing the best projects to maintain our status as a global leader in feeding systems technology.

Laura Graña Suarez
R&D Manager, Feeding Systems Group, Foundry R&D Centre Enschede, the Netherlands

Find out more at report2019.vesuvius.com

Governance

Board of Directors

John McDonough CBE
Chairman

Appointed to the Board
31 October 2012

N

Key strengths
> Proven strategic and leadership skills gained in a complex multinational business
> Strong engineering background and global commercial experience
> Clear leadership understanding of safety issues
> Operational and strategic understanding of a range of business environments gained from working in Asia-Pacific, EMEA and the UK
> Experience as CEO with an international listed company

Current external appointments
He is Chairman of Sunbird Business Services Limited and a Non-executive Director of Cornerstone Property Assets Limited.

Career experience
John spent 11 years as Group Chief Executive Officer of Carillion plc until he retired in 2011. Prior to this, he spent nine years working for Johnson Controls. He served as Chairman of The Vitec Group plc until retiring from the board at its AGM in May 2019. He has also previously served as a Non-executive Director and Chairman of the Remuneration Committee of Tomkins plc, as a non-executive Director of Exel plc and as a Trustee of Team Rubicon UK.

John was awarded a CBE in 2011 for services to industry.

Douglas Hurt
Senior Independent Director

Appointed to the Board
2 April 2015

A N R

Key strengths
> Qualified Chartered Accountant, with significant recent and relevant financial experience having served as Finance Director of a listed UK company for nine years
> Highly knowledgeable of both corporate and operational financial matters, with significant US and European experience
> Proven general management and leadership skills

Current external appointments
Senior Independent Director and Chairman of the Audit Committee of Countryside Properties PLC, and a Non-executive Director and Chairman of the Audit Committee of the British Standards Institution.

Career experience
Douglas was Finance Director of IMI plc, the global engineering group, for nine years until 2015. Prior to this, he spent 23 years at GlaxoSmithKline plc where he held a number of senior finance and general management positions. Douglas served as Senior Independent Director and Chairman of the Audit Committee of Tate & Lyle plc until July 2019. He began his career at Price Waterhouse.

Douglas is a Chartered Accountant.

Hock Goh
Non-executive Independent Director

Appointed to the Board
2 April 2015

A N R

Key strengths
> Strong focus on R&D and technology
> Wealth of experience dealing with safety and sustainability matters gained from more than 35 years working in the oil and gas industry
> In-depth knowledge of Asian markets
> Strong international commercial experience, gained through a global career in the oil and gas industry

Current external appointments
Non-executive Director of AB SKF, Santos Ltd and Stora Enso Oyj.

Career experience
Hock spent 25 years with Schlumberger, where his roles included serving as President of Network and Infrastructure Solutions in London, President of Asia-Pacific, and Vice President and General Manager of China. Following this, Hock spent seven years as a Partner of Baird Capital Partners Asia, based in China. He has previously served as Chairman of Advent Energy Ltd and MEC Resources Ltd, and as a Non-executive Director of Harbour Energy Ltd.

Friederike Helfer
Non-executive Director

Appointed to the Board
4 December 2019

N

Key strengths
> An experienced strategist, with strong analytic capability
> Commercial acumen and a strong track record of working with a portfolio of companies to identify scope for operational and strategic improvement

Current external appointments
Partner of Cevian Capital*, and was appointed a Non-executive director of the Supervisory Board of thyssenkrupp AG on 31 January 2020.

* Cevian Capital is a shareholder of Vesuvius plc and, at 27 February 2020, held 21.11% of Vesuvius' issued share capital.

Career experience
Friederike is a Partner of Cevian Capital.

Friederike joined Cevian in 2008 and from 2013 to 2017, served on the Board of Directors and the Audit Committee of Valmet, a Finnish engineering company, in which Cevian was also invested. Prior to joining Cevian, Friederike Helfer worked at McKinsey & Company. She is a CFA charter holder.

Key to Board Committee membership
A Audit Committee
N Nomination Committee
R Remuneration Committee
● Committee Chairman

Changes to the Board during the year
The Directors named below were in office during the year and up to the date of this Annual Report with the exception of Friederike Helfer who was appointed to the Board on 4 December 2019. Christer Gardell retired from the Board on 4 December 2019.

Patrick André
Chief Executive

Appointed to the Board
1 September 2017

Key strengths
> Global career serving the steel industry
> Strong background in strategic development and implementation
> Consumer focus and proven record of delivery, with strong commercial acumen
> Drive and energy in promoting his strategic vision

Current external appointments
None

Career experience
Patrick was President of the Vesuvius Flow Control business unit prior to his appointment as Chief Executive of the Group.

Before joining the Group in 2016, he served as Executive Vice President Strategic Growth, CEO Europe and CEO for Asia, CIS and Africa for Lhoist company, the world leader in lime production. Prior to this, he was CEO of the Nickel division, then CEO of the Manganese division of ERAMET group, a global manufacturer of nickel and special alloys.

Guy Young
Chief Financial Officer

Appointed to the Board
1 November 2015

Key strengths
> Extensive international experience gained in the mining and industrial sectors
> Qualified Chartered Accountant, with significant financial and business development experience
> Drive and energy in managing people and teams
> Focus on strategic execution and business optimisation

Current external appointments
None

Career experience
Guy was Chief Financial Officer of Tarmac and latterly Lafarge Tarmac, the British building materials company, between 2011 and 2015. Prior to this he spent 13 years working at Anglo American plc in various senior financial and business development positions, including as Chief Financial Officer of Scaw Metals Group, the South African steel products manufacturer.

Guy is qualified with the South African Institute of Chartered Accountants.

Jane Hinkley
Non-executive Independent Director

Appointed to the Board
3 December 2012

A N R

Key strengths
> Proven track record of managing complex global trading business
> Qualified Chartered Accountant, with significant financial and operational experience in large multinational companies
> Well-developed leadership and global team management skills

Current external appointments
None

Career experience
Jane was Managing Director of Navion Shipping AS for three years until 2001. Prior to this, she spent a large part of her executive career working at Gotaas-Larsen Shipping Corporation, the liquefied natural gas shipping specialist, where she served as Chief Financial Officer and Managing Director. She served as Chairman of Teekay GP LLC until May 2019, as a Non-executive Director and Chairman of the Remuneration Committee of Premier Oil plc until December 2019, and was also previously a Non-executive Director of Revus Energy ASA.

Jane is a Chartered Accountant.

Holly Koeppel
Non-executive Independent Director

Appointed to the Board
3 April 2017

A N R

Key strengths
> A strong track record of growing businesses, with more than 35 years of domestic and international utility, power and infrastructure experience
> International financial and operational experience managing assets on five continents
> Strong board experience both as an independent non-executive director and as an investor, in the US and internationally

Current external appointments
Non-executive Director and Chairman of the Audit Committee of British American Tobacco p.l.c., Non-executive Director and Chairman of the Governance Committee of The AES Corporation and a Non-executive Director of Arch Coal, Inc.

Career experience
From 2000 to 2009, Holly worked at American Electric Power Company, Inc., latterly serving as Chief Financial Officer. Prior to this, she spent 15 years at the Consolidated Natural Gas Corporation in a variety of management roles which included four years based in Australia. From 2010 to 2017, Holly was Co-Head of Citi Infrastructure Investors (which was renamed Gateway). She has also served as a Director of Integrys Energy Group, Inc., and Reynolds American Inc.

Group Executive Committee

Guy Young
Chief Financial Officer
4 years with the Group

1

For biographical details please see the Board of Directors on page 77.

Henry Knowles
General Counsel & Company Secretary
6 years with the Group

2

Appointed as General Counsel & Company Secretary in September 2013. Prior to joining Vesuvius, Henry spent eight years at Hikma Pharmaceuticals PLC, a generic pharmaceutical manufacturer with significant operations in the Middle East, North Africa and the United States where he held the roles of General Counsel and Company Secretary. Henry took responsibility for the Intellectual Property function in 2019.

Henry is based in London, UK.

Agnieszka Tomczak
Chief HR Officer
1 year with the Group

3

Appointed as Chief HR Officer in October 2018. Agnieszka has over 25 years of senior leadership experience in multinational companies spanning various business sectors and industries. Prior to joining Vesuvius, she spent 12 years at ICI, which was subsequently acquired by Akzo Nobel, in regional and global HR roles.

Agnieszka is based in London, UK.

Patrick André
Chief Executive
4 years with the Group

4

For biographical details, please see the Board of Directors on page 77.

Karena Cancilleri
President, Foundry
5 months with the Group

5

Appointed President, Foundry in October 2019. Karena joined the Group from Beaulieu International Group, where she served for six years as VP Engineered Products and latterly President Engineered Products. She has a broad breadth of managerial experience spanning various international leadership roles in companies such as FiberVisions, Kraton Corporation and Shell.

Karena is based in London, UK.

Thiago Avelar
President, Advanced Refractories
1 year with the Group

6

Appointed President, Advanced Refractories on 1 January 2020. Thiago joined Vesuvius in February 2019 as Regional VP Steel, South America, where he was responsible for Vesuvius' Steel Operations in South America. Prior to joining the Group, he worked for RHI Magnesita and Arcelor Mittal in various technical and marketing roles based in Europe and Brazil.

Thiago is based in London, UK.

Tanmay Ganguly
President, Business Development
14 years with the Group

7

Currently President, Business Development and has been appointed President, Flow Control with effect from 1 April 2020. Prior to this, Tanmay served as President, Advanced Refractories for five years. He joined the Group in India as Managing Director of Vesuvius India Ltd, before serving as Vice President Steel Flow Control and Advanced Refractories, South Asia.

Tanmay is based in Barlborough, UK.

Patrick Bikard
President, Operations & Technology
11 years with the Group

8

Appointed President, Operations in January 2014 with an emphasis on improving safety and quality, and reducing inventories, creating value through customer focus, lean techniques and continuous improvement. He was also given responsibility for Technology in 2019. He was previously Vice President for Manufacturing, QHSE, Engineering and Purchasing and, prior to joining Vesuvius, he held senior operational roles at Renault, Alstom and Faurecia.

Patrick is based in Ghlin, Belgium.

Corporate Governance Statement

Chairman's governance letter

Dear Shareholder,

On behalf of the Board, I am delighted to present the 2019 Corporate Governance Statement. This year, for the first time, we are reporting compliance against the new 2018 UK Corporate Governance Code issued by the Financial Reporting Council (the 'Code').

A copy of the Code can be found on the FRC website at: https://www.frc.org.uk/directors/corporate-governance-and-stewardship/uk-corporate-governance-code. The new Code is a shorter and more focused document than its predecessor, with a greater emphasis on purpose, culture and stakeholder engagement.

The Board of Vesuvius plc (the 'Company') is committed to maintaining high standards of governance and to developing them to reflect progression in best practice. The Corporate Governance Statement (the 'CG Statement') provides investors and other stakeholders with an annual insight into the governance activities of the Board and its Committees. The CG Statement also describes how the Group has complied with the Code Principles during 2019, except where we considered it more natural for us to describe the application of a Principle elsewhere in this Annual Report. The table opposite signposts where detailed information on each section of the Code (and associated Principles) can be found.

I am pleased to confirm that your Company is fully compliant with the Principles and Provisions of the Code for the year ended 31 December 2019.

As a Board, we remain committed to applying the highest standards of corporate governance, recognising that robust governance and culture underpin business success. With the advent of the new Code, we took the opportunity to refine some of our governance procedures, with a particular focus on how we assess the Group's culture and how we embed the practices which best promote the long-term success of the Group. Further details of our activities in this regard are given in the remainder of the CG Statement on pages 81-125.

We have spent more time this year formally considering the Group's engagement with its wide range of stakeholders, and for the first time conducted an extensive employee engagement survey. We were delighted that over 90% of our employees took the time to contribute their opinions on life at Vesuvius. The results have been analysed and shared in two-way meetings at all levels throughout the Group. Action plans have been created to address the issues raised and to ensure that we optimise this engagement with our workforce throughout the world. This is the beginning of a new dialogue with our employees and we intend to build on this foundation by issuing another survey, followed by another round of reviews, later this year.

The Nomination Committee has once again been focusing on succession planning, with more detailed activity on strengthening the Group's talent pool for senior management and discussing the future plans and priorities for Board rotation. It also oversaw the appointment of Friederike Helfer from Cevian Capital, who joined us when Christer Gardell stepped down from the Board in December 2019.

The Remuneration Committee's work this year has centred on the development of the new triennial Remuneration Policy, on which we have sought our major shareholders' views. The Audit Committee has been considering the Group's response to cyber security alongside its more standard responsibilities. Further details on the work of each of the Committees can be found in the respective Committees' Reports on pages 89-125.

The Board's formal evaluation process for 2019 was externally facilitated by the corporate advisory firm, Lintstock. The results of the review highlighted the Board's composition and dynamics as particular strengths, and concluded that the Board remained strong and effective with a good level of constructive challenge and debate. The evaluation highlighted a small number of Board priorities, which we look forward to progressing in 2020.

Yours sincerely

John McDonough CBE
Chairman

27 February 2020

In this section:

- **Board leadership and company purpose** on p82
- **Division of responsibilities** on p84
- **Audit Committee report** on p89
- **Nomination Committee report** on p97
- **Directors' Remuneration Report** on p102

Also see:

- **Group's statement of purpose** on p1
- **Strategic Report** on p1-73

Board Report
2018 UK Corporate Governance Code – Information Availability

Board Leadership and Company Purpose	The Corporate Governance statement ('CG Statement') on pages 80-125 gives information on the Group's compliance with Principles relating to the Board's Leadership and Company Purpose, but more detailed information on: > the Group's statement of purpose can be found on page 1 > the Group's strategy, resources and the indicators it uses to measure performance can be found on pages 4-51 in the Strategic Report (the 'SR') > the Group's engagement with stakeholders and the Group's S172(1) Statement is contained in the Section 172(1) Statement and Stakeholder Engagement section of the SR on pages 22-27 > the Group's approach to workforce matters can be found in the People and community section of the SR on pages 68-71, with further details of the Group's approach to employee involvement and engagement contained in the Section 172(1) Statement on pages 22-27 Details of the Group's framework of controls is contained in the Audit Committee report on pages 89-96 of the CG Statement and in the Risk, viability and going concern section of the SR on pages 28-33.
Division of Responsibilities	The CG Statement describes the structure and operation of the Board. The Nomination Committee report, on pages 97-101, describes the process the Company conducts to evaluate the Board, to ensure that it continues to operate effectively, that individual Directors' contributions are appropriate and that the oversight of the Chairman promotes a culture of openness and constructive yet challenging debate.
Composition, Succession and Evaluation	Details of the skills, experience and knowledge of the existing Board members can be found in the Board biographies contained on pages 76 and 77. Information on the Board's appointment process and approach to succession planning and Board evaluation is contained in the Nomination Committee report on pages 97-101 of the CG Statement.
Audit, Risk and Internal Control	Information on the policies and procedures the Group has in place to monitor the effectiveness of the Group's Internal and External Audit functions, and the integrity of the Group's financial statements is contained in the Audit Committee report on pages 89-96 of the CG Statement, along with an overview of the procedures in place to manage risk and oversee the internal control framework. Further information on the Group's approach to risk management is contained in the Risk, viability and going concern section of the SR on pages 28-33. The Board believes the 2019 Annual Report to be a fair, balanced and understandable assessment of the Company's position and prospects. A description of the Audit Committee's work in enabling the Board to reach this conclusion is contained in the Audit Committee report on pages 89-96.
Remuneration	The Directors' Remuneration Report section of the CG Statement describes the Group's approach to Directors' remuneration, including the procedure for developing policy and the Remuneration Committee's discretion for authorising remuneration outcomes. Details of linkage of the Directors' Remuneration Policy with long-term strategy is contained on page 102 and also highlighted on page 37 in the section of Key Performance Indicators in the SR.

Board Report continued

Board leadership and company purpose

The Board is responsible for leading the Group in an efficient and entrepreneurial manner, for establishing the Group's purpose, values and strategy and satisfying itself that these and the Group's culture are aligned. It focuses primarily upon strategic and policy issues and is responsible for ensuring the long-term sustainable success of the Group. It sets the Group's strategy, oversees the allocation of resources and monitors the performance of the Group. It is responsible for effective risk assessment and management. In performance of these duties, the Board has regard to the interests of the Group's key stakeholders and is cognisant of the potential impact of the decisions it makes on wider society.

Purpose

Vesuvius' stated purpose is to be a global leader in molten metal flow engineering and technology. In order to achieve this, the Group develops innovative solutions that enable our customers to improve their sustainability footprint, manufacturing quality and safety performance, whilst reducing cost by driving efficiency in their processes. The Group aims to deliver sustainable, profitable growth to provide its shareholders with a superior return on their investment, whilst providing each of its employees with a safe workplace where they are recognised, developed and properly rewarded.

The Board has identified seven key strategic objectives which form the basis for achieving this long-term sustainable success. It is currently pursuing five shorter-term key execution priorities, which define the Group's immediate strategic aims. Further information on these can be found on pages 14 and 15. Each month the Board reviews the Group's performance against a number of Key Performance Indicators (KPIs) which provide information on key aspects of the Group's financial and non-financial performance. This information assists the Board to assess progress with the execution of the Group's strategy and to determine any remedial action that needs to be taken. Detailed information on the Group's KPIs can be found on pages 36 and 37.

The Group has established a framework of prudent and effective controls to enable risk to be assessed and managed, further information on which can be found in the Audit, risk and internal control section on page 88 of this Board Report.

Culture

The Board takes seriously its responsibility for shaping and monitoring the corporate culture of the Group. In 2018, a new set of CORE Values was launched across the Group – Courage, Ownership, Respect and Energy. These Values define our priorities for behaviour across the business and are the practical representation of the culture we seek to foster, aligning with the Company's purpose, values and strategy, and supporting our governance and control processes. These values were rolled out across the Group and are prominently displayed at all sites. Our CORE Values are reinforced in our performance management systems, which ensure that they are firmly embedded in our day-to-day conversations and behaviours. Further detail can be found on page 55.

The CORE Values are supported by the Group's Code of Conduct which sets out the standards of conduct expected, without exception, of everyone who works for Vesuvius in any of its worldwide operations. The Code of Conduct emphasises the Group's commitment to ethics and compliance with the law, and covers every aspect of Vesuvius' approach to business, from the way that the Group engages with customers, employees, its markets and each of its other stakeholders, to the safety of its employees and places of work. Everyone within Vesuvius is individually accountable for upholding these requirements.

Vesuvius recognises that lasting business success is measured not only in financial performance but in the way in which the Group deals with its customers, business associates, employees, investors and local communities. The Board seeks to ensure that the Group's workforce policies and practices are consistent with the Group's long-term sustainable success. Further information about the Group's remuneration practices for senior managers can be found in the Directors' Remuneration Report on pages 102-125, the Group's approach to diversity in the Nomination Committee report on page 99, the Group's approach to HR matters in the People and community section on pages 68-73 and the Group's policies and procedures, including information on the Speak Up confidential employee concern helpline in the Our principles section on pages 54-57.

The Board recognises the need to 'walk the talk' on our CORE Values and all the Directors act with integrity and are fully committed to leading by example to promote the desired culture.

During the year, the Board's assessment of the Group's culture focused on the Group's:

(1) **Adherence to the CORE Values** – Throughout the year, the Board focused on ensuring that there is a consistent culture across the Group, underpinned by the CORE Values. It was delighted that 1,254 employees (12%) of the organisation were nominated for Living the Values Awards, which showcase examples of individuals and teams going the 'extra mile' to live the CORE Values. During site visits, the Directors focused on the extent to which the values are published, understood and motivate employee behaviour, and reported on their individual findings to the Board.

(2) **Commitment to safety** – The Board received monthly updates on the Group's performance against safety targets, and a thorough analysis of all Lost Time Incidents. All incidents are reported in detail at the next Board meeting. In addition, the Board receives biannual reports on the progress of the Group's safety programmes. In 2019, the Board supported the introduction of a new, dedicated process for safety auditing and the launch of a new set of Core Safety Rules. The Directors also used individual site visits to assess each site's commitment to safety, and the Remuneration Committee set the Executive Directors specific safety targets as part of their personal objectives for the Annual Incentive Plan.

(3) **Entrepreneurship** – As part of the Board's rolling agenda, the Board received reports from each of the business unit Presidents on their business's strategy, new commercial initiatives and future technology trends. These were complemented by a presentation from the President Operations & Technology on R&D activities throughout the Group. The Board also received quarterly reports on the Group's progress on innovation as well as other strategic initiatives. Following the strategy presentations held in June 2019, the Board followed up on the structure and experience of the commercial teams across the Group at subsequent meetings.

(4) **Transparency** – The Board used individual and collective site visits to assess the level of engagement and openness exhibited by the employees. These first-hand reviews were supported by its review of the output of the Group's Speak Up processes, which were updated and recommunicated during the year. The Audit Committee sought qualitative feedback from External and Internal Audit on how transparent/engaged managers had been during audit interactions.

(5) **Customer focus** – The Board received monthly updates on quality performance, which were supported by a full annual presentation on the Group's ongoing initiatives on quality and a review at each Board meeting of specific quality issues. At each Board meeting, the Board also considered the state of the Group's markets and the associated customer developments. As with previous years, the Chief Executive undertook regular visits to customers in 2019 and the Board incorporated customer visits into their Vesuvius site visit programme.

(6) **Diversity and respect for local cultures** – The Board reviewed the results of the employee engagement survey and subsequent management actions. The Board approved a new Group Diversity Policy.

Formal Board activities were supplemented by informal opportunities for the Non-executive Directors to interact directly with Vesuvius colleagues through Board dinners and site visits, and enabled Directors to undertake a rounded assessment of the Group's culture and direction. In 2019, visits were conducted by all the Non-executive Directors, covering sites in Belgium, Brazil, the Czech Republic, Germany, India, Japan, Mexico, Poland, South Korea and the USA. These visits provided the Board with greater clarity on local organisation and management, and the views of employees, as well as providing updates on business performance. The Directors engaged in first-hand discussions on culture and purpose, providing direct feedback on safety culture, understanding of Vesuvius' CORE Values, the work being conducted on diversity and programmes to develop and enhance employees' engagement – all of which remain key themes for the Board's attention in 2020 and beyond.

The Board identified areas for particular focus going forward, including rolling out the new Diversity Policy and assessing progress with its objectives, in addition to building on the enhanced employee engagement activities commenced in 2019, to strengthen the link between the Board and the Group's workforce.

Section 172 duties

The Directors are cognisant of the duty they have under Section 172 of the Companies Act 2006, to promote the success of the Company over the long term for the benefit of shareholders as a whole, having regard to a range of other key stakeholders. In performance of its duties throughout the year, the Board has had regard to the interests of the Group's key stakeholders and remained cognisant of the potential impact on these stakeholders of the decisions it has made. Details of the Board and the Company's engagement with stakeholders during the year can be found in the Section 172(1) Statement and Our Stakeholders section on pages 22-27.

The Board is committed to communicating with shareholders and other stakeholders in a clear and open manner and seeks to ensure effective engagement through the Company's regular activities.

The Company undertakes an ongoing programme of meetings with investors, which is managed by the Investor Relations team. The majority of meetings with investors are led by the Chief Executive and the Chief Financial Officer. In advance of the 2019 AGM, we wrote to our largest shareholders inviting discussion on any questions they might like to raise and making the Chairmen of the Board, the Audit Committee and the Remuneration Committee available to meet them should they so wish. Engagement on remuneration matters took place with a number of the Group's larger shareholders. Despite this engagement, at the 2019 AGM, 23% of votes were cast against the resolution relating to the approval of the Directors' Remuneration Report. Whilst a clear majority of shareholders were supportive of the resolution, three of the Company's larger shareholders, representing 22.67% of the Company's issued share capital, voted against the resolution. The Remuneration Committee invited a dialogue with these shareholders and spoke with two of them. The Remuneration Committee ascertained that these two investors' concerns principally related to the level of salary increase awarded to the Chief Executive for 2019 and discussed these concerns. The Company's rationale for its approach to this matter was set out in detail in the Directors' Remuneration Report in the 2018 Annual Report and Financial Statements and was discussed further in the aforementioned shareholder meetings.

The Remuneration Committee considered the earlier feedback in formulating proposals for the 2020 Remuneration Policy and wrote to shareholders at the beginning of this year inviting engagement on the proposed new Policy. We have subsequently entered into dialogue with a number of the Group's larger shareholders to discuss the new Policy.

Board Report continued

Division of responsibilities

The Board currently comprises eight Directors – the Non-executive Chairman, John McDonough CBE; the Chief Executive, Patrick André; the Chief Financial Officer, Guy Young; and five Non-executive Directors, Hock Goh, Friederike Helfer, Jane Hinkley, Douglas Hurt and Holly Koeppel. Christer Gardell served on the Board until he was replaced by Friederike Helfer on 4 December 2019. Douglas Hurt is the Senior Independent Director. Henry Knowles is the Company Secretary.

The Board considers that, for the purposes of the UK Corporate Governance Code, four Non-executive Directors (excluding the Non-executive Chairman), namely Hock Goh, Jane Hinkley, Douglas Hurt and Holly Koeppel, 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, and Friederike Helfer is a Partner, of Cevian Capital, which continues to hold 21.11% of Vesuvius' issued ordinary share capital. As a result, Christer Gardell was not considered to be independent during his term on the Vesuvius Board and Friederike Helfer is also not considered to be independent. The Chairman satisfied the independence criteria on his appointment to the Board. The Board and its Committees have a wide range of skills, experience and knowledge, and further details of each Director's individual contribution in this regard can be found in their biographical details on pages 76 and 77.

The Chairman and Chief Executive

The division of responsibilities between the Chairman and the Chief Executive is set out in writing. These were reviewed during the year as part of the Company's annual corporate governance review. They are available to view on the Company's website www.vesuvius.com.

The Board
Responsible for Group strategy, risk management, succession and policy issues. Sets the purpose, values and culture for the Group. Monitors the Group's progress against the targets set

Chairman
Provides leadership and guidance for the Board, promoting a high standard of corporate governance. Sets the Board agenda, and chairs and manages meetings. Independent on appointment, he is the link between the Executive and Non-executive Directors

Chief Executive
Develops strategy for review and approval by the Board. Directs, monitors and manages the operational performance of the Company. Responsible for the application of Group policies, implementation of Group strategy and the resources for their delivery. Accountable to the Board for Group performance

Senior Independent Director
Acts as a sounding board for the Chairman, an alternative contact for shareholders and an intermediary for other Non-executive Directors. Leads the annual evaluation of the Chairman and recruitment process for the Chairman's replacement, when required

Non-executive Directors
Exercise a strong, independent voice, constructively challenging and supporting the Executive Directors. Scrutinise performance against objectives and monitor financial reporting. Monitor and oversee risks and controls, determine Executive Director remuneration and manage Board succession through their Committee responsibilities

The Non-executive Directors meet at least twice a year without the Executive Directors being present

Company Secretary
Advises the Chairman on governance, together with updates on regulatory and compliance matters. Supports the Board agenda with clear information flow. Acts as a link between the Board and its Committees and between Non-executive Directors and senior management

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 occasions during 2020, holding ad hoc meetings to consider non-scheduled business if required.

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. No changes were made given the amendments made in 2018 to reflect the changing governance requirements of the new Code. These are available to view on the Company's website www.vesuvius.com.

Committee composition is set out in the relevant Committee reports. No one, other than the Committee Chairman and members of the Committee, is entitled to participate in meetings of the Audit, Nomination and Remuneration Committees. However, as detailed in the Committee reports, where the agenda permits, other Directors and senior management regularly attend by invitation, supporting the operation of each of the Committees in an open and consensual manner.

The interactions in the governance process are shown in the schematic below.

Board

Governance Committees

Audit Committee
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
Chairman Douglas Hurt
Membership All independent Non-executive Directors

Remuneration Committee
To determine the remuneration policy for the Executive Directors and set the appropriate remuneration for the Chairman, Executive Directors and senior management
Chairman Jane Hinkley
Membership All independent Non-executive Directors

Nomination Committee
To advise the Board on appointments, retirements and resignations from the Board and its Committees and to review succession planning and talent development for the Board and senior management
Chairman John McDonough, Chairman (except when considering his own succession, in which case the Committee is chaired by an appropriate Non-executive Director)
Membership Chairman and any three Non-executive Directors

Administrative Committees

In addition, the Board delegates certain responsibilities to a Finance Committee and Share Scheme Committee, which operate in accordance with the delegated authority agreed by the Board

Finance Committee
To approve specific funding and Treasury-related matters in accordance with the Group's delegated authorities or as delegated by the Board
Chairman John McDonough, Chairman
Membership Chairman, Chief Executive, Chief Financial Officer and Group Head of Corporate Finance

Share Scheme Committee
To facilitate the administration of the Company's share schemes
Chairman Any Board member
Membership Any two Directors or any two Directors and the Company Secretary

Group Executive Committee

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 business unit Presidents, the President Business Development, the Chief HR Officer, the President Operations & Technology and the General Counsel/Company Secretary. The GEC met eight times during 2019 and is scheduled to meet eight times during 2020. Its meetings are held at different Company venues round the world, focusing on the Group's key operations.

2019 Board programme

The Board discharges its responsibilities through an annual programme of meetings.

At each scheduled meeting, the following standard items are considered:

- Directors' duties and conflicts of interest
- Minutes of the previous meeting and matters arising
- Reports from the Chief Executive, the Chief Financial Officer and the Company Secretary on key aspects of the business
- Key Performance Indicators

Board Report continued

In addition, in 2019 the Board focused on key areas of strategy, performance and governance, including the issues outlined below:

Strategy	> Receiving and reviewing reports on strategy from the Flow Control, Advanced Refractories, Digital Services (Sensors & Probes) and Foundry business units > Receiving and reviewing regular reports from the Chief Executive on implementation of the Group's strategic objectives, including M&A opportunities > Reviewing and approving the acquisition of CCPI > Receiving and considering reports on the Group's quality, health, safety, environmental and sustainability strategy and objectives > Participation in a two-day off-site review of strategy attended by each business unit President and the Company's key financial advisers > Receiving and considering reports on the Group's HR, purchasing, Shared Service Centre, IT, tax and treasury strategies, legal and compliance activities and the management of the Group's key pension liabilities > Receiving and considering a report on the Group's research and development strategy and objectives > Reviewing the Group's financing structure > Reviewing the Group's internal control and risk management practices > Formulating an enhancement to the Group's employee engagement strategy, implementing and then reviewing progress
Performance	> Receiving monthly reports on the Group's financial performance against key indicators, including each of the Group's KPIs > Receiving monthly safety reports setting out performance against key indicators > Receiving regular monthly updates from the Chief Executive on the performance of the Group's businesses with a critical focus on safety and quality > Scrutinising the Group's financial performance and forecasts > Reviewing and agreeing the annual budget and forward-looking financial planning > Approving trading updates, and preliminary and half-year results
Governance	> Receiving regular reports from the Board Committees > Approving the Annual Report and Notice of AGM > Approving the payment of the interim dividend, and approving the recommendation of the payment of the final dividend subject to shareholder approval > Reviewing the Group's risk appetite and monitoring the Group's key risks > Completing an evaluation of the Board and Committees' performance and regularly reviewing progress against the improvement actions identified in 2018 > Reviewing and approving the Group's Modern Slavery Statement > Receiving regular updates on corporate governance and regulatory developments > Monitoring the amendments being made to the Group's governance arrangements to ensure full compliance with the new Code in 2019 > Completing a formal annual review of the Group's governance arrangements > Reviewing information received through the Group's Speak Up reporting processes > Renewing the Group's delegated authorities > Receiving reports from the Company's brokers on market issues

Information and support

The Board ensures that it receives, in a timely manner, information of an appropriate quality to enable it adequately to 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.

In addition to the formal Board processes, the Chief Executive provides written updates on important Company business issues between meetings, and the Board is provided with a comprehensive monthly report of key financial and management information, including information on safety and quality performance. Regular updates on shareholder issues are provided to the Directors, who also receive copies of analysts' notes issued on the Company. For the distribution of all information, Directors have access to a secure online portal, which contains a reference section containing background information on the Company.

All Directors have access to the advice and services of the Company Secretary. There is also an agreed procedure in place for Non-executive Directors, in the furtherance of their duties, to take independent legal advice at the Company's expense. The procedure was not utilised during the year under review.

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 any authorisations granted. The Board believes that the approach it has in place for reporting situational conflicts continues to operate effectively. No situational conflicts were presented to the Board for authorisation during the year under review.

Board and Committee attendance

The attendance of Directors at the Board meetings and at meetings of the principal Committees of which they are members held during 2019 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	8 (8)	—	—	6 (6)
Executive Directors				
Patrick André	8 (8)	—	—	—
Guy Young	8 (8)	—	—	—
Non-executive Directors				
Friederike Helfer[1]	n/a	—	—	n/a
Christer Gardell	7 (8)	—	—	3 (6)
Hock Goh	8 (8)	5 (5)	4 (5)	5 (6)
Jane Hinkley	7 (8)	5 (5)	5 (5)	6 (6)
Douglas Hurt	8 (8)	5 (5)	5 (5)	6 (6)
Holly Koeppel	7 (8)	5 (5)	5 (5)	5 (6)

1. Friederike Helfer was appointed to the Board at the close of the Board meeting held on 4 December 2019. No Board or Committee meetings were held in 2019 after her appointment.

Jane Hinkley and Holly Koeppel were unable to attend a Board meeting called at short notice during 2019. Hock Goh was unable to attend two scheduled Committee meetings and Holly Koeppel one scheduled Committee meeting during the year, and Christer Gardell was unable to attend one scheduled Board meeting and three Nomination Committee meetings due to clashes with other professional responsibilities that had been previously notified to the Chairman.

To the extent that Directors are unable to attend scheduled meetings, they receive the papers in advance and relay their comments to the Chairman for communication at the meeting. The Chairman follows up after the meeting in relation to the decisions taken.

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 recruitment role specifications, and each Non-executive Director's letter of appointment provides details of the meetings that they are expected to attend, along with the need to accommodate travelling time. Non-executive Directors are required to set aside sufficient time to prepare for meetings, and regularly to refresh and update their skills and knowledge. Copies of all contracts of service or, where applicable, letters of appointment of the Directors are available for inspection during business hours at the registered office of the Company and are available for inspection at the location of the Annual General Meeting (AGM) for 15 minutes prior to and during each AGM.

All Non-executive Directors have 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, and will involve visiting operational and customer sites around the Group. The Chairman in particular dedicates a significant amount of time to Vesuvius in discharging his duties.

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 during the process of their appointment and they are required to notify the Board of any subsequent changes.

The Company has reviewed the availability of the Chairman and the Non-executive Directors and considers that each of them can, and in practice does, devote the necessary amount of time to the Company's business.

Board Report continued

Composition, evaluation and succession

Appointment and replacement of Directors

The Company's Articles of Association specify that Board membership should not be fewer than five nor more than 15 Directors, 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. 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. However, in accordance with the requirements of the Code, all the Directors will offer themselves for election or re-election at this year's AGM. The Board believes that each of the current Directors is effective and demonstrates commitment to his or her respective role. Accordingly, the Board recommends that shareholders approve the resolutions to be proposed at the 2020 AGM relating to the re-election of all the Directors. The biographical details of the Directors offering themselves for election and re-election, including details of their other directorships and relevant skills and experience, will be set out in the 2020 Notice of AGM. The biographical details of the Directors are also set out on pages 76 and 77.

Recommendations for appointments to the Board and rotation of the Board are made by the Nomination Committee in accordance with a rigorous procedure. The Nomination Committee is also responsible for overseeing the maintenance of an effective succession plan for the Board and senior management. Further information on the activities of the Nomination Committee is set out in the Nomination Committee report on pages 97-101.

A comprehensive induction programme is available to new Directors. The induction programme is tailored to meet the requirements of the individual appointee and the dynamics of the Group, and includes as a minimum a series of meetings with key Group executives and advisers, along with site visits to the Group's largest sites.

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 and are encouraged and supported by the Company in attending them. In 2020, regulatory updates were provided as a standing item at each Board meeting in a Secretary's Report. External input on legal and regulatory developments impacting the business was also given, with specialist advisers invited to the Committees' meetings to provide briefings on matters such as forthcoming accounting changes and the changing landscape of UK Corporate Governance. All Non-executive Directors are encouraged to visit Vesuvius facilities on independent visits in order to engage with employees and they relay a report of these visits to the full Board. Details of the site visits undertaken in 2019 can be found in the Chairman's statement on page 10.

Performance evaluation

The Board carries out an evaluation of its performance and that of its Committees and individual Directors, including the Chairman, every year. Details of the evaluation conducted in 2019 can be found in the Nomination Committee report.

Audit, risk and internal control

The Board is responsible for ensuring that policies and procedures are in place to ensure the independence and effectiveness of the Internal and External Audit functions. The Audit Committee assists the Board in reviewing the effectiveness of the Group's Internal and External Audit functions, in addition to monitoring the integrity of the Group's financial and narrative statements. Further information about the work of the Audit Committee can be found in the Audit Committee report on pages 89-96.

The Board is also responsible for setting the Group's risk appetite and ensuring that appropriate risk management systems are in place. The Audit Committee assists the Board in reviewing the effectiveness of the system of internal control, including financial, operational and compliance controls, and risk management systems. The Group's approach to risk management and internal control is discussed in greater detail on pages 28-31 and the Group's principal risks and how they are being managed or mitigated are detailed on pages 32 and 33. The Viability Statement which considers the Group's future prospects is included on page 31. Risk management and internal control are also discussed in greater detail in the Audit Committee report.

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 critical areas of judgement. This means that, for example, the Directors are able to consider carefully the impact of incentive arrangements on the Group's risk profile and to ensure that the Group's Remuneration Policy and programme are structured to align with the long-term objectives and risk appetite of the Company.

Remuneration

The Directors' Remuneration Report on pages 102-125 describes the work of the Remuneration Committee in developing the Group's policy on executive remuneration, determining Director and senior management remuneration, reviewing workforce remuneration and related policies – including ensuring that these align with the Group's strategic objectives and culture, and overseeing the operation of the executive share incentive plans.

Audit Committee

Dear Shareholder,

On behalf of the Audit Committee, I am pleased to present the Audit Committee Report for 2019. The Committee largely works to a recurring and structured programme of activities which are defined in an annual rolling Audit Committee timetable. Additional items are then added and the Committee agenda is modified as the year progresses, to accommodate new topics and priorities.

In 2019, the Committee spent some time focusing on the Group's cyber security measures following the increased profile of cyber activity and an increase in malicious 'phishing' attacks. It also continued to focus on those operational sites where our internal audit function had highlighted the need for improvements in the local control environments.

In November, the Company received a letter from the Financial Reporting Council (FRC) as part of the usual cycle of the FRC's reviews of listed companies accounts. The FRC requested additional information on the presentation and treatment of a number of items in the Company's 2018 Annual Report and Financial Statements. The Committee approved management's response after review, discussion and input from the Group's External Auditor. The FRC have closed their enquiries on several points and the Group has adopted several recommendations in preparing the 2019 Annual Report and Financial Statements. The Group has recognised a prior year restatement relating to the year ended 31 December 2017 as a result of the FRC enquiry into the application of IAS 36 Impairment of Assets. Further detail is provided in Note 17.2 to the Group Financial Statements. We remain in correspondence with the FRC in respect of their outstanding enquiries. When reviewing the Company's 2018 Annual Report and Financial Statements, the FRC has made clear to us the limitations of its review is as follows: its review is based on the 2018 Annual Report and Financial Statements only and does not benefit from a detailed knowledge of the Group's business or an understanding of the underlying transactions entered into; communications from the FRC provide no assurance that the Company's 2018 Annual Report and Financial Statements are correct in all material respects and are made on the basis that the FRC (and its officers, employees and agents) accepts no liability for reliance on them by the Company or any third party, including but not limited to investors and shareholders; and the FRC's role is not to verify information provided but to consider compliance with reporting requirements.

The Audit Committee Report describes the work of the Committee during the year, including its role in monitoring the integrity of the Company's financial statements and the effectiveness of the Internal and External Audit processes. It provides an overview of the significant issues the Committee has considered during the year and its material judgements. It also describes how the Committee fulfilled its responsibilities to assist the Board in reviewing the effectiveness of the Group's system of internal financial controls and its internal control and risk management systems.

Yours sincerely

Douglas Hurt
Chairman, Audit Committee

27 February 2020

Committee Members

Douglas Hurt (Committee Chairman)
Hock Goh
Jane Hinkley
Holly Koeppel

The Company Secretary is Secretary to the Committee.

The Audit Committee

The Audit Committee comprises all the independent Non-executive Directors of the Company, who bring a wide range of financial and commercial expertise to the Committee's decision-making processes. Douglas Hurt is the Senior Independent Director and Chairman of the Audit Committee. He was the Finance Director of IMI plc for nine years prior to his appointment and has worked in various financial roles throughout his career. Douglas currently serves as the Chairman of the Audit Committee of Countryside Properties PLC and served as the Chairman of the Audit Committee of Tate & Lyle plc until July 2019. He is a Chartered Accountant. This background provides him with the 'recent and relevant financial experience' required under the Code.

The Code and Financial Conduct Authority Disclosure Guidance and Transparency Rules also contain requirements for the Audit Committee as a whole to have competence relevant to the sector in which the Company operates. Vesuvius' Non-executive Directors have significant breadth of experience and depth of knowledge on matters related to Vesuvius' operations, both from their previous roles and from their induction and other activities since joining the Vesuvius Board. The Directors' biographies on pages 76 and 77 outline their range of multinational business-to-business experience and expertise in fields such as engineering, manufacturing, services and logistics, as well as financial and commercial acumen. The Board therefore considers that the Audit Committee as a whole has competence relevant to Vesuvius' business sector.

Meetings

The Committee met five times during 2019. The Committee has also met twice since the end of the financial year and prior to the signing of this Annual Report. The Board Chairman, the non-independent Non-executive Director, the Chief Executive, the Chief Financial Officer, the Group Financial Controller/Head of Finance, the Group Head of Internal Audit and the External Auditor were all invited to each meeting. Other management staff were also invited to attend as appropriate.

Audit Committee meetings are conducted to promote an open debate, to constructively challenge significant accounting judgements, to provide guidance and oversight to management to ensure that the business maintains an appropriately robust control environment and to provide informed advice to the Board on financial matters. The Chairman of the Audit Committee encourages open dialogue between the External Auditors, the management team and the Group Head of Internal Audit, between Audit Committee meetings to ensure that emerging issues are addressed in a timely manner.

During the year, as is the Audit Committee's established practice, the Committee members met and discussed business and control matters with senior management during site visits, informal meetings and Board presentations. The Committee also met privately with the Group Head of Internal Audit and the External Auditor without any executives present.

Audit Committee continued

The outcomes of Audit Committee meetings were reported to the Board, and all members of the Board received the agenda, papers and minutes of the Committee.

Role and responsibilities

During 2019, the main role and responsibilities of the Committee continued to be to:

> Monitor the integrity of the Financial Statements of the Company and the Group, and any formal announcements relating to the Group's financial performance, and reviewing significant financial reporting judgements contained in them

> Provide advice, as requested by the Board, on whether the Annual Report and Financial Statements, taken as a whole, are fair, balanced and understandable and provide the information necessary for the shareholders to assess the Group's position and performance, business model and strategy

> Review and monitor the effectiveness of the Group's internal financial controls and the Group's internal control and risk management systems

> Establish, as appropriate, and review procedures for detecting fraud, and systems and controls for the prevention of bribery and ensure that procedures are put in place to refer all concerns raised by employees about possible wrongdoing in financial reporting or other matters to the Committee

> Monitor and review the effectiveness of the Company's Internal Audit function, ensuring that the function is adequately resourced and operates with appropriate independence

> Make recommendations to the Board on the appointment, reappointment and removal of the External Auditors and approve the remuneration and terms of engagement of the External Auditors

> Monitor and review with the External Auditors the findings of their work, including key accounting and audit judgements, how any risks to audit quality were addressed and the External Auditor's view of its interactions with senior management

> Review and monitor the External Auditors' independence, objectivity and effectiveness, taking into consideration relevant UK professional and regulatory requirements and any FRC audit inspection findings

> Oversee the operation of the policy on the engagement of the External Auditors to supply non-audit services

> Report to the Board on how the Committee has discharged its responsibilities

The Committee operates under formal terms of reference approved by the Board, which were reviewed during the year. They are available in the Investors/Corporate Governance section of the Company'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. These powers were not utilised 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 2019

1. The Committee's agenda covered the usual standing items – the review of financial results, the effectiveness of the Group's internal financial controls, and the review of the internal control and risk management systems – as well as additional topics, including updates on cyber security and in-depth reviews of the Group's robotics sales and the Financial Operating Model.
2. In reviewing the Financial Operating Model, the Committee considered the appropriateness of the segregation of roles and duties within the Group's global finance operations, the further integration of the shared service structure and the reorganisation of formal reporting lines to improve efficiency in the analysis and communication of financial information.
3. The FRC wrote to the Company as part of its review of the Group's 2018 Annual Report and Financial Statements. The Committee has supervised the Company's response to the matters raised in their review letter. We have enhanced certain disclosures in these 2019 Annual Report and Financial Statements and have revisited our approach to impairments that has resulted in an adjustment to the opening value of goodwill and tangible fixed assets.
4. The Audit Committee continued to devote time to ensure that initiatives to mitigate potential risks and financial exposure remained robust and appropriate. The Committee challenged the assumed growth rates and discount rates used for asset impairment assessments.
5. The Committee considered the Company's going concern statement and challenged the nature, quantum and assessment of the significant risks to the business model, future performance, solvency and liquidity of the Group that were modelled as part of the scenarios and stress testing undertaken to support the Viability Statement made by the Company in the 2018 Annual Report and Financial Statements. The 2019 Viability Statement, which was also critically reviewed, is contained within the Strategic Report and can be found on page 31.
6. The Committee monitored the resourcing and delivery of the 2019 Internal Audit plan and approved the 2020 Internal Audit plan. The Committee monitored both the responses from and follow-up by management to Internal Audit recommendations arising during the year.
7. The Committee approved enhancements to the Internal Audit approach through 2019 with the introduction of Trial Balance Deep Dive audits and for smaller entities Financial Controls Healthcheck audits which establish whether more extensive Internal Audit attention is warranted.
8. The Committee discussed at length significant issues raised, the root causes for those issues and the actions being taken to resolve the issues.
9. The Committee conducted regular, detailed reviews of provisions, challenging the reasonableness of underlying assumptions and estimates of costs and the quantum of any related insurance assets.
10. The Committee considered the impact of new accounting standards. IFRS 16 Leases and IFRIC 23 Income Taxes were effective from 1 January 2019 and the Committee reviewed their impact on the Group Financial Statements.
11. The Committee reviewed its terms of reference.
12. The Committee reviewed the effectiveness of the External Audit process.

The Committee members believe that they received sufficient, relevant and reliable information throughout the year from management and the Internal and External Auditors to enable the Committee to fully discharge its responsibilities. The work of the Audit Committee is further elaborated in the paragraphs below.

Statement of compliance with the Competition and Markets Authority (CMA) Order

The Committee considers that the Company has complied with The Statutory Audit Services for Large Companies Market Investigation (Mandatory Use of Competitive Processes and Audit Committee Responsibilities) Order 2014 (Article 7.1), published by the CMA on 26 September 2014, including with respect to the Audit Committee's responsibilities for agreeing the audit scope and fees and authorising non-audit services.

Financial reporting

The Committee fulfilled its primary responsibility to review the integrity of the 2019 half-year and 2019 annual Financial Statements and recommended their approval to the Board.

In forming its views, the Committee assessed:

> 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 management judgements and/or estimates had been made that were material to the reporting or where discussions had taken place with the External Auditors in arriving at the judgement or estimate

> In relation to the overall Annual Report, whether the Annual Report and Financial Statements taken as a whole were fair, balanced and understandable, taking into consideration all the information available to the Committee

> The application of the FRC's guidance on clear and concise reporting

> The disclosure and presentation of alternative performance measures, in view of the guidelines issued by the European Securities and Markets Association

The Committee actively deliberated and challenged reports from the Chief Financial Officer and the Group Financial Controller/Head of Finance. These were well prepared and, for areas of judgement and/or estimation, set out the rationale for the accounting treatment and disclosures, and the pertinent assumptions and the sensitivities of the estimates to changes in the assumptions. PwC also delivered memoranda for the half-year and year-end, stating its views on the treatment of significant issues. PwC provided a summary for each issue, including its assessment of the appropriateness of management's judgements or estimates.

Significant issues and material judgements

The Committee considered the following significant issues in the context of the 2019 financial statements. It identified these areas to be significant, taking into account the level of materiality and the degree of judgement exercised by management.

The Committee resolved that the judgements and estimates made on each of the significant issues detailed below were appropriate and acceptable. It is considered that judgements and estimates in relation to income tax and provisions are considered critical in the context of the 2019 Financial Statements as listed in Note 3 to the Group Financial Statements.

Impairment of intangible assets

The FRC wrote to the Company as part of its review of the 2018 Annual Report and Financial Statements. In response to one of the matters they raised, the Company has revisited its approach to impairments to comply with IAS 36 Impairment of Assets. The Committee has reviewed and challenged management's proposals to effect this change and in so doing, the forecasts for the Steel Digital Services operating segment have been revisited as at 31 December 2017 and 31 December 2018. The Committee concurs with this change requiring an impairment to write off the value of this cash-generating unit (CGU's) goodwill of £17.4m at 31 December 2017.

The 2019 year-end carrying value of goodwill of £620.2m was tested against the current and planned performance of the Steel Advanced Refractories, Steel Flow Control and Foundry CGUs. The Committee considered the Board-approved medium-term business plans, the terminal growth assumptions as well as the discount rates used in the assessments and the relevant sensitivities that were evaluated. The detailed assumptions, provided in Note 17 to the Group Financial Statements, reflect an increase in the equity risk premium, partially offset by a reduction in global risk-free rates. These changes are not specific to Vesuvius.

Given that the models indicated that there remains significant headroom between the value in use and the carrying value, the Committee concurred that no goodwill impairment charges were required.

Income tax

Income tax remains a complex area where significant judgements are required to estimate both uncertain tax liabilities and the value of deferred tax assets.

The Committee challenged the assumptions used to arrive at the £14.3m (2018: £29.3m) provided for income tax payable which includes £11.8m (2018: £20.2m) for uncertain tax provisions as set out in Note 10.5 to the Group Financial Statements. After discussions with internal tax experts and considering the results of recent tax audits and the views of the External Auditors, the Committee concurred with management's judgement.

Audit Committee continued

At the end of 2019, the Group recognised a US deferred tax asset of £61.3m (2018: £67.3m). The recognition of deferred tax assets for tax losses and other temporary differences is a highly technical area and the Committee has drawn on internal experts to understand the treatment. Following the significant increase in US deferred tax asset recognition in 2018, the Committee reviewed the Group's projections for trading in the US and concurred with management that the US forecast profits are considered sufficient to sustain the deferred tax asset in the US at the end of 2019.

In light of the substantial recognition on the Group's balance sheet of the US tax losses and other temporary differences, the Committee considered that the utilisation of these deferred tax assets, which offset the Group's US taxable headline profits, should continue to be reflected as part of the Group's headline tax charge.

Other provisions

The Committee has been made aware of a number of potential exposures and claims arising from ongoing litigation, product quality issues, employee disputes, restructuring, environmental matters, onerous leases, indirect tax disputes and indemnities or warranties outstanding for disposed businesses. Due to the long gestation period before settlement can be reached, provisioning for these items requires careful judgement in order to establish a reasonable estimate of future liabilities. The Committee also assessed the strength of any insurance coverage for certain of these liabilities and challenged the accounting treatment for any amounts deemed to be recoverable from insurers. After due consideration and challenge, with expert advice sought in certain areas, the Committee is satisfied that there are appropriate levels of provisions set aside to settle third-party claims and disputes (Note 30 to the Group Financial Statements) and that adequate disclosure has been made. Where the outcome of an existing issue is uncertain, or where no reliable estimate of the potential liability can be made, no provision has been made and appropriate disclosure is included under contingent liabilities (Note 32 to the Group Financial Statements).

Restructuring charges

During 2019, the Group's restructuring programmes were expanded and intensified. The Committee critically reviewed the treatment of the restructuring costs disclosed as separately reported items in 2019 and concluded that these have been treated consistently with the accounting policy. This ensures that only significant restructuring programmes that have a defined scope and are material in nature are reported separately, which enables a clearer understanding of the underlying results of the Group.

Impairment of investment in subsidiaries

The Committee has also reviewed management's impairment analysis of the parent company's investment in subsidiaries. Whilst it concurred that no impairment is required, it agreed that additional disclosure was required around the sensitivity of the forecasts to reasonably possible changes in certain assumptions which might require an impairment in 2020.

Fair, balanced and understandable reporting

The Committee considered all the information available to it in reviewing the overall content of the Annual Report and Financial Statements and the process by which it was compiled and reviewed, to enable it to provide advice to the Board that the Annual Report and Financial Statements are fair, balanced and understandable. In doing so, the Committee ensured that time was again dedicated to the drafting and review process so that internal linkages were identified and consistency was tested. Drafts of the Annual Report and Financial Statements were also reviewed by a senior executive not directly involved in the year-end process who reported to the Committee on his impressions of clarity, comprehensiveness, balance and disclosure in the document.

On completion of the process, the Committee was satisfied that it could recommend to the Board that the Annual Report and Financial Statements are fair, balanced and understandable.

Risk management and internal controls

As highlighted in the reviews of strategy and principal risks in the Strategic Report, risk management is inherent in management's thinking and is embedded in the business planning processes of the Group. The Board has overall responsibility for establishing and maintaining a system of risk management and internal control, and for reviewing its effectiveness. 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. This framework is consistent with the Code.

In 2019, Committee members fully participated in the Board review of existing risks and ongoing mitigating actions, further details of which are given on pages 32 and 33. The Committee believes that the Group's process for identifying and understanding its principal risks and uncertainties remains robust and appropriate.

The Committee considered the Company's going concern statement and challenged the nature, quantum and effects of the combination of the unlikely but significant risks to the business model, future performance, solvency and liquidity of the Group. These were all modelled as part of the scenarios and stress testing undertaken to support the Viability Statement. As part of this review, the Committee considered the Group's forecast funding requirements over the next three years and analysed the impact of key risks faced by the Group with reference to the Group's debt covenants. The scenarios considered the impact of multiple risks occurring simultaneously and the additional mitigating actions that the Group could take. The Committee noted that the Group's debt headroom was sufficient to accommodate the modelled stress scenarios. As a result of its review, the Committee was satisfied that the going concern statement and Viability Statement had been prepared on an appropriate basis. The 2019 going concern statement and the 2019 Viability Statement are contained within the Risk, viability and going concern section on page 31.

The key features of the Group's internal control system, which provides assurance on the accuracy and reliability of the Group's financial reporting, are detailed in the Risk, viability and going concern section on pages 28-33. During 2019, the Committee considered the process by which management evaluates internal controls across the Group. The Group Head of Internal Audit provided the Committee with a summary overview of the assurance provided by the Group's control framework and the testing of these controls. PwC also reviewed controls in the businesses within the scope of its audit.

The Group is made up of several large operating units, but also many small units in geographically diverse locations. Consequently, segregation of duties, overlapping access controls on systems and remote management oversight can give rise to control vulnerabilities and fraud opportunities. The Group has not adopted a common Enterprise Resource Planning system as a Group-wide standard. Over time, the Group is moving towards a shared services model, enabled by control, process and systems standardisation between businesses. This is expected to enhance the overall internal control environment in the smaller operating units.

The Group undertakes a range of activities to mitigate the risk of fraud. This framework is regularly reviewed to determine areas for improvement. Eliminating the risk of fraud remains one of the key areas of focus for Internal Audit, forming a fundamental part of 'full scope' and financial audits. These assess the quality of the balance sheet reconciliations, review key judgement matters, consider ERP access rights, review tenders and quotations, review the entity's controls over master data changes, and review controls over payments, journals and associated applications.

Any control issues identified by management locally or as a result of the work performed by Internal Audit are escalated as appropriate. Internal Audit rate all control issues they identify in terms of their significance and agree remediation plans with the Auditee and an Action Owner, establishing a target date for remediation. For significant issues, management at all levels within the business are engaged to agree the actions and remediation dates. The status of the remediation is monitored and overdue issues are reported at Audit Committee meetings. The Audit Committee continues to challenge management on the root cause for issues arising and on the progress of remediation activities.

In the first quarter of 2019, Vesuvius experienced a heightened number of 'phishing' emails presenting fake credentials. A small number of breaches were identified stemming from the receipt of these emails which were addressed immediately with the support of external cyber security specialists. No financial loss arose as a result of these breaches. Consequently, the internal training programme on cyber/IT security was further enhanced and a programme of work was commenced to strengthen Vesuvius' overall IT security.

During 2019, the Group continued its review of third-party representatives and intermediaries. This included detailed due diligence for active sales agents and custom clearance agents. The Committee also continued its assessment of the Group's potential exposure to bribery and corruption risks, noting the ongoing work conducted by the Group in this context, such as face-to-face visits to operations, providing focused, country-specific training and reviewing financial records. The output of these processes and previous risk assessments continue to be used to develop Group policies and procedures for the management of anti-bribery and corruption risk, reflecting an appropriate level of control for the business.

In line with the requirements of the new Code, responsibility for the oversight of and monitoring of the Group's Speak Up helpline, which collates allegations of improper behaviour and employee concerns, passed from the Audit Committee to the full Board. Procedures remain in place for any complaints received by the Company regarding fraud, accounting, internal accounting controls and auditing matters, to be passed to the Audit Committee for review and appropriate follow-up action. Further details of the operation of the Group's Speak Up policy and helpline can be found in the Our principles section of the Annual Report on pages 54-57.

Each year, the senior financial, operational and functional management of the businesses self-certify compliance with Group policies and procedures for the areas of the business under their responsibility and confirm the existence of adequate internal control systems throughout the year. The Committee reviews any exceptions noted in this bottom-up exercise.

The work undertaken during the year indicated the existence of an appropriate control environment, albeit with some areas for improvement, for which clearly defined improvement actions have been identified, particularly in respect of the Group's cyber risks. No significant control issues were raised by our External Auditors, PwC and Mazars, and no material issues were identified in 2019. After considering these various inputs, the Committee was able to provide assurance to the Board on the effectiveness of internal financial control within the Group, and on the adequacy of the Group's broader internal control systems.

Internal Audit

The Group's Internal Audit function operates on a global basis through professionally qualified and experienced individual members located around the world. They report to the Group Head of Internal Audit, based in London, who in turn reports directly to the Chairman of the Audit Committee.

Throughout 2019, Internal Audit primarily performed Compliance & Control (C&C) audits which focus on internal financial controls and key Board compliance issues. Effectiveness & Efficiency (E&E) audits, which focus on a broader range of business performance issues, are only performed in response to a direct request from management. This approach allows the Audit Committee to concentrate on key control issues for resolution. Over the course of 2019, Internal Audit modified its audit approach to include detailed review of the Trial Balance and its underlying transactions. These Trial Balance Deep Dive Audits resulted in the identification of several control issues. The actions being taken to address these issues have been discussed at length at Audit Committee meetings with regular updates on the progress made. In addition, Financial Controls Health Check Audits have been introduced. These allow the audit coverage to be extended by including the smaller entities which are audited less often. Each entity is requested to provide key financial data and evidence of key reconciliations. This is subject to a remote desktop review. In instances where the initial documentation provided is judged not to be 'fit for purpose', a site visit is arranged and more detailed audit work performed.

Audit Committee continued

The Committee received, considered and approved the 2019 Internal Audit plan, which was constructed using a risk-based approach to cover the Group's control environment. The plan was based on the premise that all operating units are audited at least once every three years, including the smaller operating units. Internal Audit annually audits each of the large operating entities located in Germany, the US, China, Mexico and Brazil. During the year, the Committee also considered and approved changes to the Internal Audit plan as required.

In 2019, a total of 29 audit assignments, including three 'Deep-Dive' audits, were undertaken, covering 48% of the Group's revenue and 69% of the Group's profit before tax. The Committee received a report from the Group Head of Internal Audit at each of its meetings detailing progress against the agreed plan, key trends and findings, and an update on the progress made towards resolving open issues. Common themes emerging from Internal Audit reports coupled with Internal Audit and management's assessment of risk have informed the development of the 2020 Internal Audit plan.

When necessary, Internal Audit uses External Auditors to supplement internal resources on an ad hoc basis. Individuals are usually sourced for their technical expertise in a particular area. The process provides valuable learning opportunities and we expect to continue to use external auditors to supplement internal audits in specialist areas and geographies in the future.

Control issues continue to be recorded in a live web-based database into which management is required to report progress towards addressing any open issues. Internal Audit monitors the progress made and frequent meetings continue to be held with each business unit President to ensure that engagement on the resolution of issues is clearly understood at all levels of the business and responsibility for remediation has been appropriately assigned. The results are communicated to the Audit Committee which also involves senior management as necessary to provide an update against any high-priority actions and Internal Audit undertakes follow-up reviews as required. In situations where audit findings required longer-term solutions, the Committee oversaw the process for ensuring that adequate mitigating controls were in place.

During the year, an internal review was undertaken of the effectiveness of the Internal Audit function, canvassing the views of the Divisional Finance Vice Presidents and business unit Presidents. This highlighted increasing satisfaction with the relevance and value of issues raised, and the quality of reporting. It did, however, highlight the need to continue to upgrade the skills and capabilities of the Internal Audit function, particularly in light of the loss of the IT specialist, and action is being taken to further strengthen the team.

Having considered the work of the Internal Audit function during 2019, including progress against the 2019 Internal Audit Plan, the quality of reports provided to the Committee, and the results of the review of the function's effectiveness, the Committee concluded that the Internal Audit function operated effectively during 2019.

External audit

Auditors' appointment

In 2017, the Company appointed PricewaterhouseCoopers LLP (PwC) as External Auditors to the Company and the Group and Mazars LLP to audit the non-material entities within the Group. PwC nominated Julian Jenkins as the audit partner responsible for the Group audit. In line with the regulations on auditor rotation, the external audit contract will be put out to tender at least every ten years. In addition, PwC will be required to rotate the audit partner every five years.

2019 Audit plan

PwC's 2019 year-end audit plan was based on objectives agreed with management as part of the FY2018 audit debrief. The audit focused on areas identified as representing significant risk and requiring significant judgement. PwC maintained an ongoing dialogue with the Audit Committee throughout the year providing regular updates, including commentaries on significant issues and its assessment of consistency and appropriateness in the judgements and estimates made by management. Private sessions were held with PwC without management being present. PwC confirmed that its work had not been constrained in any way and that it was able to exercise appropriate professional scepticism and challenge throughout the audit process. The Chairman of the Audit Committee met on a number of occasions with PwC to monitor the progress of the audit and discuss questions as they arose.

The Independent Auditors' Report provided by PwC on pages 132-138 includes PwC's assessment of the key audit matters. These key audit matters are discussed in the significant issues and material judgements comments above. The report also summarises the scope, coverage and materiality levels applied by PwC in its audit. As part of the audit planning process and based on a detailed risk assessment, the Committee agreed a materiality figure of £8.6m for Group financial reporting purposes which is lower than last year (£9.4m) and, in line with similar groups, is set at 5% of headline profit before tax of £171.4m. Importantly, much lower levels of materiality are used in the audit fieldwork on the individual businesses across the Group and these lower figures drive the scope and depth of audit work. Any misstatement at or above £0.43m was reported to the Committee.

There were no significant changes this year to the coverage of the audit which stood at 69% of the Group's revenue, 76% of profit before tax and 64% of headline profit before tax. This coverage was considered to be sufficient by the Committee. The audit coverage is reflective of the long tail of smaller businesses within the Group that individually are not 'material' to the Group result.

The Committee also received a report from Mazars during the year summarising the findings and recommendations from its statutory audits for the year ended 31 December 2018 of the non-material Group subsidiaries and management agreed to implement certain of these recommendations.

The PwC audit fee approved by the Audit Committee was £1.8m. This was constructed bottom up on a local currency basis and was assessed in light of the audit work required by the agreed materiality level and scope. The fee agreed with Mazars for the audit of the non-material entities was £0.5m, resulting in a combined audit fee with PwC of £2.3m, compared with £2.2m in 2018.

Independence and objectivity

The Committee is responsible for safeguarding the independence and objectivity of the External Auditors in order to ensure the integrity of the external audit process. In discharging this responsibility during 2019, the Committee:

> Sought regular confirmation from the incumbent External Auditors that they considered themselves to be independent of the Company in their own professional judgement, and within the context of applicable professional standards

> Assessed the External Auditors' work and considered whether they were exercising an appropriate level of professional scepticism

> Evaluated all the relationships between the External Auditors and the Group, including compliance with the Group's policy on the employment of former employees of the External Auditors, to determine whether these impaired, or appear to impair, the Auditors' independence

> Reviewed compliance against the policy on the provision of non-audit services by the External Auditors

> Reviewed details of the non-audit services provided by the External Auditors and associated fees

As a result of its review, the Committee concluded that PwC remained appropriately independent.

Non-audit services

Vesuvius operates a policy for the approval of non-audit services. A copy of the current policy is available to view on the 'Investors/Corporate Governance' section of the Company's website, www.vesuvius.com. In 2019, Group companies were not permitted to use the External Auditors for any 'prohibited non-audit services' as specified by the UK Financial Reporting Council's (FRC's) Revised Ethical Standard 2016, unless subject to a permitted derogation.

The restrictions broadly prohibited External Auditors' involvement in tax services, any services that involve playing a part in management decision-making, preparing accounting records, designing or implementing internal control/risk management services or financial systems, certain HR services and other legal, investment and share-dealing services. The External Auditors could be invited to provide non-audit services which, in their position as External Auditors, they must or were best placed to undertake and which did not impact on auditor objectivity or independence. All audit-related and permissible non-audit services proposed to be carried out for any Group company worldwide by the External Auditors had to be pre-approved by the Chief Financial Officer, who thereafter was required to refer matters to be further approved by the Chairman of the Audit Committee or the full Audit Committee before an engagement was agreed. Any assignment proposed to be carried out by the External Auditors also had to be cleared by the External Auditors' own internal pre-approval process to confirm the firms' ethical ability to do the work.

In practice, the Group did not seek to engage PwC for non-audit services during 2019 except for audit related services that are required to be performed by an auditor. In 2019, the fees for non-audit services payable to PwC amounted to £0.1m (2018: £0.1m). The 2019 fees represent payment for assurance services related to the review of the Group's half-year financial statements, quarterly reviews and tax form audits in India (as required by regulation).

In light of the FRC's publication of a revised 2019 Ethical Standard, the Committee has approved a revised Non-audit Services Policy to comply with the new Standard. This new Policy takes effect from 15 March 2020. The Group is not currently sourcing any services from the External Auditors that would not meet the new criteria in the revised Standard.

Effectiveness of PwC

The Committee and the Board are committed to maintaining the high quality of the external audit process. Each year the Committee carries out a formal assessment of the performance of the External Auditors. Input into the evaluation was obtained from management and other key Company personnel, members of the Audit Committee and the External Audit team. The review focused on the External Auditor's mindset and culture, skills, character and knowledge, and the quality of its controls, as set out in the guidance for audit committees prepared by the FRC.

In 2019, the evaluation of the External Auditors included the following steps:

> a survey of key finance and non-finance stakeholders in Head Office and in-scope countries

> a commentary-based survey of Audit Committee members focused on their experience of working with PwC

> consideration of PwC's approach to assessing the risks to its audit quality and an evaluation of the actions it had taken to mitigate these

> a review of other external evidence on PwC audit quality (e.g. report on PwC by the FRC)

> an assessment against the objectives outlined in PwC's Audit Objectives report

> discussions with PwC and key finance and non-finance personnel

The evaluation concluded that PwC provided an effective audit for the 2018 financial year, building on its experience from the prior year to improve the efficiency and effectiveness of the audit, with improved communication between the Group and PwC's local teams and earlier planning of year-end processes. The PwC team was noted to exhibit strong technical expertise and appropriate challenge and was seen as independent by the Audit Committee and management. PwC was deemed to have provided an objective and challenging audit process for 2018. Debrief meetings were held at a local level to facilitate further improvements to the audit planning for the 2019 audit.

Audit Committee continued

Reappointment of PwC for 2020

The Committee is responsible for making recommendations to the Board in relation to the appointment, reappointment and removal of the External Auditors. In undertaking this duty, the Committee takes into consideration a number of factors concerning the Auditor and the Group's current activity, including:

> the results of its most recent review of the effectiveness of the Auditors

> the results of its review of the independence and objectivity of the Auditors, particularly in light of the provision of non-audit services

> its ability to coordinate a global audit, working to tight deadlines

> the cost-competitiveness of the Auditors in relation to the audit costs of comparable UK companies

> the tenure of the incumbent Auditors

> the periodic rotation of the senior audit management assigned to the audit of the Company

In addition, the Committee considers external reviews of the performance and quality of the Auditors, including:

> the annual report issued by the Audit Inspection Unit of the Financial Reporting Council on the work of the Auditors

> the Auditors' own annual Transparency Report

Having considered the aforementioned factors, the Committee decided to recommend to the Board that PwC be reappointed for 2020. It confirms that its recommendation is free from the influence of any third party and that there are no contractual restrictions on the choice of auditor. A resolution proposing the reappointment of PwC is included in the notice of AGM for 2020.

The Committee noted the ruling by the Securities Exchange Board of India (SEBI) regarding the prohibition placed on PwC network companies performing audits of listed entities for two years from 1 January 2018. This allowed a transitional period and the audit of Vesuvius entities in India remained permissible for the year ended 31 December 2018. PwC subsequently won the appeal at the Securities Appellate Tribunal (SAT) allowing PwC to continue with existing audits of listed companies. SEBI appealed against the SAT order in November 2019 and this was stayed by the Supreme Court pending final disposal of the appeal. For the rest of the order, dealing with the ban, there has not been any hearing and no date has been fixed. The Committee continues to monitor developments on this matter in the context of the Group's two listed Indian subsidiaries, Foseco India Limited and Vesuvius India Limited. The Group has contingency plans in place should PwC not be able to continue to audit the Group's entities in India.

Audit Committee evaluation

The Audit Committee's performance was evaluated as part of the overall externally facilitated Board and Committee performance evaluation, which is described in depth on page 100. The overall performance of the Audit Committee was rated highly, with the quality of the information provided to the Audit Committee stated to be of good quality and continuing to improve. The relationship and communication between the Audit Committee and the Chief Financial Officer and his team, the Head of Internal Audit and the External Audit Partner received high ratings and, again, an improvement over the past year was observed. The detailed reviews and reporting from Internal Audit were commented on favourably and the newly implemented deep-dive internal audits were felt to have greatly improved the performance of Internal Audit. The Audit Committee's review and monitoring of the work of the External Auditors was also rated highly, with the Committee being engaged in an open, rigorous review and discussion. It was concluded that the Committee operated effectively to review the work of the Internal and External Auditors, to provide appropriate challenge to management's assessment of significant audit issues and material accounting judgements, and to have appropriate oversight of the Group's risk management and internal control systems.

A number of priorities were identified for the Audit Committee over the coming year, including reviewing the existing finance organisational structure to ensure that it is appropriate to meet the future needs of the Group, driving further improvements in the standardisation, accuracy and reliability of accounting and financial control practices.

On behalf of the Audit Committee

Douglas Hurt
Chairman, Audit Committee

27 February 2020

Nomination Committee

Dear Shareholder,

On behalf of the Nomination Committee, I am pleased to present the Nomination Committee Report for 2019. The primary responsibility of the Nomination Committee is to focus on Board composition and succession planning to ensure that the Board is made up of individuals with the appropriate drive, abilities, diversity and experience to lead the Company in the delivery of its strategy.

As part of this work, the Committee is also responsible for overseeing the succession plans that are in place for senior management to ensure that there is a consistent pool of diverse talent as a pipeline for future progression to the Board.

The Committee reviews the current and future needs of the Board and its Committees on an ongoing basis and, as part of the annual corporate governance review conducted each year, examines the independence and diversity of the Board and the balance of skills and development needs of Board members. During 2019, the Committee reviewed the tenure of all of the Directors and discussed future Board composition, noting that myself and Jane Hinkley would reach our ninth anniversaries, and Hock Goh and Douglas Hurt their sixth anniversaries, of appointment to the Board in 2021. The Committee has discussed the optimum timing and the appropriate steps required to address a rotation of Board membership whilst minimising risk.

During the year, the Nomination Committee also oversaw the process for the appointment of Friederike Helfer, a Partner in Cevian Capital, the Group's largest shareholder, who became a new non-independent Non-executive Director, when Christer Gardell, who is Managing Partner at Cevian Capital, stepped down from the Board in December.

Yours sincerely

John McDonough CBE
Chairman, Nomination Committee

27 February 2020

Committee members

John McDonough CBE (Committee Chairman)
Christer Gardell – served on the Committee until his retirement from the Board on 4 December 2019
Hock Goh
Friederike Helfer – joined the Committee on her appointment to the Board on 4 December 2019
Jane Hinkley
Douglas Hurt
Holly Koeppel

Meetings

The Committee met six times during the year.

Key activities during the year

> **Board composition:** The Committee reviewed the structure, size and composition of the Board, including the skills, knowledge and experience required for the Board to continue to function effectively, taking into consideration the need to ensure an appropriate balance of independence and diversity amongst Board members. The Committee then evaluated the current Board composition against an assessment of these future business needs.

> **Board succession:** The Committee reviewed the ongoing requirements for Board composition to maintain the correct skills, experience, independence and diversity at Board level, in light of the tenure of existing Directors. The Committee oversaw the recruitment process to appoint Friederike Helfer, a Partner in Cevian Capital, as a Non-executive Director following Christer Gardell's indication that he wished to step down from the Board.

> **Senior management succession:** The Committee reviewed the Group's succession processes for the Group Executive Committee and the management cadre below this level. It also examined how the Group's talent management processes operate, how the new cohort of senior managers who joined the Group over the past 18 months were being integrated and how the development of individuals flagged as 'high potential' was proceeding.

> **Diversity:** The Committee reviewed and approved the Group's proposal for a formal Group Diversity Policy, which emphasised the Group's commitment to a diverse and inclusive workforce, and approved the integration into this policy of an updated Board diversity objective. See page 99.

> **Directors' elections:** The Committee considered the Directors' annual re-elections at the AGM.

> **Committee evaluation:** The Committee reviewed its performance and effectiveness during 2019, including evaluating whether each Non-executive Director was spending sufficient time fulfilling their duties.

> **Committee terms of reference:** The Committee reviewed its terms of reference.

Nomination Committee continued

The Nomination Committee

The Nomination Committee is made up of me, as Chairman of the Company, and any three of the Non-executive Directors. During the year, I continued as Chairman of the Committee, though I did not act as Chairman when the Committee was discussing issues surrounding my succession, when Douglas Hurt our Senior Independent Director served as Chairman in my place. The Company Secretary is Secretary to the Committee. Members' biographies are set out on pages 76 and 77.

Role and responsibilities

The Nomination Committee's foremost priorities are to ensure that the Company has the best possible leadership, to oversee the process for Board appointments, ensure plans are in place for orderly succession to both the Board and Senior Management (being the Group Executive Committee) positions, and oversee the development of a diverse pipeline for succession. The Committee ensures that the procedure for the selection of potential candidates for Board appointments – either as an Executive Director or independent Non-executive Director – is formal, rigorous and transparent and undertaken in a manner consistent with best practice. It also ensures that appointments to the Board are made on merit, against objective criteria and with due regard for the benefits of diversity of gender, social and ethnic backgrounds, and cognitive and personal strengths on the Board. The Nomination Committee advises the Board on appointments, retirements and resignations from the Board and its Committees.

The Committee operates under formal terms of reference which were reviewed during the year. A copy of these terms of reference is available on the Group's website www.vesuvius.com.

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

Process for Board appointments

The Committee follows formal, rigorous and transparent procedures for the appointment of new Directors. When considering a Board appointment, the Nomination Committee draws up a specification for the role, 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 the necessary attributes to enhance the Board's performance.

With regard to the appointment of Friederike Helfer during the year, the Committee undertook a shortened process following her nomination by Cevian Capital, which holds 21.11% of Vesuvius' issued share capital, as a suitable representative for Cevian on the Board, following Christer Gardell's indication that he wished to step down. The Board considered and confirmed that it remained beneficial to have a representative from Cevian at the Board table and, consequently, Ms Helfer's credentials were reviewed and external references taken up. She also confirmed that she had sufficient time available to devote to the role. Members of the Board met with Ms Helfer in a series of formal and informal meetings and provided feedback to the Nomination Committee.

Based upon the outcome of this process, the Nomination Committee recommended that she be appointed to serve as a non-independent Non-executive Director in place of Christer Gardell, who stepped down from the Board immediately prior to her appointment.

In the ordinary course, the Committee uses the services of search firms to identify appropriate candidates, ensuring that any selected firm is not in any way conflicted in the delivery of its role. The Committee only uses those firms that have adopted the Voluntary Code of Conduct addressing gender diversity and best practice in search assignments.

The Committee begins the recruitment process by reviewing the skills and attributes required for the role and agreeing a job specification. The Committee then selects a suitable search firm for the assignment based on its skills, expertise and price. Searches are conducted globally and a longlist of diverse potential appointees is produced. For Executive Director positions, internal candidates are also considered. The Committee reviews the longlist, and a shortlist of candidates for interview is drawn up based upon the objective criteria identified at inception. The initial shortlist of candidates is interviewed by members of the Nomination Committee. The preferred candidate then meets with the other Board members. Finally, detailed external references are taken up and following this the Committee makes a formal recommendation to the Board for the appointment of the preferred candidate. The candidate is then supported in undertaking their own due diligence on the Company and meeting with its advisers. For non-executive appointments, candidates are also required to demonstrate that they have sufficient time available to devote to the role and to identify any potential conflicts of interest.

Following a new appointment, the Committee continues to monitor the development and integration onto the Board of the new Director. They undertake a full induction programme, continuing to gain insight into the business and meeting executives throughout the organisation. Following her appointment, Ms Helfer has embarked on an induction programme encompassing meetings with key Group executives, outside advisers and visits to key operational sites.

Board composition

On an ongoing basis, the Committee reviews the current and future needs of the Board and its Committees – reflecting on the balance of skills, knowledge and experience of current Directors and comparing this against the Board's list of key skills. The independence and diversity of the Board and the balance of skills, experience and development needs of Board members are examined as part of the annual corporate governance review. The Committee also takes into consideration the results of the Board evaluation process each year. In 2019, the evaluation highly rated the size of the Board, the skills and experience represented and the level of diversity amongst Directors, and considered the future skills requirements of the Board. The importance of the Board possessing knowledge of the Company's geographic markets and continuing to focus on diversity was re-emphasised. The Committee's key skills matrix was reviewed in light of the outcome of these deliberations. On an ongoing basis, the Committee considers existing lengths of tenure and the prospective rotation and retirement of Board members, so that it can plan succession accordingly.

Diversity

Vesuvius recognises the value of a diverse and skilled workforce and is committed to creating and maintaining an inclusive and collaborative workplace culture that will provide sustainability for the organisation into the future. We believe that the dedication and professionalism of our people is the most significant contributor to our success. Having a balance of cultures, ethnicities and genders helps to promote innovation and creativity, and the diversity of our employees is one of the core strengths of the Group.

During the year, the Committee approved the adoption of a formal Group Diversity Policy. This outlines Vesuvius' commitment to encouraging a supportive and inclusive culture amongst its global workforce, promoting diversity and eliminating any potential discrimination in our work environment.

As an organisation, Vesuvius has a global, multicultural operational and customer base, and we wish to reflect that inside our organisation with a multiculturally diverse community of excellent professionals of all backgrounds at Vesuvius. This starts by focusing on broad diversity of gender and nationality, with an aim to ensure that all employees and job applicants are given equal opportunity and that our organisation is representative of all sections of society where we operate. Each employee is respected and valued and able to give their best as a result. All employees are given help and encouragement to develop their full potential and utilise their unique talents.

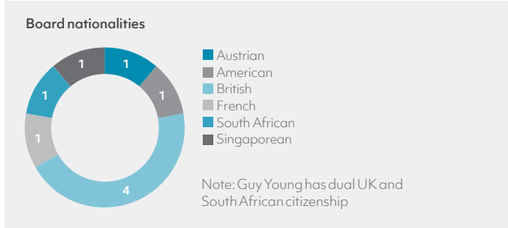
In turn, a more diverse leadership group will result. We expect that Vesuvius' leadership population should increase in diversity significantly over the next two to five years, in terms of age, gender, ethnicity, length of service and education background.

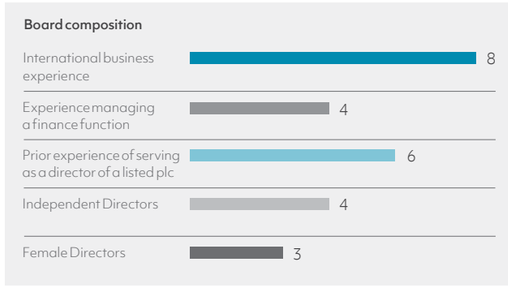
In line with the Group's global commitment to diversity, the Nomination Committee focuses on ensuring that both the Board and its Committees have the appropriate range of diversity, skills, experience, independence and knowledge of the Company, and the markets in which it operates, to discharge its duties and responsibilities effectively. We continue to look at diversity in its broadest sense – reflected in the range of backgrounds and experience of Board members who are drawn from different nationalities and have managed a variety of complex global businesses. The Nomination Committee recognises that diversity is a key ingredient in creating a balanced culture for open discussions at Board level and in minimising 'groupthink'.

The Board's overall skills and experience, as well as Non-executive Director independence, were reviewed during the year. The Board's composition also formed part of the Board evaluation process. During the year, Christer Gardell stepped down from the Board and Friederike Helfer was appointed in his place, increasing the number of women serving on the Board from two to three (25% to 37.5%) and resulting in the Board reaching its target of achieving at least 33% female membership. Four Directors are non-UK citizens. The Board also contains individuals from a range of ethnic backgrounds. The Board considers its diversity, size and composition to be appropriate for the requirements of the business.

The new Group Diversity Policy confirms the Group's commitment to maintaining a Board comprising at least 33% female membership, while continuing to appoint candidates based on merit and recognising that over time the proportion of female Directors will fluctuate naturally as Board members retire and new Directors are appointed.

Further information on the Group's approach to promoting diversity can be found on pages 68-73.





As at 31 December 2019, the gender balance of the Group's employees was as follows:

	Female	Male	Total	Female	Male
Group Executive Committee member	2	6	8	25%	75%
Senior management[1]	13	121	134	10%	90%
Middle management	57	329	386	15%	85%
All other employees	1,419	8,549	9,968	14%	86%
Grand total	1,491	9,005	10,496	14%	86%
Directors of subsidiaries included in consolidation[2]	39	402	441	9%	91%

Notes:
1. Of these 134 senior managers, 48 directly report to members of the Group Executive Committee and, of these, five are women (10%).
2. There are 441 directors of Group subsidiaries, 9% of whom are women. This disclosure is made to comply with regulatory requirements. It includes directors of dormant companies. Some individuals hold multiple directorships.

Nomination Committee continued

Board evaluation

The Board carries out an evaluation of its performance and that of its Committees every year. This year's evaluation was again externally facilitated by the corporate advisory firm, Lintstock. The Group subscribes to the use of Lintstock's Insider List database tool but has no other connection with the organisation and Lintstock does not have any connection with any of the Directors.

Each evaluation was conducted via a series of targeted questionnaires. As with previous years, the evaluation not only covered the performance of the Board but also that of its Committees, along with individual reviews of each Director and analysis of the performance of the Chairman. Narrative reports were then prepared for the Board and the Audit, Nomination and Remuneration Committees and a Partner from Lintstock attended the December Board meeting to present their findings.

The Board assessment focused on six different areas: Board composition, oversight of stakeholders and markets, Board dynamics, Board support and focus of meetings, Board oversight and risk management, and priorities for change, covering an array of topics in line with new governance requirements.

Overall, the Board was seen to operate effectively, with positive improvement since the last evaluation. Meetings were considered to be well run by the Chairman, with appropriate support from the Company Secretary, and timely receipt of clear and accurate Board papers. The Board's understanding of investors was rated highly, as was its understanding of the views of customers and employees, although it was recognised that there was scope to further improve the Board's information on customers' views. The Board's monitoring of culture and behaviours was positively rated, as were the Group's people and talent development processes. The Group's strategy was noted to be clearly defined, but there continued to be a need to ensure that there was sufficient focus on reviewing its implementation of the Board agenda. It was felt that going forward the Board could strive to spend more time on broader stakeholder and strategic issues. The greater level of engagement by the Non-executive Directors with the business outside the boardroom was positively noted. Succession planning continued to be an area of focus, reflecting a significant number of senior management changes during 2018 and 2019. It was agreed that following these changes succession plans for the Chief Executive, Chief Financial Officer and other members of the Group Executive Committee would need to be reassessed in 2020. The responses on Board composition were noted by the Nomination Committee.

The individual assessment of Directors concluded that all of the Directors continued to contribute effectively, providing expert and strategic advice as appropriate and holding management to account in an open and constructive manner. They were considered to devote adequate time to their duties and to be engaged and proactive in debate at all meetings. The Chairman was viewed to operate with objective judgement, and his approach to chairing meetings was deemed to be inclusive and to facilitate debate. Each of the Committees was also considered to have operated effectively during the year.

As in previous years, a set of action points was compiled from the output of the evaluation to ensure that its findings are included in the Board's activities. These will be implemented by the Board in 2020, with progress reviewed by the Board throughout the year.

The 2018 evaluation identified the following Board priorities for future Board attention; these were addressed during 2019 as follows:

Area	Issue	Action taken in 2019
Strategy	New product development	Strategy presentations contained more focused content on technology and R&D, noting key launches planned and the pipeline of products for the future. Progress on R&D forms a key element of the Chief Executive's regular strategy update.
	Manufacturing footprint optimisation	Restructuring and lean plans expanded. Board and Audit Committee oversight retained throughout the year.
People and organisation	Senior management succession and talent development	Detailed focus on senior management succession and talent management at the Nomination Committee, with oversight of actions taken to refresh Group talent throughout the organisation.
	Continued focus on enhancing Board's understanding of senior management capabilities	Opportunities continued to be created for key senior management to present at Board meetings. Individual Non-executive Directors continued to undertake site visits in 2019, with specific measures implemented to ensure that these included meetings with high-potential executives, alongside other Group colleagues.
Risk and culture	Risk appetite	The Board implemented a comprehensive review of risk appetite.
Board performance	Continued focus on prioritising time for discussion of key strategic and operational issues at the Board meeting	Assisted by the clearer formatting and content of papers, the Board spent less time noting standard items for approval and more time debating key strategic and operational issues.
	Board information flow	The format of papers was amended to include clearer identification of action items and a concerted effort was made to ensure that they were more concise.

Senior management succession

The Committee's succession planning activities do not exclusively relate to the Board but encompass the senior management levels below the Board, aiming to support and encourage the growth of a pool of talent able to step up to the top roles in future years. A key area of focus for the Committee during 2019 was again on the Group's talent development and succession planning processes, with an emphasis on the development of the senior management cadre. The Committee considered detailed succession plans for the senior functional and business unit positions and was apprised of the work being undertaken to develop and recruit new executives for this talent pool. As part of the usual Board timetable, Directors also met key executives throughout the Group, at Board presentations and site visits, to gain a greater understanding of the breadth and depth of management talent. In addition, in order for the Committee to gain greater insight into the development of high-potential individuals in less senior positions, the standard protocol for Directors' site visits was amended during the year, to include a standing item for Non-executive Directors to meet with these high-potential individuals at each site.

Committee evaluation

The Committee's activities were part of the externally facilitated evaluation of Board effectiveness during the year, with Committee members completing individual questionnaires. The results of these written submissions were then collated and a written report tabled to the Committee. The management of Nomination Committee meetings was highly rated overall, and the greater involvement of the Committee in succession planning for senior management was seen as a positive development. Following a review of Committee requirements conducted at the beginning of the year, Committee members noted a marked improvement in the information provided to the Nomination Committee, particularly with regard to succession planning, talent development, management capabilities and business structure. The site visits conducted by the Chairman and Non-executives, with greater emphasis on meeting high-potential executives, were identified as having contributed effectively to the Committee's improved understanding of succession planning and talent development. Overall, the Committee was considered to have performed effectively over the past year. Going forward, it was noted that the Committee would continue to focus on reviewing the development of the pipeline of internal successors, and that other priorities for the Committee in 2020 included future Board rotation, noting that myself and Jane Hinkley would reach our ninth anniversaries, and Hock Goh and Douglas Hurt their sixth anniversaries, in 2021.

On behalf of the Nomination Committee

John McDonough CBE
Chairman, Nomination Committee

27 February 2020

Directors' Remuneration Report

Remuneration overview

Dear Shareholder,

On behalf of the Remuneration Committee, I am pleased to present the Directors' Remuneration Report for 2019. The Remuneration Report is split into two sections, a new Directors' Remuneration Policy and the Annual Report on Directors' Remuneration.

Further details of the new Remuneration Policy, which will be subject to a binding shareholder vote at the 2020 AGM, are given below. The Annual Report on Directors' Remuneration sets out details of the pay received by the Directors in 2019. It will be subject to an advisory shareholder vote at the 2020 AGM. All payments received by Directors in 2019 were in line with our Remuneration Policy.

Performance in 2019

2019 was a challenging year for the Group, during which we experienced declines in end-markets for both our Steel and Foundry Divisions. Despite these challenges, the Group focused swift action on restructuring and cost control as well as continuing to invest in technology. Our reported results declined from the high of 2018, registering £1,710.4m of sales and £181.4m of trading profit on a reported basis. Group return on sales was 10.6% compared with 11.0% in 2018.

2019 Directors' Remuneration

In 2019, Patrick André received a salary increase of 14%, the details of which are contained on page 118 of the Directors' Remuneration Report. This was disclosed in last year's Directors' Remuneration Report. There was no change to Guy Young's salary for 2019. With respect to variable incentives, in accordance with prior years, Patrick André and Guy Young received allocations of Performance Shares worth 200% and 150% of their base salaries respectively in 2019, and Annual Incentive awards with potential maximums of 125% of base salary. Other than as outlined above, the Remuneration Committee did not exercise any further discretion in respect of the award of Executive Directors' remuneration in 2019.

Remuneration outcomes for 2019

In 2019, the Annual Incentive awards were based 60% on Group headline earnings per share (EPS), 20% on the Group's working capital to sales ratio (based on the 12-month moving average) and 20% on specified personal objectives. 33% of any Annual Incentive earned will be deferred into awards over shares for three years.

In 2019, our adjusted headline EPS of 45.2 pence was below the threshold Annual Incentive target of 52.2 pence and the Group's 2019 working capital to sales ratio of 24.0% was above the threshold target of 23.5%. As a result, no payments are due to the Executive Directors in respect of the financial performance metrics of the 2019 Annual Incentive. Payouts are due, however, in respect of the personal objectives element of the Annual Incentive, with the Committee awarding Patrick André and Guy Young 13.96% and 18.16% respectively of their maximum entitlements of 25% of base salary (being 20% of their overall Annual Incentive), in respect of the personal objectives they were set for 2019. The Committee considered the appropriateness of paying Directors' incentives under the personal objectives element of the Annual Incentive for 2019 when neither of the financial targets had been met. Given that the personal objectives are linked to key strategic, organisational and operational projects with measurable targets, the Committee concluded that such payouts were in order.

The performance period for the awards made under the Vesuvius Share Plan (VSP) in 2017 matured at the end of December 2019. Performance was measured equally by reference to total shareholder return (TSR) relative to the FTSE 250 (excluding investment trusts) and headline EPS growth over the three-year period (adjusted as above). Relative TSR performance was between median and upper quintile; as a result, 12.64% of Performance Share awards will vest under the TSR element (out of a maximum 50%). The annual compound headline EPS growth for the period was 15%, meeting the maximum headline EPS growth target of 15%. As a result, 50% of Performance Share awards will vest under the EPS performance element (out of a maximum of 50%).

The Committee considered whether to exercise its discretion when confirming the vesting of the Performance Shares, and reviewed the underlying financial performance of the Company to satisfy itself that the outcome was justified. Awards will vest in March 2020.

The Committee considered that the Group's Executive Remuneration Policy had operated appropriately in respect of 2019. The non-attainment of the financial performance elements of the Annual Incentive Plan reflected the decline in the Group's profitability for the year and the achievement of the performance targets for the VSP reflected the significant improvement in the Group's profitability over the past three years.

Workforce remuneration

The Remuneration Committee has always had clear oversight of the level and structure of remuneration for members of the Group Executive Committee, along with approving the structure and payment of awards to all executives under the Group's executive share plans. In addition, it has been provided with broad remuneration information on the top cadre of management. Following the recent revisions to the Code, the remit of the Remuneration Committee has been broadened to include the review of workforce remuneration and related policies and the more general alignment of incentives and rewards with culture. Given the diverse nature of the Group's operations both geographically and functionally, the Group has a wide variety of different remuneration and incentive arrangements in operation. The Committee has therefore agreed a programme for the review of workforce remuneration which commenced this year with a summary of the pension arrangements in the Group's largest territories and a review of the annual bonus arrangements applicable to the Top 150 executives. The Committee took the insights gained from this exercise into account when setting the policy for Executive Director remuneration.

Remuneration Strategic Alignment	Deliver growth	Generate sustainable profitability and create shareholder value	Maintain strong cash generation and an efficient capital structure	Provide a safe working environment for our people	Be at the forefront of innovation	Run top-quality, cost-efficient and sustainable operations	Foster talent, skill and motivation in our people
Annual Incentive Plan	✓	✓	✓	✓	✓	✓	✓
Vesuvius Share Plan	✓	✓					

Environmental, social and governance issues

The Committee recognises the need to consider environmental, social and governance matters in relation to Executive Directors' remuneration. The Executive Directors' personal objectives for the 2020 Annual Incentive contain specific targets in relation to such matters.

In addition, the malus and clawback provisions applicable to the Vesuvius Share Plan specifically contemplate the reduction of awards should an individual's conduct, a material failure of risk management or a serious breach of health and safety, result in serious reputational damage.

Review of Remuneration Policy and implementation in 2020

During the year, the Committee undertook a thorough review of the Directors' Remuneration Policy to ensure that it continues to support delivery of our business strategy. The Committee considered recent developments in governance and the views of our shareholders gained through our investor engagement programme. It also received independent advice from the Committee adviser, Deloitte, and reviewed the pay and benefits received by other Vesuvius employees. The Committee considered the market competitiveness of Vesuvius' reward package to ensure that the Group can continue to attract, motivate and retain appropriate talent to implement our business strategy successfully. As part of the process, the Committee sought, and received, the views of the Executive Directors and senior HR management on updates to the existing Policy.

However, whilst the Chief Executive (CEO) was rightly part of the development process and attended some meetings at which amendments to the existing Policy were discussed, he was not involved in the decision-making process. The Committee also consulted our major shareholders and the investment industry bodies (ISS, the Investment Association and Glass Lewis) on the proposed new policy.

Following these deliberations, the Remuneration Committee concluded that the remuneration framework in our current Policy remains consistent with our core strategic objective of delivering long-term sustainable and profitable growth and supports our performance-orientated culture. In particular, the Committee concluded that the existing combination of fixed pay, Annual Incentive and Long-Term Incentive awarded in Performance Shares remains the most suitable mechanism for rewarding and incentivising Executive Directors, focusing the Executive Directors on both proximate performance and longer-term goals. The existing 2017 Policy framework was therefore considered 'fit for purpose' and, as a result, no fundamental changes are proposed in the new Policy. We are, however, proposing some changes to respond to market and governance developments.

Enhancement of shareholding guidelines

> The shareholding guideline that applies whilst in employment will be 200% of salary for all Executive Directors. To date, a lower guideline of 100% of salary has applied to Executive Directors other than the CEO.

> A post-employment shareholding guideline will be introduced under which Executive Directors will remain subject to their shareholding requirement in the first year after their cessation as an Executive Director and to 50% of the shares retained in the first year during the second year after such cessation, recognising that there is no requirement to purchase additional shares if the shares held when they cease to be an Executive Director are less than the applicable shareholding guideline.

Aligning pension provision

> As required by the new UK Corporate Governance Code, the level of pension allowance for Executive Directors appointed following the adoption of the 2020 Remuneration Policy will be aligned with the post-retirement benefits applicable to the majority of the workforce or, where appropriate, to the majority of the workforce of the relevant geography.

> Our incumbent Directors currently receive a 25% pension contribution. This will be frozen at the 1 January 2020 amount and reduced over time such that by the end of 2022 it will be reduced to that of the majority of the workforce. The precise timing and quantum of the reductions will be finalised and disclosed in the Remuneration Report following the completion of a Group-wide review of pension arrangements.

Other changes

> Under the existing Policy, whilst individuals' performance is reviewed annually, changes to base salaries and Non-executive Director fees were normally appraised over a two to three-year period with a consequence that individual increases, when paid, are usually in excess of those for the wider population of employees for that year. To align with standard market practice and provide greater uniformity between Director and employee annual salary reviews, it is proposed that we revert to a process of annual salary/fee reviews in the new Policy.

> In order to give the Committee flexibility during the three-year Policy period, it is also proposed to increase the maximum Annual Incentive opportunity that can be offered under the Policy to Executive Directors from 125% to 150% of salary. As a Committee, we are mindful of the importance of using this flexibility in a responsible manner and can confirm that the Annual Incentive opportunity for the Executive Directors in 2020 will be unchanged at 125% of salary.

> The Policy clarifies the flexibility to use different financial performance measures for different Vesuvius Share Plan award cycles in order to ensure that awards are aligned with strategic objectives, along with clarifying the flexibility available to the Committee when determining the Annual Incentive award of a Good Leaver.

> In 2019, a two-year holding period post the three-year performance period was introduced for Vesuvius Share Plan awards to Executive Directors, taking the total release period for awards to five years. The two-year holding period will be formally adopted within the new Policy.

> If appropriate, non-executive Directors may be paid an additional fee for membership of a Board Committee or other roles that involve significant additional time commitment and/or responsibility.

The Policy has been updated to reflect the additional reporting requirements of The Companies (Miscellaneous Reporting) Regulations 2018 and The Companies (Directors' Remuneration Policy and Directors' Remuneration Report) Regulations 2019.

Summary of new 2020 Remuneration Policy

The table below summarises our proposed new Policy and its proposed implementation in 2020.

	Terms of existing Policy	Changes in proposed new Policy	Proposed implementation of new Policy in 2020
Base salary	The individual's performance is reviewed annually with changes to base salary normally appraised over a two to three-year period. Individual increases when paid are likely to be in excess of those for the wider population of employees for that year	Base salary will normally be reviewed annually, with changes effective from 1 January	Salaries will be reviewed under the new policy effective 1 January 2021 2019 salaries are CEO £600,000; CFO £350,000 2020 salaries are CEO £618,000; CF0 £385,000
Pension	Maximum provision of 30% of salary	Maximum provision for incumbent Directors of 25% of base salary. Incumbent Directors' provision will be frozen at the 1 January 2020 level and reduced over time to be aligned with that applicable to the majority of the workforce by the end of 2022 Maximum provision for future Director appointments to be aligned with the post-retirement benefits applicable to the majority of the workforce or, where appropriate, to the majority of the workforce of the relevant geography	Incumbent CEO and CFO – 25% of salary frozen at 1 January 2020 amount Any future Director appointment will receive pension provision in line with the new Policy
Annual Incentive	Maximum potential: 125% of salary 33% delivered in shares deferred for three years Majority based on Group financial measures; remainder based on financial, strategic or operational measures appropriate to the individual	Increased maximum potential of 150% of salary	Maximum potential: 125% of salary 60% based on EPS; 20% based on working capital to sales ratio; 20% based on personal objectives 33% delivered in shares deferred for three years
Vesuvius Share Plan	Annual awards of performance shares worth up to 200% of salary Awards vest three years after grant with Remuneration Committee discretion to impose an additional holding period Awards usually vest subject to EPS and relative TSR measures	Vested awards to be subject to two-year holding period Flexibility to include additional or alternative performance conditions for each award which are aligned to corporate strategy	200% of salary award to CEO; 150% of salary to CFO Awards released five years post grant (three-year performance period plus two-year holding period) Awards 50% based on TSR relative to FTSE 250 excluding Investment Trusts and 50% based on EPS growth
Shareholding guideline (whilst in employment)	Guideline of 200% of salary for CEO and 100% of salary for other Directors	Guideline of 200% of salary for all Executive Directors	Guideline of 200% of salary for all Executive Directors
Shareholding guideline (post-employment)	n/a	Executive Directors will remain subject to the in-employment Shareholding guideline in the first year after their cessation as an Executive Director and to 50% of the shares retained in the first year during the second year after such cessation, recognising that there is no requirement to purchase additional shares if the shares held when they cease to be an Executive Director are less than the applicable shareholding guideline	Executive Directors to remain subject to the in-employment Shareholding guideline in first year post their cessation as an Executive Director, reducing to 50% of the shares retained in the first year during the second year after such cessation

No other material changes to the existing Policy are being proposed.

The Committee is satisfied that the Remuneration Policy is designed to promote the long-term success of the Company, and accords with the requirements of the Code with regard to:

Clarity: There is complete transparency on the executive remuneration arrangements with full disclosure in the Annual Report. The Annual Incentive bonus structure for the Executive Directors is based on the same structure utilised for annual bonus arrangements for senior executives throughout the Group. The focus of incentive arrangements on long-term sustainable growth clearly aligns the interests of executives with those of the Group's shareholders. The Vesuvius Share Plan, with its emphasis on the retention of shares for a period of at least five years, clearly aligns the long-term objectives of the Directors with that of its investors.

Simplicity: The new Policy with its focus on three core elements: fixed pay, Annual Incentive and Long-Term Incentive is clear, simple and easy to understand.

Risk: The Committee has carefully analysed the range of possible outcomes of awards and believes the Policy to be fair and proportionate, with the clear linkage to Group profitability mitigating the potential for excessive rewards and the reliance on audited profit numbers and externally verified TSR targets serving to mitigate behavioural risk. The Committee has discretion under the Vesuvius Share Plan to determine the vesting of awards in accordance with the Code requirement and malus and clawback provisions also apply.

Predictability: The charts on page 109 provide estimates of the total remuneration for the Executive Directors for 2020 for minimum, on-target and maximum performance, showing the split between fixed and variable remuneration. The charts also indicate the maximum potential remuneration assuming 50% share price appreciation. Prior to any vesting under the Vesuvius Share Plan the Committee reviews the underlying financial performance of the Company over the performance period, and the non-financial performance of the Group and participants, to ensure that the vesting is justified. Following this review, the Committee has the discretion to amend the final vesting level if it does not consider that it is justified.

Proportionality: The Committee believes that the performance-related elements of remuneration have financial targets which are transparent, stretching and clearly align the Executive Directors' remuneration with the delivery of the Group's strategy. The Vesuvius Share Plan rewards long-term performance directly linked with the Group's strategy and results, ensuring that only strong performance is rewarded.

Alignment to culture: The Executive Directors' incentive arrangements are consistent with the Group's core strategic objective of delivering long-term sustainable and profitable growth and support our performance-orientated culture. The inclusion of personal objectives in the Annual Incentive Plan affords the opportunity for attention to be focused on key non-financial strategic objectives each year.

2020 salary review

In December 2019, the Committee reviewed Patrick André's and Guy Young's salaries. Under the terms of his appointment, Patrick André is entitled to an annual review. Guy Young's salary was reviewed under the terms of the current policy, having not received an adjustment since 1 January 2018. After reviewing the performance of both Directors, the Committee concluded that it was appropriate to increase Patrick André's salary by 3% to £618,000 in line with the UK workforce and Guy Young's salary by 10% to £385,000. Whilst Guy Young's increase (equivalent to 4.9% p.a. for the two-year period since his last salary review) is higher than the average annual salary increase given to our UK staff over the equivalent period of 3.5% p.a., the Committee considered this was appropriate given his performance and continued development in his role.

2020 Vesuvius Share Plan awards

When the Committee met earlier this month, it was concerned that the current share price volatility could result in the 2020 Vesuvius Share Plan awards being made at an artificially low price. As a consequence, the Committee resolved that, whilst awards under the Vesuvius Share Plan will be made on the usual basis (using the middle market price for a Vesuvius share for the five days prior to the date of grant), the number of shares to be awarded will be capped at a level that reflects the middle market share price of the Company for the five days up to the Committee meeting, being 437.1 pence.

Employee and shareholder engagement

The Group's operations are geographically diverse in nature. The Group does not operate a central workforce engagement mechanism, and as such the Committee has not engaged systematically with the workforce during the year to explain how executive remuneration aligns with wider Company pay policy, although direct visits to operations by the Non-executive Directors have provided an open forum for discussion with employees. Copies of the Company's Annual Report detailing the Executive Directors' remuneration are, however, widely disseminated throughout the Group and available for employees to view on the Company's website.

At the 2019 AGM, all the resolutions were passed with the requisite majority, but 23% of votes were cast against the resolution relating to the approval of the Directors' Remuneration Report. Whilst a clear majority of shareholders were supportive of the resolution, three of the Company's larger shareholders, representing 22.67% of the Company's issued share capital, voted against the resolution. The Committee invited a dialogue with these shareholders and spoke with two of them.

The Committee ascertained that these two investors' concerns principally related to the level of salary increase awarded to the Chief Executive for 2019. The Committee and the Board discussed these concerns. The Company's rationale for its approach to this matter was set out in detail in the Directors' Remuneration Report in the 2018 Annual Report and was discussed further in the aforementioned shareholder meetings. The Committee and the Board continue to believe that the salary increase for the Chief Executive, which was supported by the majority of the shareholders, was appropriate. I separately wrote to each of the Company's largest shareholders and key governance agencies outlining the Committee's proposals for the 2020 Remuneration Policy and inviting comments. Vesuvius received responses from each governance agency contacted and from half of these shareholders. We entered into dialogue with a number of shareholders and the overall response has been supportive, both of the developments in the 2020 Remuneration Policy and to the changes proposed to Executive Directors' remuneration. I remain keen to hear shareholders' views on remuneration matters – including any further comments on our 2020 Remuneration Policy.

Yours sincerely

Jane Hinkley
Chairman, Remuneration Committee
27 February 2020

Directors' Remuneration Report
2020 Remuneration Policy

The Company is required to submit its Remuneration Policy to a binding shareholder vote at least every three years, and as the Policy was last approved at the AGM in 2017, a new Policy will be tabled for approval at the 2020 AGM, to take effect from the close of the 2020 AGM. The previous policy will apply in its entirety up until this date and after this date those elements of the previous policy that relate to remuneration that remain extant on this date (such as outstanding share awards) will continue to apply until these commitments cease.

The Remuneration Committee reserves the right to make any remuneration payments and payments for loss of office (including exercising any discretions available to it in connection with such payments), notwithstanding that they are not in line with the Policy set out here, where the terms of the payment were agreed: (i) before the date the Company's first Remuneration Policy approved by shareholders in accordance with Section 439A of the Companies Act came into effect; (ii) before the Policy set out here came into effect, provided that the terms of the payment were consistent with the shareholder-approved Remuneration Policy in force at the time they were agreed; or (iii) at a time when the relevant individual was not a Director of the Company and, in the opinion of the Remuneration Committee, the payment was not in consideration for the individual becoming a Director of the Company. For these purposes, 'payments' includes the Remuneration Committee satisfying awards of variable remuneration and, in relation to an award over shares, the terms of the payment are 'agreed' at the time the award is granted.

Remuneration Policy Table for Executive Directors

Base salary

Alignment/purpose

Helps to recruit and retain key employees. Reflects the individual's experience, role and contribution within the Company.

Operation

Base salary is normally reviewed annually, with changes effective from 1 January.

Base salary is positioned to be market competitive when considered against other global industrial companies, and relevant international and FTSE 250 companies (excluding Investment Trusts).

Paid in cash, subject to local tax and social security regulations.

Opportunity

Salary increases will normally be in line with the average increase awarded to other employees in the Group although increases may be made above this level at the Committee's discretion in appropriate circumstances. In considering any increase in base salary, the Committee will also take into account:

(i) the role and value of the individual

(ii) changes in job scope or responsibility

(iii) progression in the role (e.g. for a new appointee)

(iv) a significant increase in the scale of role and/or size, value or complexity of the Group and

(v) the need to maintain market competitiveness

No absolute maximum has been set for Executive Director base salaries. Current Executive Directors' salaries are set out in the Annual Report on Directors' Remuneration section of this Remuneration Report.

Performance

Any increase will take into account the individual's performance, contribution and increasing experience.

Other benefits

Alignment/purpose

Provides normal market practice benefits.

Operation

A range of benefits including, but not limited to: car allowance, private medical care (including spouse and dependent children), life insurance, disability and health insurance, expense reimbursement (including costs if a spouse accompanies an Executive Director on Vesuvius business), together with relocation allowances and expatriate benefits, in some instances grossed up for tax, in accordance with the Group's policies, and participation in any employee share scheme operated by the Group.

Opportunity

There is no formal maximum as benefit costs can fluctuate depending on changes in provider, cost and individual circumstances.

Performance

None.

Pension

Alignment/purpose

Helps to recruit and retain key employees. Ensures income in retirement.

Operation

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).

Opportunity

Maximum of 25% of base salary for incumbent Executive Directors at the date that this policy is adopted. This will be frozen at the 1 January 2020 amount and reduced over time such that by the end of 2022 it will be reduced to the level applicable to the majority of the workforce.

The level of allowance for Executive Directors appointed following the adoption of this policy will be aligned with the post-retirement benefits applicable to the majority of the workforce or, where appropriate, to the majority of the workforce of the relevant geography.

Performance

None.

Annual Incentive

Alignment/purpose

Incentivises Executive Directors to achieve key short-term financial and strategic targets of the Group.

Additional alignment with shareholders' interests through the operation of bonus deferral.

Operation

Normally 33% of any Annual Incentive earned by Executive Directors will be deferred into awards over shares under the Vesuvius Deferred Share Bonus Plan which normally vest after at least three years, other than in specified circumstances outlined elsewhere in this Policy. These may be cash or share settled.

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.

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 malus and clawback.

Opportunity

Below threshold: 0%.

On-target: 50% of the applicable maximum opportunity in any year.

Maximum: Up to 150% of base salary.

The Remuneration Committee will set the level of maximum bonus opportunity for each Executive Director at the start of each year, with 50% of the applicable maximum payable for on-target performance.

Payments start to accrue on meeting the threshold level of performance, with payments between threshold and on-target and between on-target and maximum made on a pro rata basis.

Performance

The Annual Incentive is measured on targets set at the beginning of each year. The Committee establishes threshold and maximum performance targets for each financial year. The majority of the Annual Incentive will be determined by measure(s) of Group financial performance. The remainder of the Annual Incentive will be based on financial, strategic or operational measures appropriate to the individual Director. Performance is measured over a one-year period. Actual performance targets will be disclosed after the performance period has ended. They are not disclosed in advance due to their commercial sensitivity.

Vesuvius Share Plan (VSP)

Alignment/purpose

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.

Operation

VSP awards to Executive Directors are granted as Performance Share awards. These may be cash or share settled.

Awards vest three years after their award date, other than in specified circumstances outlined elsewhere in this Policy, subject to the achievement of specified conditions. All vested shares, net of any tax liabilities, are then subject to a further two-year holding period after the vesting date, which will continue to apply notwithstanding the termination of employment of the participants during this holding period, except at the Committee's discretion in exceptional circumstances, including a change of control or where the participant dies or has left employment due to ill health, injury or disability.

The Committee has the discretion to award participants the equivalent value of dividends accrued during the vesting period and further two year holding period on any shares that vest.

Subject to malus and clawback.

Opportunity

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 at threshold performance is at 25% of the award, rising to vesting of the full award at maximum.

Performance

Vesting will be subject to performance conditions as determined by the Remuneration Committee ahead of each award. Those conditions will be disclosed in the Annual Report on Directors' Remuneration section of the Remuneration Report. The performance conditions will initially be Group EPS and relative TSR, although the Remuneration Committee will retain discretion for future awards to include additional or alternative performance conditions which are aligned with the corporate strategy.

At its discretion, the Committee may elect to add additional underpinning performance conditions.

The Company reserves the right only to disclose certain of the performance targets after the performance period has ended, due to their commercial sensitivity.

Prior to any vesting, the Remuneration Committee reviews the underlying financial performance of the Group over the performance period, and the non-financial performance of the Group and participants, to ensure that the vesting is justified. Following this review, the Committee has the discretion to amend the final vesting level if it does not consider that it is justified.

2020 Remuneration Policy continued

Malus/clawback arrangements

The Executive Directors' variable remuneration is subject to malus and clawback provisions. These provide the Committee with the flexibility, if required, to withhold or recover payments made to Executive Directors under the Annual Incentive Plan (including deferred awards) and/or to withhold or recover share awards granted to Executive Directors under the Vesuvius Share Plan, including any dividends granted on such awards. The circumstances in which the Committee could potentially elect to apply malus and clawback provisions include: a material misstatement in the Group's financial results; an error in the calculation of the extent of payment or vesting of an incentive; gross misconduct by an individual; or significant financial loss or serious reputational damage to Vesuvius plc resulting from an individual's conduct, a material failure of risk management or a serious breach of health and safety. These malus and clawback provisions apply for a period of up to three years after the end of a performance period (or end of the deferral period in respect of awards made under the Vesuvius Deferred Share Bonus Plan).

Performance measures

In selecting performance measures for the Annual Incentive, the Committee seeks to reflect key strategic aims and the need for a rigorous focus on financial performance. Each year, the Committee agrees challenging targets to ensure that underperformance is not rewarded. The Company will not be disclosing the specific financial or personal objectives set until after the relevant performance period has ended because of commercial sensitivities. The personal objectives are all job-specific in nature and track performance against key strategic, organisational and operational goals.

In selecting performance measures for the Vesuvius Share Plan, the Committee seeks 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 will initially include measures based on TSR and EPS performance.

Within the Policy period, the Committee will continually review the performance 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.

The Committee may vary or waive any performance condition(s) if circumstances occur which cause it to determine that the original condition(s) have ceased to be appropriate, provided that any such variation or waiver is fair, reasonable and not materially less difficult to satisfy than the original condition (in its opinion). In the event that the Committee were to make an adjustment of this sort, a full explanation would be provided in the next Remuneration Report.

The Committee may: (a) in the event of a variation of the Company's share capital, demerger, special dividend or any other corporate event which it reasonably determines justifies such an adjustment, adjust; and (b) amend the terms of awards granted under the share schemes referred to above in accordance with the rules of the relevant plans.

Share awards may be settled by the issue of new shares or by the transfer of existing shares. In line with prevailing best practice at the time this Policy was approved, any issuance of new shares is limited to 5% of share capital over a rolling ten-year period in relation to discretionary employee share schemes and 10% of share capital over a rolling ten-year period in relation to all employee share schemes.

Illustration of the application of the Remuneration Policy for 2020

The charts below show the total remuneration for Executive Directors for 2020 for minimum, on-target and maximum performance. The fixed elements of remuneration comprise base salary, pension and other benefits, using 2020 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 (made at 62.5% of base salary for Patrick André and Guy Young) and threshold vesting (i.e. median performance for TSR and threshold for EPS) for Performance Share awards (made at 200% of base salary for Patrick André and 150% of base salary for Guy Young) under the Vesuvius Share Plan. No share price appreciation is assumed.

Maximum: Fixed remuneration plus maximum Annual Incentive (being full achievement of financial and personal targets, made at 125% of base salary for Patrick André and Guy Young) and 100% vesting for Performance Share awards (made at 200% of base salary for Patrick André and 150% of base salary for Guy Young) under the Vesuvius Share Plan. No share price appreciation is assumed.

Maximum including assumed 50% share price appreciation: This shows the value of the maximum scenario if 50% share price appreciation is assumed over the three-year performance period of the Performance Share awards.

Note: In addition, the Committee retains the discretion to award dividends (either shares or their cash equivalent) on any shares that vest.

Service contracts of Executive Directors

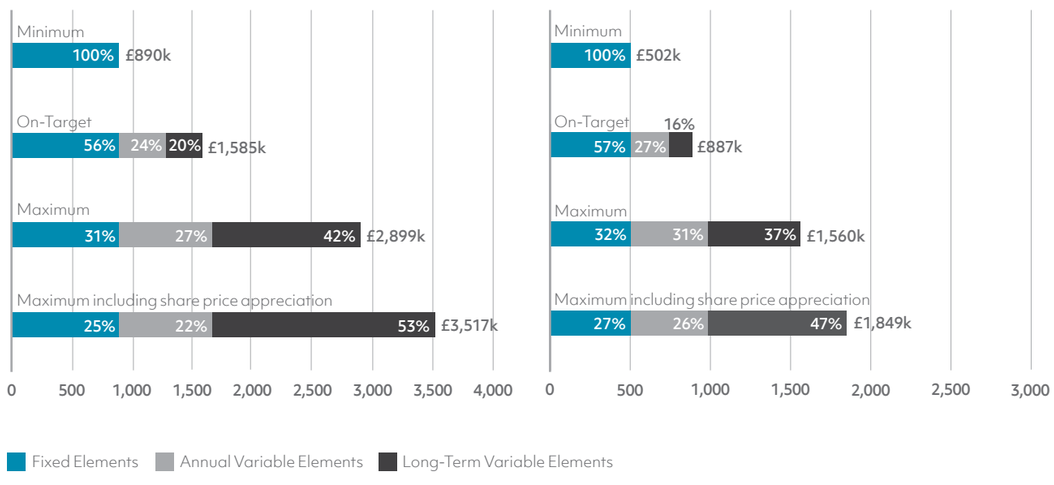
The Committee will periodically review the contractual terms for new Executive Directors to ensure that these reflect best practice. Service contracts currently operate on a rolling basis and are limited to a 12-month notice period.

Patrick André is employed as Chief Executive of Vesuvius plc pursuant to the terms of a service agreement made with Vesuvius plc dated 17 July 2017. Guy Young is employed as Chief Financial Officer pursuant to the terms of a service agreement with Vesuvius plc dated 16 September 2015. 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.

External appointments of Executive Directors

The Executive Directors do not currently serve as Non-executive Directors 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.

Remuneration Illustrations £000



2020 Remuneration Policy continued

Remuneration 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 sector, to support diversity of expertise at the Board and match the wide geographical 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.

Fees

Alignment/purpose

To attract and retain Non-executive Directors of the necessary skill and experience by offering market-competitive fees.

Operation

Fees are usually reviewed every year by the Board.

Non-executive Directors are paid a base fee for the performance of their role plus additional fees for roles that involve significant additional time commitment and/or responsibility. Such roles could include, but are not limited to, Committee chairmanship (and, where appropriate, membership) or acting as the Senior Independent Director. Fees are paid in cash.

The Chairman is paid a single cash fee and receives administrative support from the Company.

Opportunity

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.

Base fees paid to Non-executive Directors will in aggregate remain within the aggregate limit stated in our Articles, currently being £500,000.

Performance

None.

Benefits and expenses

Alignment/purpose

To facilitate execution of responsibilities and duties required by the role.

Operation

All Non-executive Directors are reimbursed for reasonable expenses incurred in carrying out their duties (including any personal tax owing on such expenses).

Opportunity

Non-executive Directors' expenses are paid in accordance with Vesuvius' expense procedures.

Performance

None.

Terms of service of the Chairman and other Non-executive Directors

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. During the first year of his/her appointment, the Chairman is entitled to 12 months' notice from the Company; thereafter, he/she is entitled to six months' notice from the Company. None of the other Non-executive Directors is entitled to receive compensation for loss of office at any time. 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 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 Non-executive Directors:

Non-executive Director	Date of appointment
John McDonough CBE	31 October 2012
Friederike Helfer	4 December 2019
Hock Goh	2 April 2015
Jane Hinkley	3 December 2012
Douglas Hurt	2 April 2015
Holly Koeppel	3 April 2017

Recruitment policy

On appointment or promotion of a new Executive Director, the Committee will typically use the Remuneration Policy in force at the time of the Committee's decision to determine ongoing remuneration.

Base salary levels will generally be set in accordance with the Remuneration Policy current at the time of the Committee's decision, 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 Remuneration Report following an individual's appointment. Other than in exceptional circumstances, other elements of annual remuneration will, typically, be set in line with the Remuneration Policy, including a limit on awards under the Annual Incentive and Vesuvius Share Plan of 350% of salary in aggregate. The Committee retains the discretion to make the following further exceptions:

> In the event that an internal appointment is made, or where a Director is appointed as a result of transfer into the Group on an acquisition of another Company, the Committee may continue with existing remuneration provisions for this individual, where appropriate

> If necessary and appropriate to secure the appointment of a candidate who has to move locations as a result of the appointment, whether internal or external, 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

> If appropriate the Committee may apply different performance measures and/or targets to a Director's first incentive awards in his/her year of appointment

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

In addition to the annual remuneration elements noted above, the Committee may consider buying out terms, incentives and any other compensation arrangements forfeited on leaving a previous employer that an individual forfeits in accepting an appointment with Vesuvius. The Committee will have the authority to rely on Listing Rule 9.4.2R(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 malus and clawback.

With respect to the appointment of a new Chairman or Non-executive Director, appointment terms will be consistent with those applicable at the time the appointment is agreed. Variable pay will not be considered. With respect to Non-executive Directors, fees will be consistent with the Policy at the time the appointment is agreed. If, in exceptional circumstances, a Non-executive Director was asked to assume an interim executive role, the Company retains the discretion to pay them appropriate executive compensation, in line with the Policy.

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 foregone 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.

2020 Remuneration Policy continued

Executive Directors' contracts do not contain any change of control provisions; they do 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 – during period prior to payment		
Good leaver	Paid at the same time as to continuing employees.	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 before cessation of employment. In determining the level of bonus to be paid, the Committee may, at its discretion, take into account performance up to the date of cessation or over the financial year as a whole based on appropriate performance measures as determined by the Committee. The bonus may, at the Committee's discretion, be paid entirely in cash.
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.
Annual Incentive Plan – in respect of any amount deferred into awards over shares under the Vesuvius Deferred Share Bonus Plan		
Good leaver	On the date of the event.	Deferred awards vest in full.
Bad leaver	On the date of the event.	Other than dismissal for cause, deferred awards will vest in full.
Change of control[2]	Within seven days of the event.	Deferred awards vest in full.
Vesuvius Share Plan		
Good leaver[1]	On normal release date (or earlier at the Committee's discretion).	Unvested awards vest to the extent that any performance conditions have been satisfied and a pro rata reduction applies to the value of the awards to take into account the proportion of vesting period not served, unless the Committee decides that the reduction in the number of vested shares is inappropriate.
Bad leaver	Unvested awards lapse.	Unvested awards lapse on cessation of employment.
Change of control[2]	On the date of the event.	Unvested awards vest to the extent that any performance conditions have been satisfied and a pro rata reduction applies for the proportion of the vesting period not served, unless the Committee decides that the reduction in the number of vested shares is inappropriate.

Notes:
1. Under the rules of the Vesuvius Share Plan, any vested shares, net of any tax liabilities, are subject to a further two-year holding period after the vesting date. The holding period may be terminated early at the Committee's discretion in exceptional circumstances, including a change of control or where the award holder dies or leaves employment due to ill health, injury or disability.
2. In certain circumstances, the Committee may determine that unvested awards under the Vesuvius Deferred Bonus Plan and 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.

Benefits normally cease to be provided on the date employment ends. However, the Committee has the discretion to allow some minor benefits (such as health insurance, tax advice and repatriation expenses) to continue to be provided for a period following cessation where this is considered fair and reasonable, or appropriate on the basis of local market practice. In addition, the Committee retains discretion to fund other expenses for the Executive Director; for example, payments to meet legal fees incurred in connection with termination of employment, or to meet the costs of providing outplacement support, and de minimis termination costs up to £5,000 to cover transfer of mobile phone or other administrative expenses.

The Committee reserves the right to make any other payments in connection with a Director's cessation of office or employment where the payments are made in good faith in discharge of an existing legal obligation (or by way of damages for breach of such an obligation) or by way of a compromise or settlement of any claim arising in connection with the cessation of a Director's office or employment.

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. These would be used only where the Committee believed it was in the best interests of the Company to do so.

Comparison of Remuneration Policy for Executive Directors with that for other employees

The Remuneration Policy for Executive Directors is designed in line with the remuneration philosophy set out in 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 to 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. Individual percentages of variable versus fixed remuneration and participation in share-based structures increase as seniority increases.

As for Executive Directors, all employees receive an annual performance appraisal, and receive salary reviews on an annual basis. Middle and senior managers participate in the Annual Incentive Plan. For functional members of the Group Executive Committee, the award is predominantly based on Group performance, with the remainder focused upon the achievement of personal objectives. For business unit Presidents and other operational business unit employees, any potential award is based upon four separate measures relating to Group performance, business unit performance, regional performance, where relevant, and achievement of personal objectives.

All members of the Group Executive Committee participate in the Vesuvius Share Plan and receive awards of Performance Shares, which vest on the basis of the same targets set for the Executive Directors. The level of awards granted to members of the Group Executive Committee who don't serve on the Board are lower than those payable to the Executive Directors.

For certain senior and middle managers, awards are made under the Vesuvius Medium Term Plan (MTP). These managers participate in the MTP at varying percentage levels, and awards are based on the same measures and targets as the Annual Incentive Plan. The senior management cadre receives MTP awards made over Vesuvius shares, whilst other managers who participate in the MTP receive their awards in cash. 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.

Consideration 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, when the Committee will consider the salary increases for other Group employees in the same jurisdiction.

Consideration of shareholder views

Vesuvius is committed to open and transparent dialogue with its shareholders on remuneration as well as other governance matters. As Chairman of the Committee, Jane Hinkley welcomes shareholder engagement and is available for any discussions investors wish to have on remuneration matters. During 2019, as with previous years, Jane Hinkley directly contacted significant shareholders to offer discussions on remuneration matters and a number of meetings were conducted by her, and the Board Chairman, accordingly. The feedback from such meetings is always shared with the Committee and taken into consideration when decisions are made about future remuneration strategy and arrangements. Two investors expressed concerns related to the level of salary increase awarded to the Chief Executive for 2019. The Remuneration Committee and the Board discussed these concerns. The Company's rationale for its approach to this matter was set out in detail in the Directors' Remuneration Report in the 2018 Annual Report and Financial Statements and was discussed further in the aforementioned shareholder meetings. The Committee and the Board continue to believe that the salary increase for the Chief Executive, which was supported by the majority of the shareholders, was appropriate. In early 2020, the Committee separately wrote to its largest shareholders and key governance agencies outlining its proposals for the 2020 Remuneration Policy and inviting comments. Vesuvius received responses from each governance agency contacted and from 53% of the shareholders, and entered into dialogue with a number of shareholders as a result. The overall shareholder response has been supportive both of the developments in the 2020 Remuneration Policy and of the changes proposed to executive remuneration. The development of practices in line with the new Policy will be carefully managed by the Committee.

Shareholding guidelines

The Remuneration Committee encourages Executive Directors to build and hold a shareholding in the Company equivalent in value to at least 200% of base salary.

Compliance with the shareholding policy is tested at the end of each year for application in the following year, with the valuation of any holding being taken at the higher of: (1) the share price on the date of vesting of any shares derived from a share award, in respect of those shares only; and (2) the average of the closing prices of a Vesuvius ordinary share for the trading days in that December.

Unless exceptionally the Committee determines otherwise, under the post-employment shareholding guideline the Executive Directors will remain subject to their shareholding requirement in the first year after their cessation as an Executive Director and to 50% of the shares retained in the first year during the second year after such cessation, recognising that there is no requirement to purchase additional shares if the shares held when they cease to be an Executive Director are less than the applicable shareholding guideline.

General

The Committee may make minor amendments to the policy set out in this Policy Report (for regulatory, exchange control, tax or administrative purposes or to take account of a change in legislation) without obtaining shareholder approval for that amendment.

Directors' Remuneration Report

Annual Report on Directors' Remuneration

Directors' Remuneration at a glance

Our remuneration for Executive Directors

The table below sets out the phasing of receipt of the various elements of Executive Director remuneration for 2020.

	2020	2021	2022	2023	2024	2025	Description and link to strategy
Base salary							Salaries are set at an appropriate level to enable the Company to recruit and retain key employees, and reflect the individual's experience, role and contribution within the Company.
Benefits							Provides normal market practice benefits.
Pension							The pension benefit helps to recruit and retain key employees and ensures income in retirement.
Annual Incentive							The Annual Incentive incentivises the Executive Directors to achieve key short-term financial and strategic targets of the Group.
Deferred Annual Incentive							The deferral of a portion of the Annual Incentive increases alignment with shareholders.
Vesuvius Share Plan					Holding Period		Awards under the Vesuvius Share Plan align Executive Directors' interests with those of shareholders through the delivery of shares and assist in the retention of the Executive Directors. The VSP rewards the Executive Directors for achieving the strategic objectives of growth in shareholder value and earnings.

2020 Directors' Remuneration

The table below sets out how the Remuneration Policy will be applied to the Executive Directors' remuneration for 2020. Further details about each of the elements of remuneration are set out in the Remuneration Policy and the Annual Report on Directors' Remuneration.

Remuneration element	Remuneration structure
Base salary	Current salaries as follows: > Patrick André – £618,000 (2019: £600,000) > Guy Young – £385,000 (2019: £350,000) The 2020 salaries shown above include a salary increase effective from 1 January 2020 of 3% for Patrick André and 10% for Guy Young.
Benefits	Benefits for Executive Directors include car allowance, private medical care, relocation expenses, tax advice and tax reimbursement, commuting costs, school fees, Directors' spouse's travel and administrative expenses.
Pension	Pension allowances of 25% of base salary. This allowance can be used to participate in Vesuvius' pension arrangements, be invested in their own pension arrangements or be taken as a cash supplement (or any combination of these alternatives). The pension allowance is frozen at the 1 January 2020 amount and will be reduced over time such that by the end of 2022 it will be reduced to the level applicable to the majority of the workforce.
Annual Incentive	For 2020 the maximum Annual Incentive potential for the Executive Directors will be 125% of base salary with target Annual Incentive potential being 62.5% of base salary. Their incentives are based 60% on Group headline earnings per share, 20% on the Group's working capital to sales ratio (based on the 12-month moving average) and 20% on specified personal objectives. 33% of any Annual Incentive earned will be deferred into awards over shares, to be held for a period of three years.
Vesuvius Share Plan	Performance Share awards with a maximum value of 200% of salary will be awarded to Patrick André and 150% for Guy Young. Vesting of 50% of shares awarded will be based upon the Company's TSR performance relative to that of the constituent companies of the FTSE 250 (excluding investment trusts), and 50% on headline EPS growth. Performance will be measured over three years with awards vesting after three years. There will then be a further two-year holding period applicable to the awards.

Remuneration Committee structure

The current members of the Remuneration Committee are all the independent Non-executive Directors of the Company.

The Committee Chairman is Jane Hinkley. Jane Hinkley, Hock Goh, Douglas Hurt and Holly Koeppel have all served on the Committee throughout 2019. All continue in office as at the date of this report. The Committee complies with the requirements of the UK Corporate Governance Code for the 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. The Company Secretary is Secretary to the Committee. Members' biographies are on pages 76 and 77.

Meetings

The Committee met five times during the year. The Group's Chairman, Chief Executive and Chief HR Officer were invited to each meeting, together with Christer Gardell, Vesuvius' non-independent Non-executive Director, though none of them participated in discussions regarding their own remuneration. In addition, a representative from Deloitte, the Remuneration Committee adviser, attended the meetings. The attendees supported the work of the Committee, giving critical insight into the operational demands of the business and their application to the overall remuneration strategy within the Group. In receiving views on remuneration matters from the Executive Directors and senior management, the Committee recognised the potential for conflicts of interest to arise and considered the advice accordingly. The Chairman of the Committee reported the outcomes of all meetings to the Board.

The Committee operates under formal terms of reference which were reviewed during the year. The terms of reference are available on the Group website www.vesuvius.com. The Committee members are permitted to obtain outside legal advice at the Company's expense in relation to their deliberations. These powers were not exercised during the year. The Committee may also secure the attendance at its meetings of any employee or other parties it considers necessary.

Role and responsibilities

The Committee is responsible for:

> Determining the overall remuneration policy for the Executive Directors, including the terms of their service agreements, pension rights and compensation payments

> Setting the appropriate remuneration for the Chairman, the Executive Directors and Senior Management (being the Group Executive Committee)

> Reviewing workforce remuneration and related policies, and the alignment of incentives and rewards with culture, taking these into account when setting the policy for Executive Director remuneration

> Overseeing the operation of the executive share incentive plans

Advice provided to the Remuneration Committee

Deloitte is appointed directly by the Remuneration Committee to provide advice on executive remuneration matters, including remuneration structure and policy, updates on market practice and trends, and guidance on the implementation and operation of share incentive plans. The Committee appointed Deloitte, a signatory to the Remuneration Consultants Group Code of Conduct in relation to Executive Remuneration Consulting in the UK, following a formal tender process in 2014. Deloitte also provides the Remuneration Committee with ongoing calculations of total shareholder return (TSR) to enable the Committee to monitor the performance of long-term share incentive plans. Deloitte does not have any other connection with any individual Director.

In addition in 2019, Deloitte provided the Group with IFRS 2 calculations for the purposes of valuing the share plan grants and, within the wider Group, was engaged in various jurisdictions to provide tax and treasury advisory work, and some consultancy services. During 2019, Deloitte's fees for advice to the Remuneration Committee, charged on a time spent basis, amounted to £79,710. The Committee conducted a review of the performance of Deloitte as remuneration adviser during the year and concluded that Deloitte continued to provide effective, objective and independent advice to the Committee. No conflict of interest arises as a result of other services provided by Deloitte to the Group.

Activities of the Remuneration Committee

The key matters the Remuneration Committee considered during its five meetings in 2019 included:

> Considering and approving the 2020 salaries for the Chairman, Chief Executive, Chief Financial Officer and senior management

> Reviewing and approving achievement against performance targets for the 2018 Annual Incentive arrangements

> Setting performance targets and approving the structure of the 2019 Annual Incentive arrangements

> Reviewing and assessing the Company's attainment of performance conditions applicable to the Vesuvius Performance Share awards made in 2016

> Setting the performance measures and targets, and authorising the grant of new awards in 2019 under the Vesuvius Share Plan, the Deferred Share Bonus Plan and Medium Term Incentive Plan

> Considering the Company's ongoing share sourcing requirements to meet obligations under the Company's share plans, and funding of the employee share ownership plan (ESOP)

> Considering, formulating and approving the 2020 Directors' Remuneration Policy, taking into account the requirements of the 2018 UK Corporate Governance Code, along with advice received from the external advisers and other trends in remuneration practice

Annual Report on Directors' Remuneration continued

> Reviewing the Annual Incentive Plan structure applicable to the Group and approving changes to this structure for executives below the Board to incorporate a more granular level of trading performance at business unit level into the bonus plan structure

> Approving the 2018 Directors' Remuneration Report and reviewing the 2019 Directors' Remuneration Report

> Reviewing the Committee's terms of reference

As in previous years, the Committee was the subject of an externally moderated performance evaluation in 2019. The management of Remuneration Committee meetings was highly rated, with the meetings being seen to be well run, and the work being well prepared and organised. The quality of information provided to the Remuneration Committee from management and internal sources was positively rated, as was the quality of information and advice provided to the Remuneration Committee by the external remuneration adviser, Deloitte. The Committee noted that it had a good understanding of senior executive remuneration, but that there was more work to do for it to gain a deeper understanding of the remuneration of the workforce in general, a complex task given the number of countries and variables involved. The Committee also reflected on the process that had been undertaken for the revision of the Group's Remuneration Policy and concluded that it had worked effectively.

Regulatory compliance

The Remuneration Policy, which is set out on pages 106-113, was prepared in accordance with the Companies Act 2006 and the Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 (as amended). It also meets the requirements of the Financial Conduct Authority's Listing Rules and the Disclosure Guidance and Transparency Rules.

This Remuneration Report sets out how the principles of the Code are applied by the Company in relation to matters of remuneration. We have complied for the year under review with the provisions of the Code.

Share usage

Under the rules of the Vesuvius Share Plan, the Company has the discretion to satisfy awards either by the transfer of Treasury shares or other existing shares, or by the allotment of newly issued shares. Awards made under the Deferred Share Bonus Plan to satisfy shares awarded to Directors in respect of their Annual Incentive, and awards made to management of the Company over shares pursuant to the Medium Term Incentive Plan, must be satisfied out of Vesuvius shares held for this purpose by the Company's ESOP trust.

The decision on how to satisfy awards is taken by the Remuneration Committee, which considers the most prudent and appropriate sourcing arrangement for the Company.

At 31 December 2019, the Company held 7,271,174 ordinary shares in Treasury and the ESOP held 1,718,615 ordinary shares. During the year, the trustee of the ESOP purchased an additional 71,544 Vesuvius plc shares to hold to satisfy the potential future vesting of awards under the Company's share incentive plans. The ESOP can be gifted Treasury shares by the Company, can purchase shares in the open market or can subscribe for newly issued shares, as required, to meet obligations to satisfy options and awards that vest.

The Vesuvius Share Plan complies with the current Investment Association guidelines on headroom which provide that overall dilution under all plans over a rolling ten-year period should not exceed 10% of the Company's issued share capital, with a further limitation over a rolling ten-year period of 5% for discretionary share schemes. More than 9.9% of the 10% limit and more than 4.9% of the 5% limit remains available as headroom for the issue of new shares or the transfer of Treasury shares for the Company. No Treasury shares have been transferred or newly issued shares allotted under the Vesuvius Share Plan during the year under review.

Policy implementation

The following section provides details of how the Company's current Remuneration Policy was implemented during the financial year 2019 and how it will be implemented in the financial year 2020.

Directors' Remuneration – audited

The table below sets out the total remuneration received by Executive Directors in the financial year under review:

	Patrick André		Guy Young	
	2019 (£000)	2018 (£000)	2019 (£000)	2018 (£000)
Total salary[1]	600	525	350	350
Taxable benefits[2]	118	203	20	29
Pension[3]	150	131	88	88
Total fixed pay[4]	868	859	458	467
Annual Incentive[5]	84	546	64	351
Long-Term Incentives[6,7]	311	617	286	856
Total variable pay[8]	395	1,163	350	1,207
Total[9]	1,263	2,022	808	1,674

The table below sets out the fees and taxable benefits received by Non-executive Directors in the financial year under review and the total remuneration received by both Executive and Non-executive Directors during the year under review:

	2019			2018		
	Total fees[1] (£000)	Taxable benefits[2] (£000)	Total (£000)	Total fees[1] (£000)	Taxable benefits[2] (£000)	Total (£000)
John McDonough CBE	205	11	216	185	7	192
Christer Gardell[10]	47	3	50	45	8	53
Hock Goh	50	5	55	45	5	50
Friederike Helfer[11]	4	—	4	—	—	—
Jane Hinkley	65	3	68	60	3	63
Douglas Hurt	70	1	71	65	1	66
Holly Koeppel	50	8	58	45	6	51
Total 2019 Non-executive Director remuneration	522					
Total 2019 Executive Director remuneration	2,071					
Total 2019 Director remuneration	2,593					

Notes:

1. Base salary (or fees, as appropriate) earned in relation to services as a Director during the financial year.
2. The UK regulations require the inclusion of benefits for Directors where these would be taxable in the UK on the assumption that the Director is tax resident in the UK. The figures in the table therefore include expense reimbursement and associated tax relating to travel, accommodation and subsistence for the Director (and, where appropriate, their spouse) in connection with attendance at Board meetings and other corporate business during the year, which are considered by HMRC to be taxable in the UK. Standard benefits for the Executive Directors include car allowance and private medical care. As an expatriate, Patrick André also receives relocation benefits under Vesuvius' applicable expatriate localisation policy. As detailed in the 18 July 2017 RNS announcement of Mr André's appointment, those relocation benefits (totalling £89,796 in 2019) comprise commuting and housing costs, a one-off resettlement allowance of one month's salary (paid in 2018), tax advice and school fees.
3. Patrick André and Guy Young currently receive a pension allowance of 25% of base salary. The figures in the table represent the value of all cash allowances and contributions received in respect of pension benefits.
4. The sum of total salary, taxable benefits and pension.
5. This figure includes the Annual Incentive payments to be made to the Executive Directors in relation to the year under review. 33% of these Annual Incentive payments will be deferred into awards over shares, to be held for a period of three years. See pages 118 and 119 for more details.
6. The 2018 figures represent the Performance Share awards granted to Patrick André and Guy Young in 2016 under the Vesuvius Share Plan, that vested in 2019, along with the cash payment for the dividend that had accrued on these vested shares. See Note 2 of the Vesuvius Performance Share award allocations table on page 121 for further detail. Of these amounts, £383,391 was attributable to share price growth in respect of the vesting of Guy Young's shares and £276,202 in respect of Patrick André's shares.
7. The 2019 figures represent the Performance Share awards granted to Patrick André and Guy Young in 2017 under the Vesuvius Share Plan, that are due to vest in 2020. See Note 3 of the Vesuvius Performance Share awards allocations table on page 122. At an average Vesuvius mid-market closing share price (from 1 October 2019-31 December 2019) of 434.37 pence, the total value of the awards that are due to vest, along with the value of the dividends that have already accrued on these shares, is £596,915. None of this amount is attributable to share price growth as the shares were granted based on a share price higher than the assumed vesting price. The awards due to vest to Patrick André in September 2020 may also accrue further dividends prior to vesting.
8. The sum of the value of the Annual Incentive and the Long-Term Incentives where the performance period ended during the financial year.
9. The sum of base salary, benefits, pension, Annual Incentive and Long-Term Incentives where the performance period ended during the financial year.
10. Christer Gardell retired from the Board on 4 December 2019.
11. Friederike Helfer joined the Board on 4 December 2019.

Additional note:

12. Total 2018 Director remuneration for the Directors who served during 2018 was £4.171m.

Annual Report on Directors' Remuneration continued

Base salary and fees

The Chief Executive's salary was increased by 14% to £600,000 p.a. with effect from 1 January 2019. The Chief Financial Officer's base salary remained at £350,000 p.a. during 2019.

In December 2019, the Committee reviewed the salaries of the CEO and CFO. Under the terms of his appointment, the CEO is entitled to an annual review. The CFO's salary was reviewed under the terms of the current policy, having not received an adjustment since 1 January 2018. After reviewing the performance of both Directors, the Committee concluded that it was appropriate to increase the CEO's salary by 3% to £618,000 in line with the UK workforce and that of the CFO by 10% to £385,000. Whilst the CFO's increase (equivalent to 4.9% p.a. for the two-year period since his last salary review) is higher than the average annual salary increase to our UK staff over the equivalent period of 3.5% p.a., the Committee considered this was appropriate given the CFO's performance and continued development in his role.

With effect from 1 January 2019, the Chairman's fee was increased to £205,000, and the Non-executive Directors' fees were increased to £50,000 p.a. No changes were made to the supplementary fees, which remained at £15,000 p.a. for the Chairmen of the Audit and Remuneration Committees, and £5,000 for the Senior Independent Director. 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. There are no changes to the Chairman's or the other Non-executive Directors' fees in 2020.

Pension arrangements – audited

In accordance with their service agreements, Patrick André and Guy Young are entitled to pension allowances of 25% of base salary. This allowance can be used to participate in Vesuvius' pension arrangements, be invested in their own pension arrangements or be taken as a cash supplement (or any combination of these alternatives). The Remuneration Committee has determined that this level of pension allowance will be frozen at the 1 January 2020 amount and reduced over time such that by the end of 2022 it will be reduced to that of the majority of the workforce.

Annual Incentive

The Executive Directors are eligible to receive an Annual Incentive calculated as a percentage of base salary, based on achievement against specified financial targets and personal objectives. Each year, the Remuneration Committee establishes the performance criteria for the forthcoming year. The financial targets are set by reference to the Company's financial budget. The target range is set to ensure that Annual Incentives are only paid out at maximum for significantly exceeding performance expectations. The Remuneration Committee considers that the setting and attainment of these targets is important in the context of achievement of the Company's longer-term strategic goals.

The Annual Incentive has a threshold level of performance below which no award is paid, a target level and a maximum performance level at which a maximum award is earned.

2019 Annual Incentive

For 2019, the maximum Annual Incentive potential for the Executive Directors was 125% of base salary and their target Annual Incentive potential was 62.5% of base salary.

For the financial year 2019, the Executive Directors' Annual Incentives were based 60% on Group headline earnings per share, 20% on the Group's working capital to sales ratio (based on the 12-month moving average) and 20% on specified personal objectives.

Financial targets

The 2019 Vesuvius Group headline earnings per share performance targets set out below were set at the December 2018 full-year average foreign exchange rates, being the rates used for the 2019 budget process:

Threshold:	On-target:	Maximum:
52.2 pence	54.9 pence	57.5 pence

The 2019 Group's working capital to sales ratio targets were set as follows:

Threshold:	On-target:	Maximum:
23.5%	23.0%	22.5%

In assessing the Group's performance against these targets, the Committee uses a constant currency approach. Thus, the 2019 full-year EPS performance was retranslated at December 2018 full-year average foreign exchange rates to establish performance. This is consistent with practice in previous years.

In 2019, Vesuvius' retranslated EPS performance at the December 2018 full-year average foreign exchange rates was 45.2 pence, and working capital to sales ratio was 24.0%. Consequently EPS performance was below threshold and the Group's working capital to sales ratio was also below threshold. As a result, no payouts are due in respect of the financial performance metrics of the 2019 Annual Incentive.

Personal objectives

In 2019, a proportion (20%) of the Annual Incentive for Executive Directors (representing 25% of base salary out of the maximum 125% bonus entitlement) was based on the achievement of personal objectives. The Committee considered the appropriateness of paying Directors' incentives under the personal objectives element of the Annual Incentive for 2019 when neither of the financial targets had been met. Given that the personal objectives are linked to key strategic, organisational and operational projects with measurable targets, the Committee concluded that such payouts are in order. A summary of the objectives set and performance achieved is set out on the opposite page.

Patrick André

Summary of objective	Summary outcome
Drive Group performance	> Continued focus on existing restructuring, and launched new proposals to respond to market activity. Eight plants closed in 2019. Savings of £16.4m in 2019 > Delivered improved cash management. Cash conversion of 120% > Maintained focus on the importance of quality initiatives and reporting, and swift response to reported complaints
Reinforce talent management	> Ensured the successful integration of recently joined managers into Group operations > Supported the reorganisation of HR, finance and IT functions. New CIO and Head of Finance appointed > Led the Group-wide engagement survey with 91% participation rate and drove action plans based on results
Implementation of Group Strategy	> Laid groundwork for improved longer-term return on sales > Championed the delivery of targeted strategic capex projects to improve manufacturing efficiency. Increased capacity and accelerated automation in Mexico and focused on US challenges > Closed the acquisition of CCPI in pursuit of growth strategy and integrated the business into the Group

In summary, after considering performance as outlined above, the Committee approved an Annual Incentive pay-out of 13.96% of base salary, out of the 25%, in respect of the personal objectives of Patrick André.

Guy Young

Summary of objective	Summary outcome
Improve Group financial control and metrics	> Streamlined internal financial processes to support better financial analysis, with monthly results finalisation accelerated > Supported targeted asset sales. Sale of two US properties and planning for further rationalisation > Delivered improved cash management
Leadership of finance function	> Strengthened personal oversight of key finance functions > Enhanced team structure and personnel to drive efficiency and performance
Enhance performance of shared services	> Successfully integrated previously outsourced European Shared Service Centre in Krakow > Conducted further work on operating cost of global shared services
Performance of tax department	> Appointed and integrated new Head of Tax > Championed strategic internal tax projects, including delivering target plan of cash tax savings at flagship sites in Germany and Poland
Efficiency and performance of IT function	> Appointed and integrated new Chief Information Officer > Drove structuring and commencement of key IT infrastructure projects > Enhanced operating technology performance in key NAFTA manufacturing sites

In summary, after considering performance as outlined above, the Committee approved an Annual Incentive pay-out of 18.16% of base salary, out of the 25%, in respect of the personal objectives of Guy Young.

The total Annual Incentive awards payable to Patrick André and Guy Young in respect of their services as a Director during 2019 are therefore 13.96% and 18.16% of salary respectively. 33% of these Annual Incentive payments will be deferred into awards over shares, to be held for a period of three years.

2020 Annual Incentive

In order to give the Committee flexibility during the three-year Policy period, the new 2020 Remuneration Policy proposes increasing the maximum Annual Incentive opportunity that can be offered under the Policy to Executive Directors from 125% to 150% of salary. The Committee has, however, confirmed that it does not plan to use this flexibility in 2020, and therefore the Annual Incentive opportunity for the Executive Directors in 2020 will be unchanged at 125% of salary, with potential pay-outs of 62.5% of base salary for the achievement of target performance in all three elements. Pay-outs will commence and increase incrementally from 0% once the threshold performance for any of the three elements has been met. The structure of the Annual Incentive will also remain the same as for 2019: 60% of the Executive Directors' Annual Incentives will therefore be based on Group headline earnings per share, 20% on the Group's working capital to sales ratio (based on the 12-month moving average) and 20% on the achievement of personal objectives. The Company will not be disclosing the targets set until after the relevant performance period has ended because of commercial sensitivities. The personal objectives for 2020 are all non-financial or job-specific in nature and track performance against key strategic, organisational and operational goals. 33% of any Annual Incentive earned will be deferred into awards over shares, to be held for a period of three years.

Annual Report on Directors' Remuneration continued

Deferred Share Bonus Plan allocations – audited

In 2018 and 2019, 33% of the cash Annual Incentives earned by Patrick André and Guy Young in respect of their periods of service as Directors of Vesuvius plc during 2017 and 2018 respectively were deferred into shares under the Company's Deferred Share Bonus Plan. The following table sets out details of these awards:

Grant and type of award	Total share allocations as at 1 Jan 2019	Additional shares allocated during the year	Allocations lapsed during the year	Shares vested during the year	**Total share allocations as at 31 Dec 2019**	Market price of the shares on the day before award (p)	Earliest vesting date
Patrick André							
15 March 2018[1]							
Deferred Bonus Shares	10,128	—	—	—	**10,128**	605.5	15 Mar 2021
14 March 2019[2]							
Deferred Bonus Shares	—	29,646	—	—	**29,646**	608	14 Mar 2022
Total	10,128	29,646	—	—	**39,774**		
Guy Young							
15 March 2018[1]							
Deferred Bonus Shares	18,118	—	—	—	**18,118**	605.5	15 Mar 2021
14 March 2019[2]							
Deferred Bonus Shares	—	19,028	—	—	**19,028**	608	14 Mar 2022
Total	18,118	19,028	—	—	**37,146**		

Notes:
1. In 2018, Patrick André and Guy Young were awarded Annual Incentive bonuses in respect of their service as Directors of Vesuvius plc of £185,544 and £331,906 respectively. 33% of these bonuses were paid in deferred shares under the Vesuvius Deferred Share Bonus Plan. These shares will vest on the third anniversary of their award date.
2. In 2019, Patrick André and Guy Young were awarded Annual Incentive bonuses in respect of their service as Directors of Vesuvius plc of £546,131 and £350,525 respectively. 33% of these bonuses were paid in deferred shares under the Vesuvius Deferred Share Bonus Plan. The allocations of shares were made on 14 March 2019 and were calculated based upon the average closing mid-market price of Vesuvius' shares on the five dealing days before the award was made, being £6.079. The total value of these awards based on this share price was £180,218 and £115,671 respectively. There are no additional performance conditions applicable to these awards, therefore these shares will vest in full on the third anniversary of their award date.

Additional note:
3. The mid-market closing price of Vesuvius' shares during 2019 ranged between 341 pence and 642 pence per share and on 31 December 2019, the last dealing day of the year, was 500 pence per share.

Longer-term Pay (LTIPs) – audited

Performance Share awards are allocated to the Executive Directors under the Vesuvius Share Plan (VSP). In accordance with the Remuneration Policy and the rules of the VSP, they are eligible to receive, on an annual basis, a Performance Share award with a face value of up to 200% of salary. 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. The level of compound headline EPS growth specified in the targets is set by the Remuneration Committee each year, taking into account the Group's prospects and the broader global economic environment. The schedule of EPS targets is designed at the maximum level to be highly challenging, whilst remaining an effective incentive for the management team. The EPS and TSR measures operate independently. The use of these performance measures is intended to align executive remuneration with shareholders' interests. UK executives receive awards in the form of nil-cost options with a flexible exercise date and non-UK executives receive conditional awards which are exercised on the date of vesting. Performance Share awards vest after three years and, commencing with awards made in 2019, are then subject to a further two-year holding period.

On 14 March 2019, Patrick André and Guy Young received allocations of Performance Shares worth 200% and 150% of their base salaries, respectively. The Remuneration Committee has determined that Patrick André will again receive a Performance Share award in 2020 equivalent in value to 200% of his base salary and Guy Young an award equivalent in value to 150% of his base salary, subject to the application of the Committee's discretion to address concerns about share price volatility as set out in the Remuneration overview on page 105 of this Report.

The performance period applicable to the awards made in 2017 ended on 31 December 2019. The TSR performance during this three-year performance period was assessed against the comparator group and it was determined that the Company's performance was just above median; as a result, 12.64% of Performance Share awards will vest under the TSR performance element.

In 2018, the Board resolved to adjust the accounting treatment for the Group's US Deferred Tax Asset, recognising its utilisation through headline trading profit. This change was entirely unrelated to Group financial performance (and had no bearing on incentive outcomes), but required the Group's EPS for the base year of the performance period of the 2017 awards to be adjusted accordingly, to ensure that the effects of this decision were neutralised as performance was evaluated. This resulted in a restated 2016 EPS of 29.6p. On this basis, the Group's annual compound headline EPS growth over the performance period was 15%. As a result, 50% of Performance Share awards will vest under the EPS element, giving a total vesting of 62.64%. These awards will vest in March 2020 and in respect of Patrick André's 2017 'top-up' award in September 2020.

As described in the Remuneration Policy, prior to the vesting of Performance Shares the Remuneration Committee reviews the underlying financial performance of the Company over the performance period to ensure that the vesting is justified, and to consider whether to exercise its discretion to make any amendments. Having undertaken this analysis in 2020, the Committee concluded that vesting of the 2019 VSP awards was appropriate. For grants of Performance Shares under the VSP from 2019 onwards, the Committee determined that this discretion be extended to include consideration of certain non-financial matters, the occurrence of which may make full or partial vesting inappropriate.

Targets for the Performance Share awards – audited

TSR ranking relative to FTSE 250 excluding investment trusts	Vesting percentage
Below median	0%
Median	12.50%
Between median and upper quintile	Pro rata between 12.50% and 50%
Upper quintile and above	50%

Annual compound headline EPS growth	Vesting percentage
Less than 3%	0%
3%	12.50%
Between 3% and 6%	Pro rata between 12.50% and 25%
6%	25%
Between 6% and 15%	Pro rata between 25% and 50%
15% or more	50%

Vesuvius Performance Share award allocations – audited

The following table sets out the Performance Share awards that were allocated in 2016, 2017, 2018 and 2019 under the Vesuvius Share Plan:

Grant and type of award	Total share allocations as at 1 Jan 2019	Additional shares allocated during the year	Allocations lapsed during the year	Shares vested during the year	**Total share allocations as at 31 Dec 2019**	Market price of the shares on the day before award (p)	Performance period	Earliest vesting date	End of holding period[1]
Patrick André									
8 April 2016[2]							1 Jan 16 – 31 Dec 18		
Performance Shares	92,746	—	—	92,746	—	291.7		8 Apr 2019	n/a
16 March 2017[3,5]							1 Jan 17 – 31 Dec 19		
Performance Shares	60,413	—	—	—	**60,413**	524.5		16 Mar 2020	n/a
1 September 2017[4,5]							1 Jan 17 – 31 Dec 19		
Performance Shares	42,257	—	—	—	**42,257**	578		1 Sep 2020	n/a
15 March 2018[6]							1 Jan 18 – 31 Dec 20		
Performance Shares	173,697	—	—	—	**173,697**	605.5		15 Mar 2021	n/a
14 March 2019[7]							1 Jan 19 – 31 Dec 21		
Performance Shares	—	197,400	—	—	**197,400**	608		14 Mar 2022	14 Mar 2024
Total	369,113	197,400	—	92,746	**473,767**				
Guy Young									
8 April 2016[2]							1 Jan 16 – 31 Dec 18		
Performance Shares	128,739	—	—	128,739	—	291.7		8 Apr 2019	n/a
16 March 2017[3,5]							1 Jan 17 – 31 Dec 19		
Performance Shares	93,355	—	—	—	**93,355**	524.5		16 Mar 2020	n/a
15 March 2018[6]							1 Jan 18 – 31 Dec 20		
Performance Shares	86,848	—	—	—	**86,848**	605.5		15 Mar 2021	n/a
14 March 2019[7]							1 Jan 19 – 31 Dec 21		
Performance Shares	—	86,362	—	—	**86,362**	608		14 Mar 2022	14 Mar 2024
Total	308,942	86,362	—	128,739	**266,565**				

Notes:
1. Performance shares granted from 2019 onwards are subject to a further two year holding period.
2. In 2016, Guy Young received an allocation of Performance Shares worth 125% of his base salary, being 128,739 shares. In addition, prior to his appointment as Chief Executive, Patrick André received an award of 92,746 shares in respect of his role as President, Flow Control. Performance Shares that were allocated in 2016 had performance conditions to be tested over the financial years 2016, 2017 and 2018. In accordance with the Company's achievement of the specified performance conditions, 100% of Patrick André's and Guy Young's Performance Shares, being 92,746 shares and 128,739 shares respectively, vested on 8 April 2019. In addition, Messrs André and Young were given cash payments of £47,927 and £66,526 respectively, equivalent to the value of the dividends that would have been paid on the number of shares that vested in respect of dividend record dates occurring during the period between the award date and the date of vesting. The aggregate amount of gains made by the Directors on awards that vested during the year was £1,358,511.

Annual Report on Directors' Remuneration continued

3. On 16 March 2017, Guy Young received an allocation of Performance Shares worth 150% of his base salary, being 93,355 shares. In addition, prior to his appointment as Chief Executive, Patrick André received an award of 60,413 shares in respect of his role as President, Flow Control. Patrick André's March 2017 Performance Share award is subject to Flow Control performance conditions. Under these, 7,552 of the 60,413 shares awarded were deemed to have met the performance condition applicable in the first year, and 7,552 shares were deemed to have met the performance condition applicable in the second year. Having remeasured the performance at the end of 2019 for the full performance period, 62.64% of the shares are deemed to have met the performance condition.
4. Following his promotion to Chief Executive on 1 September 2017, Patrick André received an additional award of 42,257 Performance Shares in the form of a conditional award. This award brought his total award of Performance Shares in 2017 to 200% of his salary on a prorated basis, which is the maximum annual award for the Chief Executive as determined by the Vesuvius Remuneration Policy.
5. In accordance with the Company's achievement of the specified performance conditions, 62.64% of Guy Young's March 2017 award of Performance Shares and 62.64% of Patrick André's March and September 2017 awards of Performance Shares, being 58,478 shares and 64,313 shares respectively, are due to vest on 16 March and 1 September 2020. In addition, the Remuneration Committee has determined that Messrs André and Young will be given additional shares equivalent in value to the dividends that would have been paid on the number of shares that are due to vest in respect of dividend record dates occurring during the period between the award date and the date of vesting of their 2017 Performance Share. The value of the dividends that have already accrued on these shares is £31,156 and £32,397 respectively. The awards due to vest to Patrick André in September 2020 may also accrue further dividends prior to vesting.
6. On 15 March 2018, Patrick André and Guy Young received allocations of Performance Shares worth 200% and 150% of their base salaries, being 173,697 shares and 86,848 shares respectively. These allocations were calculated based upon the average closing mid-market price of Vesuvius' shares on the five dealing days before the award was made, being £6.045. The total value of these awards based on this share price on the date of grant was £1,049,998 and £524,996 respectively.
7. On 14 March 2019, Patrick André and Guy Young received allocations of Performance Shares worth 200% and 150% of their base salaries, being 197,400 shares and 86,362 shares respectively. These allocations were calculated based upon the average closing mid-market price of Vesuvius' shares on the five dealing days before the award was made, being £6.079. The total value of these awards based on this share price was £1,199,994 and £524,994 respectively. The Committee did not exercise any discretion to adjust the level of awards made.

Additional notes:

8. If the respective performance conditions for Patrick André's and Guy Young's awards are not met, then the awards will lapse. If the threshold level of either of the two performance conditions applicable to the awards is met, then 12.50% of the awards will vest.
9. The Remuneration Committee also has the discretion to award cash or shares equivalent in value to the dividend that would have been paid during the vesting period on the number of shares that vest.
10. The mid-market closing prices of Vesuvius' shares during 2019 ranged between 341 pence and 642 pence per share and on 31 December 2019, the last dealing day of the year, was 500 pence per share.

Malus/clawback arrangements in 2020

Vesuvius has malus and clawback arrangements in respect of Executive Directors' variable remuneration. The structure of those arrangements is outlined in our Remuneration Policy.

Statement of Directors' shareholding – audited

The interests of Directors and their closely associated persons in ordinary shares as at 31 December 2019, including any interests in share options and shares provisionally awarded under the Vesuvius Share Plan, are set out below:

		Outstanding share incentive awards	
	Beneficial holding in shares	With performance conditions[1]	Without performance conditions[2]
Executive Directors			
Patrick André	55,015	473,767	39,774
Guy Young	84,163	266,565	37,146
Non-executive Directors			
John McDonough CBE (Chairman)	100,000	—	—
Friederike Helfer[3]	—	—	—
Hock Goh	5,000	—	—
Jane Hinkley	12,000	—	—
Douglas Hurt	18,000	—	—
Holly Koeppel	27,500	—	—

Notes:

1. Patrick André and Guy Young hold awards over 473,767 shares and 266,565 shares respectively; these have all been granted as Performance Shares under the Vesuvius Share Plan. The awards were all granted subject to performance conditions.
2. Patrick André and Guy Young hold awards over 39,774 shares and 37,146 shares respectively, granted under the Deferred Share Bonus Plan. These awards are not subject to any additional performance conditions.
3. Friederike Helfer is a Partner of, and has a financial interest in, Cevian Capital which held 21.11% of Vesuvius' issued share capital as at 31 December 2019 and at the date of this report.

Additional notes:

4. None of the other Directors, nor their spouses, nor their minor children, held non-beneficial interests in the ordinary shares of the Company during the year.
5. There were no changes in the interests of the Directors in the ordinary shares of the Company in the period from 1 January 2020 to the date of this Report.
6. All awards under the Vesuvius Share Plan are subject to performance conditions and continued employment until the relevant vesting date as set out on pages 120 and 121.
7. Full details of Directors' shareholdings and incentive awards are given in the Company's Register of Directors' Interests, which is open to inspection at the Company's registered office during normal business hours.

Payments to past Directors and loss of office payments – audited

There were no payments made to any Director for loss of office during the year ended 31 December 2019, and no payments were made to any other past Directors of the Company during the year ended 31 December 2019.

Shareholding guidelines

The Remuneration Committee encourages Executive Directors to build and hold a shareholding in the Company. Under the 2017 Remuneration Policy, the required holding of the Chief Executive was equivalent in value to at least 200% of salary, and that required of other Executive Directors was equivalent in value to at least 100% of salary. Under the proposed new Remuneration Policy, the required holding is 200% of salary for all Executive Directors. Executive Directors are required to retain at least 50% (measured as the value after tax) of any shares received through the operation of share schemes; in addition, permission to sell shares held – whether acquired through the operation of share schemes or otherwise – will not be given, other than in exceptional circumstances, if, following the disposal, the shareholding requirements have not been achieved or are not maintained.

Compliance with the shareholding policy is tested at the end of each year for application in the following year. Under the 2020 Remuneration Policy, the valuation of any holding will be taken at the higher of: (1) the share price on the date of vesting of any shares derived from a share award, in respect of those shares only; and (2) the average of the closing prices of a Vesuvius ordinary share for the trading days in that December.

Executive Directors' shareholdings – audited

As at 31 December 2019, the Executive Directors' shareholdings against the shareholding guidelines contained in the 2017 Directors' Remuneration Policy in force on that date (using the Company's share price averaged over the trading days of the period 1 December to 31 December 2019, of 480.96 pence per share) were as follows:

Director	Actual share ownership as a percentage of salary at 31 Dec 2019	Policy share ownership as a percentage of salary	Policy met?
Patrick André	76%	200%	In the build-up period
Guy Young	167%	100%	Yes

Annual changes in Chief Executive pay versus employee pay

The table below shows the percentage change in the remuneration of the Chief Executive – comprising salary, taxable benefits and Annual Incentive – and comparable data for UK salaried employees. The UK salaried employee workforce was chosen as a fair representation of a suitable comparator group as the Chief Executive Patrick André 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)
	2019 (£000)	2018 (£000)	% change	% change
Salary	**600**	525	14.29	2.80
Taxable benefits	**118**	203	(41.87)	(7.09)
Annual bonus	**84**	546	(84.66)	(81.21)

Annual Report on Directors' Remuneration continued

CEO pay ratios

	Year	Method	25th percentile pay ratio	50th percentile (median) pay ratio	75th percentile pay ratio
Total remuneration (£)	2018	n/a	58:1	43:1	28:1
Total remuneration (£)	2019	Option A	35:1 (37,119)	28:1 (45,000)	17:1 (75,293)
Salary (£)	2019	Option A	22:1 (27,338)	15:1 (39,890)	9:1 (66,784)

The table above shows the Chief Executive pay ratios versus our UK employees for 2019. The pay ratios compare amounts disclosed in the single total figure table for the Group Chief Executive to the annual full-time equivalent remuneration of our UK employees for 2019. The data has been calculated in accordance with 'Option' A in The Companies (Miscellaneous Reporting) Regulations 2018, because it allows the Company to show the total annualised full-time equivalent remuneration (salary, incentives, allowances, fees, taxable benefits) and percentiles across the financial year as at 31 December 2019.

Amounts have been annualised for those who joined part way through the year or who are on part-time arrangements and exclude those who left the organisation during the reporting period.

The approach to calculating the pay ratios is consistent with the prior year and there have not been any changes to the compensation models in the reporting period.

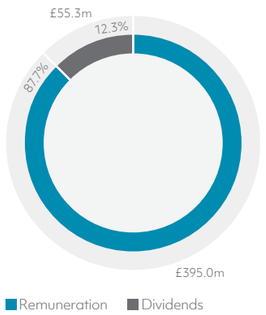
The reduction in pay ratios compared with last year can be attributed to a number of factors, including the median UK employee total remuneration (excluding CEO) remaining similar to the prior year despite the lower annual incentive pay-outs (less than half of the UK employees participate in an annual incentive); the Long-Term Incentive Plan paying out at a lower rate than the prior year for the CEO (and his leadership team) which constitutes a larger proportion of total remuneration than for employees who do not participate in the plan; a reduction in the number of lower paid roles in the UK; and an increase in the UK employee median salary compared with last year (excluding the CEO).

On balance, the Committee feels that the formulaic outcome against the financial performance targets set is a fair reflection of performance and is satisfied that the resulting compensation for the Group's leadership team is an appropriate reflection of the performance delivered. The Committee is also comfortable that the principles applied and the quantum of compensation are appropriate across the Group's employee base. These are regularly benchmarked to ensure market competitiveness. There is a consistent approach of measuring against both business and personal performance for all those who participate in incentive programmes. The Group continues to monitor the effectiveness of all compensation practices to identify future opportunities to ensure they remain fair, consistent and in line with best practice.

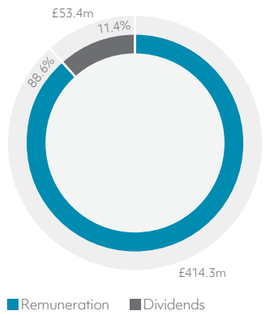
Annual spend on employee pay[1] versus shareholders' distributions[2]

The charts below show the annual spend on all employees (including Executive Directors) compared with distributions made and proposed to be made to shareholders for 2018 and 2019:

Relative importance of spend on pay (2019) £m



Relative importance of spend on pay (2018) £m



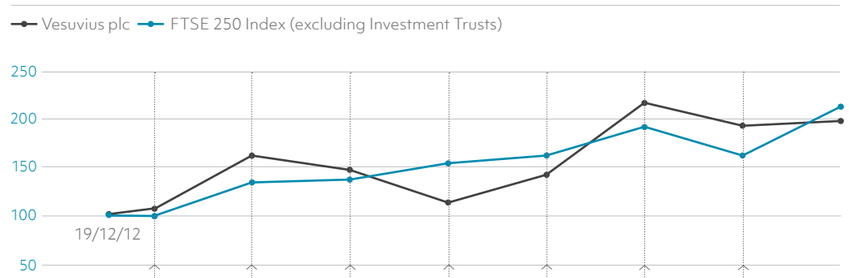
	2019 (£m)	2018 (£m)	Change
Employee pay[1]	**395.0**	414.3	(4.7%)%
Dividends[2] (based on final proposed dividend)	**55.3**	53.4	3.6%

Notes:
1. Employee pay includes wages and salaries, social security, share-based payments and pension costs, and other post-retirement benefits. See Note 8 to the Group Financial Statements.
2. Shareholder distributions/dividends includes interim and final dividends paid in respect of each financial year. See Note 24 of the Group Financial Statements.

TSR performance and Chief Executive pay

The TSR performance graph compares Vesuvius TSR performance with 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. The demerger of Vesuvius plc was effective on 19 December 2012 and therefore the graph shows the period from 19 December 2012 to 31 December 2019.

Vesuvius' total shareholder return compared against total shareholder return of the FTSE 250 index (excluding investment trusts) since demerger



Chief Executive pay – financial year ended	31/12/12	31/12/13	31/12/14	31/12/15	31/12/16	31/12/17	31/12/18	31/12/19
			François Wanecq[1]				Patrick André[2]	
Total remuneration (single figure (£000))	£1,227	£2,447	£1,519	£752	£1,173	£1,675[1] £465[2]	£2,022	£1,263
Annual variable pay (% of maximum)	0%	100%	64%	0%	50%	81%[1] 85%[2]	83%	11%
Long-term variable pay (% of maximum)	67%	28%	27%	0%	0%	43.7%[1] n/a[2]	100%	62.6%

Notes:
1. Amounts shown in respect of François for 2017 reflect payments in respect of his service as Chief Executive from 1 January 2017 to 31 August 2017 and the full value of his Vesuvius Share Plan award in relation to the performance period 2015–2017.
2. Amounts shown in respect of Patrick André for 2017 reflect payments in respect of his service as Chief Executive from 1 September 2017 to 31 December 2017.

Statement on shareholder voting

At the last AGM (which was held on 15 May 2019) the resolution concerning the advisory vote on the Directors' Remuneration Report for 2019 received 180,165,253 votes (76.91%) in favour and 54,091,750 votes against (23.09%); 671,069 votes were withheld. Whilst a clear majority of shareholders were supportive of the resolution, three of the Company's larger shareholders,representing 22.67% of the Company's issued share capital, voted against the resolution. The Remuneration Committee invited a dialogue with these shareholders and spoke with two of them. These two investors' concerns principally related to the level of salary increase awarded to the Chief Executive for 2019. The Remuneration Committee and the Board discussed these concerns. The Company's rationale for its approach to this matter was set out in detail in the Directors' Remuneration Report in the 2018 Annual Report and Financial Statements and was discussed further in these shareholder meetings. The Committee and the Board continues to believe that the salary increase for the Chief Executive, which was supported by the majority of the shareholders, was appropriate.

At the 2017 AGM, when the Company's Remuneration Policy was last put to the vote, the resolution received 238,743,173 (98.86%) in favour and 2,762,888 votes (1.14%) against; 1,454,874 votes were withheld. The new 2020 Remuneration Policy will be tabled for a shareholder vote at the 2020 AGM to be held on 13 May 2020, alongside the advisory vote on the Directors' Remuneration Report.

The Chairman of the Remuneration Committee contacted each of the Company's largest shareholders and key governance agencies at the beginning of the year, outlining the Committee's proposals for the 2020 Remuneration Policy and inviting comments. Vesuvius received responses from each governance agency contacted and from half of the shareholders. The Company entered into dialogue with a number of shareholders. The overall response has been supportive, both of the developments in the 2020 Remuneration Policy and to the changes proposed to executive remuneration.

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

Jane Hinkley
Chairman, Remuneration Committee

27 February 2020

Directors' Report

Directors' Report

The Directors submit their Annual Report together with the audited financial statements of the Group and of the Company, Vesuvius plc, registered in England and Wales No. 8217766, for the year ended 31 December 2019.

The Companies Act 2006 requires the Company to provide a Directors' Report for Vesuvius plc for the year ended 31 December 2019.

Information incorporated by reference

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 Section 172(1) statement

> The Non-financial information section

> The Governance section, including the Corporate Governance Statement

> Financial instruments: the information on financial risk management objectives and policies contained in Note 25 to the Group Financial Statements

This Directors' Report and the Strategic Report contained on pages 1 to 73 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.

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 Strategic Report. The principal risks and uncertainties that the Group faces throughout its global operations are shown on pages 32 and 33. The financial position of the Group, its cash flows, liquidity position and debt facilities are also described in the Strategic Report. In addition, the Group's Viability Statement is set out within the Strategic Report on page 31. Note 25 to the Group Financial Statements sets 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 13, 14 and 25 to the Group Financial Statements. The Directors have prepared profit and loss, balance sheet and cash flow forecasts for the Group for a period in excess of 12 months from the date of approval of the 2019 financial statements. On the basis of the exercise described above, the Directors have prepared a going concern statement which can be found on page 31.
Events since the balance sheet	Since 31 December 2019, there have been no material items to report.
Future developments	A full description of the activities of the Group, including performance, significant events affecting the Group in the year and indicative information in respect of the likely future developments in the Group's business, can be found in the Strategic Report.
Financial instruments	Information on Vesuvius' financial risk management objectives and policies can be found in Note 25 to the Group Financial Statements.
Research and development	The Group's investment in research and development (R&D) during the year under review amounted to £29.1m (representing approximately 2% (2018: 2%) of Group revenue). Further details of the Group's R&D activities can be found in the Operating Review section of the Strategic Report.
Political and charitable donations	In accordance with Vesuvius policy, the Group did not make any political donations or incur any political expenditure in the UK or the EU during 2019 (2018: nil). The Company made no charitable donations of more than £2,000 in 2019 (2018: nil).
Energy consumption and efficiency/greenhouse gas emissions	Information on our reporting of greenhouse gas emissions, and the methodology used to record these, is set out on page 66 of the Strategic Report. Details of the Group's energy usage for 2019, and the efficiency initiatives currently being undertaken, can be found in the Sustainability section of p64-67.
Branches	A number of the Group's subsidiary undertakings maintain branches; further details of these can be found in Note 33.1 to the Group Financial Statements.
Dividends	An interim dividend of 6.20 pence (2018: 6.00 pence) per Vesuvius ordinary share was paid on 20 September 2019 to Vesuvius shareholders. The Board is recommending a final dividend in respect of 2019 of 14.30 pence (2018: 13.80 pence) per ordinary share which, if approved, will be paid on 22 May 2020 to shareholders on the register at 17 April 2020.
Accountability and audit	A responsibility statement of the Directors and a statement by the auditor about its reporting responsibilities can be found on pages 131 and 132-138 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's reappointment	PricewaterhouseCoopers LLP (PwC) was reappointed as External Auditor for Vesuvius plc for the year ended 31 December 2019, at the 2019 AGM. PwC has been Vesuvius' external Auditor since 2017 and has expressed its willingness to continue in office as Auditor of the Company for the year ending 31 December 2020. Consequently, resolutions for the reappointment of PwC as auditor of the Company and to authorise the Directors to determine their remuneration are to be proposed at the 2020 AGM.
Directors	The current Directors of the Company are Patrick André, Hock Goh, Friederike Helfer, Jane Hinkley, Douglas Hurt, Holly Koeppel, John McDonough CBE and Guy Young. Christer Gardell served on the Board until 4 December 2019, when he stepped down from the Board and was replaced by Friederike Helfer. All the Directors will retire at the 2020 AGM and offer themselves for re-election at the AGM. Biographical information for the Directors is given on pages 76 and 77. Further information on the remuneration of, and contractual arrangements for, the Executive and Non-executive Directors is given on pages 114-125 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 Plans Trustee Board (none of whom is a Director of Vesuvius plc) have been granted qualifying pension scheme indemnity provisions by Vesuvius Pension 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 Wednesday 13 May 2020 at 11.00 am.
Amendments of articles of association	The Company may make amendments to the Articles by way of special resolution in accordance with the Companies Act.
Share capital	As at the date of this report, the Company had an issued share capital of 278,485,071 ordinary shares of 10 pence each; 7,271,174 of these ordinary shares are held in Treasury. Therefore, the total number of Vesuvius plc shares with voting rights is 271,213,897. Further information relating to the Company's issued share capital can be found in Note 9 to the Company Financial Statements. The Company's Articles specify that, subject to the authorisation of an appropriate resolution passed at 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 the relevant resolution. In addition, the Articles state that the Directors can seek the authority of shareholders in a 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 under Section 561 of the Companies Act, in connection with a rights issue and in other circumstances up to the aggregate nominal amount specified by the relevant resolution. At the AGM on 15 May 2019, the Directors were authorised to issue relevant securities up to an aggregate nominal amount of £9,040,463, and, in connection with a rights issue, to issue relevant securities up to a further nominal value of £9,040,463. In addition, the Directors were empowered to allot equity securities, or sell Treasury Shares, for cash on a non pre-emptive basis up to an aggregate nominal amount of £1,356,069, and for the purposes of financing (or refinancing, if the authority is to be used within six months after the original transaction) a transaction which the Board of the Company determines to be an acquisition or other capital investment, to allot equity securities, or sell Treasury Shares, for cash on a non pre-emptive basis up to an additional nominal amount of £1,356,069. Each of the authorities given in these resolutions expires on 30 June 2020 or the date of the AGM to be held in 2020, whichever is the earlier. The resolutions were all tabled in accordance with the terms of the Pre-Emption Group's Statement of Principles. The Directors propose to renew these authorities at the 2020 AGM for a further year. In the year ahead, other than in respect of Vesuvius' 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 plc.

Directors' Report continued

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 AGM on 15 May 2019, Vesuvius shareholders gave authority to the Company to make market purchases of up to 27,121,389 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 2020 or the date of the AGM to be held in 2020, whichever is the earlier. The Directors will seek renewal of this authority at the 2020 AGM. In 2013, 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 further acquisitions of shares nor did it dispose of any shares previously acquired. The Company does not have a lien over any of its shares.
Share plans	Vesuvius operates a number of share-based incentive plans. Under these plans, the Group can satisfy entitlements by the acquisition of existing shares, the transfer of Treasury shares or by the issue of new shares. Existing shares are held in an employee share ownership plan trust (ESOP). The Trustee of the ESOP 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. At 31 December 2018, the ESOP held 2,874,060 ordinary shares in the Company. During the year, the ESOP sold/transferred 1,226,989 shares to satisfy the vesting of awards under the Company's share-based incentive plans. As at 31 December 2019, the ESOP held 1,718,615 ordinary shares. During the year, the trustee of the ESOP purchased 71,544 ordinary shares of 10p each in Vesuvius with a nominal value of £7,154 at a total cost, including transaction costs of approximately £0.4m, to hold to satisfy the future vesting of awards under the Company's share incentive plans. The total purchases during the year represented 0.03% of the Company's called-up share capital.
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 issued shares are fully paid. This is a summary only and the relevant provisions of the Articles should be consulted if further information is required.
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 also 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.
Interests in the Company's shares	The Company has been notified in accordance with DTR 5 of the Disclosure and Transparency Rules of the following interests of 3%, or more, of its issued ordinary shares:

	As at 31 Dec 2019	As at 27 Feb 2020
Cevian Capital	**21.11**	21.11
Standard Life Aberdeen	**13.42**	14.04
Aberforth Partners	**4.93**	4.93
Phoenix Asset Management	**4.05**	4.05

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 Financial Conduct Authority are as set out on page 122 of the Directors' Remuneration Report and details of the Directors' Deferred Share Bonus Plan and Long-Term Incentive awards are set out on pages 120 and 121.

Suppliers, customers and others	Information summarising how the Directors have regard to the need to foster the Company's business relationships with suppliers, customers and others is included in the Group's Section 172(1) Statement on pages 22-27. This also details how that regard impacted the principal decisions taken by the Directors during the year. Our approach to business places a significant number of Vesuvius Steel employees at customer sites on a permanent basis. In the Foundry Division, our success is built on our deep understanding of customer processes and technical requirements, and our ability to assist them in delivering the greatest efficiency from their operations. During the year, our supplier audit programme covered the operations of 203 suppliers. This approach allows Vesuvius to gain a deep understanding of our suppliers' operations to ensure sustainability and quality of supply. Vesuvius agrees payment terms with its suppliers and seeks to pay in accordance with those terms.
Equal opportunities employment	Vesuvius is an equal opportunities employer, and decisions on recruitment, development, training and 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, belief, gender, sexual orientation, age, disability or any other reason not related to job performance or prohibited by applicable law. In cases where employees are injured or disabled during employment with the Group, support, including appropriate training, is provided to those employees and workplace adjustments are made as appropriate in respect of their duties and working environment, supporting recovery and continued employment.
Employee engagement	Information on the mechanisms through which Vesuvius engages with its workforce is included in the Section 172(1) Statement on pages 22-27.
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 shares of Vesuvius plc. Outside the UK, the US, Germany and Belgium, the majority of pension plans in the Group are of a defined contribution nature. In 2016, the main German defined benefit plan was closed for new entrants and existing members were offered a buy-out of their benefits under this plan. Those who accepted this buy-out then joined the new defined contribution plan. The Group's UK defined benefits plan (the 'UK Plan') and the main US defined benefits plans 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. For the Group's closed UK Plan, a Trustee Board exists comprising employees, former employees and an independent trustee. The Board currently comprises six trustee Directors, of whom two are member-nominated. The administration of the UK 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 the Company and Trustee Board 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. Vesuvius continues to seek ways to de-risk its existing pension plans through a combination of asset matching, buy-in opportunities and, where prudent, voluntary cash contributions. The Group's net pension deficit at 31 December 2019 was £8.5m (31 December 2018: £15.3m). The improvement of £6.8m is driven by cash contributions and payments of unfunded benefits of £9.8m and from foreign exchange movements of £5.7m; offset by changes to actuarial assumptions (attributable to reducing discount rates, updated mortality assumptions and pension membership data) of £3.6m and additional accrual and administrative expenditure paid for the year of £5.1m.

Directors' Report continued

Listing Rule 9.8.4C R Disclosures

The following disclosures are made in compliance with the Financial Conduct Authority's Listing Rule 9.8.4C R:

Disclosure requirement under LR 9.8.4R		Reference/Location
(1)	Interest capitalised by the Group during the year	None
(2)	Publication of unaudited financial information	Not applicable
(3)	Details of any Long-Term Incentive schemes	Pages 107 and 108
(4)	Director waiver of emoluments	Not applicable
(5)	Director waiver of future emoluments	Not applicable
(6)	Allotment for cash of equity securities made during the year	Not applicable
(7)	Allotment for cash of equity securities made by a major unlisted subsidiary during the year	Not applicable
(8)	Details of participation of parent undertaking in any placing made during the year	Not applicable
(9)	Details of relevant material contracts in which a Director or controlling shareholder was interested during the year	Not applicable
(10)	Contracts for the provision of services by a controlling shareholder during the year	Not applicable
(11)	Details of any arrangement under which a shareholder has waived or agreed to waive any dividends	Vesuvius plc holds 7,271,174 of its 10 pence ordinary shares as Treasury shares. No dividends are payable on these shares. The Trustee of the Company's ESOP, has agreed to waive, on an ongoing basis, any dividends payable on shares it holds in trust for use under the Company's Employee Share Plans, details of which can be found on pages 116, 120, 121 and 122
(12)	Details of where a shareholder has agreed to waive future dividends	See above
(13)	Statements relating to controlling shareholders and ensuring company independence	Not applicable

The Directors' Report has been approved by the Board and is signed, by order of the Board, by the Secretary of the Company.

Henry Knowles
Company Secretary

27 February 2020

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

The Directors are responsible for preparing the Annual Report and Financial Statements in accordance with applicable law and regulation.

Company law requires the Directors to prepare financial statements for each financial year. Under that law the Directors have prepared the Group Financial Statements in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union and Company Financial Statements in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards, comprising FRS 101 Reduced Disclosure Framework, and applicable law). 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 the profit or loss of the Group and Company for that period. In preparing the financial statements, the Directors are required to:

- Select suitable accounting policies and then apply them consistently
- State whether applicable IFRSs as adopted by the European Union have been followed for the Group Financial Statements and United Kingdom Accounting Standards, comprising FRS 101, have been followed for the Company Financial Statements, subject to any material departures disclosed and explained in the financial statements
- Make judgements and accounting estimates that are reasonable and prudent
- Prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Group and Company will continue in business

The Directors are also responsible for safeguarding the assets of the Group and Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Group and Company's transactions and disclose with reasonable accuracy at any time the financial position of the Group and Company and enable them to ensure that the financial statements and the Directors' Remuneration Report comply with the Companies Act 2006 and, as regards the Group Financial Statements, Article 4 of the IAS Regulation.

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

Directors' confirmations

The Directors consider that the annual report and financial statements, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group and Company's position and performance, business model and strategy.

Each of the Directors, whose names and functions are listed below, confirm that, to the best of their knowledge:

- The Company Financial Statements, which have been prepared in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards, comprising FRS 101 Reduced Disclosure Framework, and applicable law), give a true and fair view of the assets, liabilities, financial position and profit of the Company
- The Group Financial Statements, which have been prepared in accordance with IFRSs as adopted by the European Union, give a true and fair view of the assets, liabilities, financial position and profit of the Group
- The Strategic Report includes a fair review of the development and performance of the business and the position of the Group and Company, together with a description of the principal risks and uncertainties that it faces

The names and functions of the Directors of Vesuvius plc are as follows:

John McDonough CBE	Chairman
Patrick André	Chief Executive
Guy Young	Chief Financial Officer
Hock Goh	Non-executive Director
Friederike Helfer	Non-executive Director
Jane Hinkley	Non-executive Director and Chairman of the Remuneration Committee
Douglas Hurt	Non-executive Director, Senior Independent Director and Chairman of the Audit Committee
Holly Koeppel	Non-executive Director

On behalf of the Board

Guy Young
Chief Financial Officer

27 February 2020

Independent Auditors' Report to the Members of Vesuvius plc

Report on the audit of the financial statements

Opinion

In our opinion:

> Vesuvius plc's Group financial statements and Company financial statements (the "financial statements") give a true and fair view of the state of the Group's and of the Company's affairs as at 31 December 2019 and of the Group's profit and cash flows for the year then ended;

> the Group financial statements have been properly prepared in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union;

> the Company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards, comprising FRS 101 "Reduced Disclosure Framework", and applicable law); and

> the financial statements have been prepared in accordance with the requirements of the Companies Act 2006 and, as regards the Group financial statements, Article 4 of the IAS Regulation.

We have audited the financial statements, included within the Annual Report and Financial Statements (the "Annual Report"), which comprise: the Group and Company Balance Sheets as at 31 December 2019; the Group Income Statement and Group Statement of Comprehensive Income, the Group Statement of Cash Flows, and the Group and Company Statements of Changes in Equity for the year then ended; and the notes to the financial statements, which include a description of the significant accounting policies.

Our opinion is consistent with our reporting to the Audit Committee.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities under ISAs (UK) are further described in the Auditors' responsibilities for the audit of the financial statements section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We remained independent of the Group in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, which includes the FRC's Ethical Standard, as applicable to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

To the best of our knowledge and belief, we declare that non-audit services prohibited by the FRC's Ethical Standard were not provided to the Group or the Company.

Other than those disclosed in Note 6 to the financial statements, we have provided no non-audit services to the Group or the Company in the period from 1 January 2019 to 31 December 2019.

Our Audit Approach – Overview

Materiality

> Overall Group materiality: £8.6 million (2018: £9.4 million), based on 5% of profit before tax and separately reported items ('Headline profit before tax').

> Overall Company materiality: £8.6 million (2018: £9.4 million), based on 1% of total assets, capped at the level of Group materiality.

Audit scope

> Our audit included full scope audits of 17 components and specified procedures on certain balances and transactions for 11 additional components.

> Taken together, the components at which either full scope audit work or specified audit procedures were performed enabled us to get coverage on 69% of revenue, 76% of profit before tax and 64% of Headline profit before tax.

Key audit matters

> Impairment of goodwill (Group);

> Impairment of investment in subsidiaries (Company);

> Provisions for exposures (Group); and

> Provisions for uncertainty over income tax treatments (Group).

The scope of our audit

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the financial statements.

Capability of the audit in detecting irregularities, including fraud

Based on our understanding of the Group and industry, we identified that the principal risks of non-compliance with laws and regulations related to tax, international trade regulations, health and safety and anti-bribery, and we considered the extent to which non-compliance might have a material effect on the financial statements. We also considered those laws and regulations that have a direct impact on the preparation of the financial statements such as the Companies Act 2006. We evaluated management's incentives and opportunities for fraudulent manipulation of the financial statements (including the risk of override of controls), and determined that the principal risks were related to posting inappropriate journal entries and management bias in accounting estimates. The Group engagement team shared this risk assessment with the component auditors so that they could include appropriate audit procedures in response to such risks in their work. Audit procedures performed by the Group engagement team and/or component auditors included:

> enquiries of Group and local management, internal audit and the Group's legal counsel (internal and, where relevant, external), including consideration of known or suspected instances of non-compliance with laws and regulations and fraud;

> understanding and evaluation of the design and implementation of management's controls designed to prevent and detect irregularities, including compliance, whistleblowing arrangements and the results of management's investigation of such matters;

> inspecting management reports and Board minutes in relation to health and safety matters;

> reading key correspondence with regulatory authorities, including the Financial Reporting Council;

> challenging assumptions and judgements made by management in their critical accounting estimates, in particular relating to impairment of goodwill and investment in subsidiaries (Company), provisions for exposures and uncertain tax positions (see related key audit matters below); and

> identifying and testing journal entries, in particular any journal entries posted with unusual account combinations, postings by unusual users or with unusual descriptions.

There are inherent limitations in the audit procedures described above and the further removed non-compliance with laws and regulations is from the events and transactions reflected in the financial statements, the less likely we would become aware of it. Also, the risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error, as fraud may involve deliberate concealment by, for example, forgery or intentional misrepresentations, or through collusion.

Key audit matters

Key audit matters are those matters that, in the auditors' professional judgement, were of most significance in the audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) identified by the auditors, including those which had the greatest effect on: the overall audit strategy; the allocation of resources in the audit; and directing the efforts of the engagement team. These matters, and any comments we make on the results of our procedures thereon, were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. This is not a complete list of all risks identified by our audit.

Key audit matter	How our audit addressed the key audit matter
Impairment of goodwill Goodwill arising from acquisitions has an indefinite expected useful life. At 31 December 2019, the carrying value of goodwill is £620.2 million (2018: £637.1 million - restated). Goodwill is tested for impairment at least annually at the cash-generating unit ("CGU") level. As set out in Note 17, following correspondence with the Financial Reporting Council ('FRC') the approach to impairment testing has been revised with CGUs now defined as Advanced Refractories, Flow Control, Digital Services and Foundry. Management prepares a Value in Use model (discounted cash flow) to test for impairment of the above CGUs. We focused on this area due to challenging market conditions and because the impairment test involves a number of subjective judgements and estimates by management, many of which are forward-looking. These estimates include key assumptions surrounding the budget and strategic plan that form the basis of the projected cash flows, discount rates and long term growth rates. Due to the change in CGUs for impairment testing this year, we also focused on the allocation of goodwill to CGUs and the determination and disclosure of a prior year restatement required. Refer to Changes in Accounting Policies (Note 2), Impairment of Tangible and Intangible Assets (Note 17), Critical Accounting Judgements and Estimates (Note 3) and Significant issues and material judgements in the Audit Committee report (page 91). (Group)	Our audit procedures included: > We understood management's basis for allocating Steel goodwill to the revised CGUs and obtained corroborative audit evidence. > For each CGU we obtained management's annual impairment assessment (and revised assessment for prior periods) and ensured the calculations were mathematically accurate and the methodology used was in line with the requirements of IAS 36 'Impairment of Assets'. > We evaluated and obtained corroborative evidence supporting the future cash flow forecasts of each CGU. We compared the forecasts used in the impairment model to the latest Board approved plans, and compared prior year budget versus actual data in order to assess historical estimation uncertainty and factor this into our challenge of current year projections. We also used external market data to challenge the profile of future projections. > We utilised a valuations expert to support our audit procedures over the discount rate and long term growth rate assumptions used in the impairment model and sensitised the impacts of changes in the discount rate within our view of a reasonable range. > We remained sceptical of the impacts of forecasting uncertainty and determined alternative sensitivity scenarios to ascertain the extent of changes in projections that would be required for the goodwill to be impaired. Our findings were discussed with the Audit Committee and appropriate sensitivity disclosures have been included in the financial statements. > In respect of impairment recognised as a prior year restatement we also checked that required disclosures were provided. From our procedures we concluded that the impairment testing estimates are reasonable and that appropriate disclosures have been included within the Annual Report.

Independent Auditors' Report to the Members of Vesuvius plc continued

Key audit matter	How our audit addressed the key audit matter
Impairment of investment in subsidiaries IAS 36 Impairment of assets requires management to consider whether there are any indicators of impairment at the year end. The Company holds investments in subsidiaries with a total carrying amount of £1,778m at 31 December 2019. Due to the quantum of the carrying amount this was an area of focus in the audit of the Company. Judgement is required to determine whether impairment indicators exist which, if identified, would require an impairment test to be performed. Refer to Investment in Subsidiaries, Associates and Joint Ventures (Note 7) and Critical Accounting Judgements and Estimates (Note 3) in the Company Financial Statements. (Company)	Our audit procedures included: > We assessed the carrying value of the investments in the context that the investment carrying value exceeds the Group's market capitalisation which was considered a trigger for impairment testing. > We assessed the results of the Value in Use model used for the impairment test over goodwill which indicated headroom and that the Investment balance was not impaired. > We applied the same audit procedures set out in 'Impairment of goodwill above' to obtain evidence to support management's base case model, and challenge management on sensitivity scenarios where impairment might arise. > We checked that appropriate sensitivity disclosures have been included in the Annual Report. Our findings were discussed with the Audit Committee. We concluded that no impairment is required and enhanced sensitivity disclosures have been included in the Annual Report.
Provisions for exposures The Group holds a number of provisions for exposures including those resulting from restructuring commitments, and disposal and closure costs, including legal matters. Refer to Restructuring Charges (Note 7), Provisions (Note 30), Critical Accounting Judgements and Estimates (Note 3) and Significant issues and material judgements in the Audit Committee report (page 91). Determining the quantum of provisions requires the directors to use judgement and estimation, and for certain provisions, obtain specialist knowledge. We focused on this area due to the material quantum of provisions and the judgement and estimates involved. (Group)	We obtained an understanding for the basis of each significant estimate and the key assumptions used for provisions. Restructuring provisions (and associated costs) related to the Group's rationalisation of its operational and support functions. The provisions predominantly included redundancies and severance payments and plant closure costs. Our testing of restructuring provisions included: > We understood restructuring programmes and that these are distinct, timebound and with clear criteria established; > We have tested a sample of restructuring costs, ensuring this included a sceptical focus that costs are directly attributable to the Group's restructuring activities. > For costs which are provided for at the year end we have verified for a sample of transactions that a legal or constructive obligation exists. > From our procedures we concluded that restructuring costs were appropriately recognised and classified within the Annual Report. For other provisions: > We obtained supporting computations for the estimated costs and tested the mathematical accuracy and logic of these. > We discussed obligations arising with in-house and external legal counsel and inspected correspondence, where relevant. > We tested source data used as inputs into client calculations that estimate certain provisions and obtained the support of an internal expert to assess key assumptions. > We also inspected evidence of available insurance cover and that this was appropriately presented as gross of the associated provisions (within 'Other receivables') and considered the financial condition of insurance providers. > We assessed and challenged estimation uncertainties and whether there is a range of different possible outcomes and/or costs involved in respect of each provision, inspecting evidence to support that each provision held represented the best estimate. From our procedures, we concluded the quantum of each provision held was appropriate. We also considered the impact of the provisions for exposures on the reporting and disclosure of separately reported items and Alternative Performance Measures in the financial statements and verified that appropriate disclosures are made in the Annual Report.

Key audit matter	How our audit addressed the key audit matter
Provisions for uncertainty over income tax treatments The Group implemented IFRIC 23 'Uncertainty over Income Tax Treatments' from 1 January 2019 and an adjustment was made to the opening retained earnings balance on transition. A number of provisions are held for income tax exposures arising from tax structuring, transfer pricing and local authority reviews. Determining the quantum of these provisions and the first time adoption of IFRIC 23 requires the directors to make judgements and estimates, and for certain areas, obtain specialist knowledge. Refer to Changes in Accounting Policies (Note 2), Income Tax (Note 10), Critical Accounting Judgements and Estimates (Note 3) and Significant issues and material judgements in the Audit Committee report (page 91). (Group)	Our audit procedures included: > Where provisions were recognised for uncertainty over income tax treatments we understood the nature of the uncertainty and judgements being applied by management. We involved our tax specialists to corroborate these key judgements regarding uncertain treatments. We then further assessed assumptions used in estimating the provisions and that these were consistent with the nature of the uncertainty identified. > We further considered our understanding of the Group and the results of our component audit teams' audit procedures to assess the completeness of the income tax uncertainties identified and provided for. > The transfer pricing provision was estimated using a model. We performed testing of the accuracy of calculations and source data used in the model. Where relevant, we also obtained supporting correspondence to evidence income tax provisions. > We assessed the appropriateness of the approach used to determine provisions and that this conforms with IFRIC 23 'Uncertainty over Income Tax Treatments', including the adjustment recognised on adoption and related disclosures. > We considered the range of possible outcomes in respect of the estimate and that the Annual Report discloses the nature of the estimation uncertainty. From our procedures we concluded that the estimates are reasonable and that appropriate disclosures have been included within the Annual Report.

How we tailored the audit scope

We tailored the scope of our audit to ensure that we performed enough work to be able to give an opinion on the financial statements as a whole, taking into account the structure of the Group and the Company, the accounting processes and controls, and the industry in which they operate.

Vesuvius has operations in 41 countries and has 54 production sites. The Group consolidates financial information through reporting from its components which include divisions and functions at these sites.

Our audit scope was determined by considering the significance of the component's contribution to revenue, Headline profit before tax and contribution to individual financial statement line items, with specific consideration to obtaining sufficient coverage over areas of heightened risk and locations and entities where we identified other areas of higher risk.

We identified one financially significant component in Germany which comprises 11% of the Group's revenue and 7% of Headline profit before tax. The Group's remaining revenue is spread across 53 other components and there were no other individually financially significant components. The audit scope, including the German component, comprised 17 components for which we determined that full scope audits would need to be performed and 11 components for which specific audit procedures on certain balances and transactions were performed. This collectively gave us coverage of 69% of the Group's revenue, 76% of the Group's profit before tax and 64% of the Group's Headline profit before tax. This, together with the additional procedures performed at the Group level, including testing the consolidation process, gave us the evidence we needed for our opinion on the financial statements as a whole.

In establishing the overall approach to the Group audit, we determined the type of work that needed to be performed at the components by us, as the Group engagement team, or by component auditors of other PwC network firms. Where the work was performed by component auditors, we determined the level of involvement and oversight we needed to have in the audit work at those reporting units to be able to conclude whether sufficient appropriate audit evidence had been obtained as a basis for our opinion on the financial statements as a whole. This was achieved through regular communications with the component auditors, including visits to 11 of the 17 full scope components by senior members of the Group audit team.

Independent Auditors' Report to the Members of Vesuvius plc continued

Materiality

The scope of our audit was influenced by our application of materiality. We set certain quantitative thresholds for materiality. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures on the individual financial statement line items and disclosures and in evaluating the effect of misstatements, both individually and in aggregate on the financial statements as a whole.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

	Group financial statements	Company financial statements
Overall materiality	£8.6 million (2018: £9.4 million).	£8.6 million (2018: £9.4 million).
How we determined it	5% of profit before tax and separately reported items ('Headline profit before tax').	1% of total assets, capped at the level of Group materiality.
Rationale for benchmark applied	We believe that profit before tax and separately reported items ('Headline profit before tax') provides us with an appropriate basis for determining our overall Group materiality given it is a key measure used by users of the financial statements both internally and externally. Headline profit before tax is an Alternative Performance Measure presented and defined in the Annual Report and Financial Statements.	We believe that total assets is an appropriate basis for determining materiality for the Parent Company, given this entity is an investment holding company and this is an accepted auditing benchmark. The materiality was capped to the level of Group overall materiality. The Company is not an in-scope component for our Group audit.

For each component in the scope of our Group audit, we allocated a materiality that is less than our overall Group materiality. The range of materiality allocated across components was between £0.6 million and £5.7 million. Certain components were audited to a local statutory audit materiality that was also less than our overall Group materiality.

We agreed with the Audit Committee that we would report to them misstatements identified during our audit above £0.4 million (Group audit) (2018: £0.5 million) and £0.4 million (Company audit) (2018: £0.5 million) as well as misstatements below those amounts that, in our view, warranted reporting for qualitative reasons.

Going concern

In accordance with ISAs (UK) we report as follows:

Reporting obligation	Outcome
We are required to report if we have anything material to add or draw attention to in respect of the directors' statement in the financial statements about whether the directors considered it appropriate to adopt the going concern basis of accounting in preparing the financial statements and the directors' identification of any material uncertainties to the Group's and the Company's ability to continue as a going concern over a period of at least twelve months from the date of approval of the financial statements.	We have nothing material to add or to draw attention to. However, because not all future events or conditions can be predicted, this statement is not a guarantee as to the Group's and Company's ability to continue as a going concern. For example, the terms of the United Kingdom's withdrawal from the European Union are not clear, and it is difficult to evaluate all of the potential implications on the Group's trade, customers, suppliers and the wider economy.
We are required to report if the directors' statement relating to Going Concern in accordance with Listing Rule 9.8.6R(3) is materially inconsistent with our knowledge obtained in the audit.	We have nothing to report.

Reporting on other information

The other information comprises all of the information in the Annual Report other than the financial statements and our auditors' report thereon. The directors are responsible for the other information. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except to the extent otherwise explicitly stated in this report, any form of assurance thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If we identify an apparent material inconsistency or material misstatement, we are required to perform procedures to conclude whether there is a material misstatement of the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report based on these responsibilities.

With respect to the Strategic Report and Directors' Report, we also considered whether the disclosures required by the UK Companies Act 2006 have been included.

Based on the responsibilities described above and our work undertaken in the course of the audit, the Companies Act 2006 (CA06), ISAs (UK) and the Listing Rules of the Financial Conduct Authority (FCA) require us also to report certain opinions and matters as described below (required by ISAs (UK) unless otherwise stated).

Strategic Report and Directors' Report

In our opinion, based on the work undertaken in the course of the audit, the information given in the Strategic Report and Directors' Report for the year ended 31 December 2019 is consistent with the financial statements and has been prepared in accordance with applicable legal requirements. (CA06)

In light of the knowledge and understanding of the Group and Company and their environment obtained in the course of the audit, we did not identify any material misstatements in the Strategic Report and Directors' Report. (CA06)

The directors' assessment of the prospects of the Group and of the principal risks that would threaten the solvency or liquidity of the Group

We have nothing material to add or draw attention to regarding:

> The directors' confirmation on page 31 of the Annual Report that they have carried out a robust assessment of the principal risks facing the Group, including those that would threaten its business model, future performance, solvency or liquidity.

> The disclosures in the Annual Report that describe those risks and explain how they are being managed or mitigated.

> The directors' explanation on page 31 of the Annual Report as to how they have assessed the prospects of the Group, over what period they have done so and why they consider that period to be appropriate, and their statement as to whether they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

We have nothing to report having performed a review of the directors' statement that they have carried out a robust assessment of the principal risks facing the Group and statement in relation to the longer-term viability of the Group. Our review was substantially less in scope than an audit and only consisted of making inquiries and considering the directors' process supporting their statements; checking that the statements are in alignment with the relevant provisions of the UK Corporate Governance Code (the "Code"); and considering whether the statements are consistent with the knowledge and understanding of the Group and Company and their environment obtained in the course of the audit. (Listing Rules)

Other Code Provisions

We have nothing to report in respect of our responsibility to report when:

> The statement given by the directors, on page 131, that they consider the Annual Report taken as a whole to be fair, balanced and understandable, and provides the information necessary for the members to assess the Group's and Company's position and performance, business model and strategy is materially inconsistent with our knowledge of the Group and Company obtained in the course of performing our audit.

> The section of the Annual Report on page 91 describing the work of the Audit Committee does not appropriately address matters communicated by us to the Audit Committee.

> The directors' statement relating to the Company's compliance with the Code does not properly disclose a departure from a relevant provision of the Code specified, under the Listing Rules, for review by the auditors.

Directors' Remuneration

In our opinion, the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the Companies Act 2006. (CA06)

Independent Auditors' Report to the Members of Vesuvius plc continued

Responsibilities for the financial statements and the audit

Responsibilities of the directors for the financial statements

As explained more fully in the Statement of Directors' Responsibilities in respect of the Annual Report and Financial Statements set out on page 131, the directors are responsible for the preparation of the financial statements in accordance with the applicable framework and for being satisfied that they give a true and fair view. The directors are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the Group's and the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or the Company or to cease operations, or have no realistic alternative but to do so.

Auditors' responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the FRC's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditors' report.

Use of this report

This report, including the opinions, has been prepared for and only for the Company's members as a body in accordance with Chapter 3 of Part 16 of the Companies Act 2006 and for no other purpose. We do not, in giving these opinions, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

Other required reporting

Companies Act 2006 exception reporting

Under the Companies Act 2006 we are required to report to you if, in our opinion:

> we have not received all the information and explanations we require for our audit; or

> adequate accounting records have not been kept by the Company, or returns adequate for our audit have not been received from branches not visited by us; or

> certain disclosures of directors' remuneration specified by law are not made; or

> the Company financial statements and the part of the Directors' Remuneration Report to be audited are not in agreement with the accounting records and returns.

We have no exceptions to report arising from this responsibility.

Appointment

Following the recommendation of the Audit Committee, we were appointed by the members on 10 May 2017 to audit the financial statements for the year ended 31 December 2017 and subsequent financial periods. The period of total uninterrupted engagement is 3 years, covering the years ended 31 December 2017 to 31 December 2019.

Julian Jenkins (Senior Statutory Auditor)
for and on behalf of PricewaterhouseCoopers LLP
Chartered Accountants and Statutory Auditors
London

27 February 2020