

Porvair plc
Annual Report & Accounts 2018

Aerospace & Industrial | Laboratory | Metal Melt Quality

Specialist filtration and environmental technology solutions

About Porvair

Porvair is a specialist filtration and environmental technology group with three operating divisions – **Aerospace & Industrial**, **Laboratory** and **Metal Melt Quality**. We have operations in the UK, US, Germany, the Netherlands and China.

We focus on specialist filtration markets which have long term growth potential of which aerospace, energy and industrial process, laboratories and metal melt quality are the most important.

At the heart of what we do is filtration and engineering expertise, which allows us to solve customer problems across all the markets we serve.

Our strategy focuses on generating value through the development of specialist filtration and environmental technology businesses, both organically and by acquisition.



Aerospace



Industrial



Laboratory



Metal Melt Quality

Strategic report 01 to 39

- 01 Key performance highlights in 2018
- 02 Our business at a glance
- 04 Market overview
- 08 Chairman's statement
- 09 Chief Executive's report
- 10 Strategy and business model
- 12 Divisional performance
- 18 Finance Director's review
- 24 Key performance indicators
- 27 Principal risks and uncertainties
- 33 Viability and going concern
- 34 Corporate and social responsibility report

Governance 40 to 65

- 40 Board of Directors
- 41 Chairman's introduction to governance
- 42 Directors' report
- 45 Corporate governance
- 47 Report of the Nomination Committee
- 48 Report of the Audit Committee
- 50 Remuneration report

Financial statements – Group accounts 66 to 109

- 66 Independent auditor's report to the members of Porvair plc
- 72 Consolidated income statement
- 72 Consolidated statement of comprehensive income
- 73 Consolidated balance sheet
- 74 Consolidated cash flow statement
- 74 Reconciliation of net cash flow to movement in net cash
- 75 Consolidated statement of changes in equity
- 76 Notes to the consolidated financial statements

Parent Company accounts 110 to 117

- 110 Parent Company – Balance sheet (under FRS101)
- 111 Parent Company – Profit for the financial year
- 111 Parent Company – Statement of changes in equity
- 112 Parent Company – Notes to the financial statements

Other Information 118 to 120

- 118 Shareholder information
- 119 Financial calendar 2019
- 120 Contact details and advisers

Key performance highlights in 2018

Record revenue, profit before tax and strong cash generation.

Highlights

A year of strong financial performance and growth.

- Record revenue of £128.8 million (2017: £116.4 million), up 11%.
- Profit before tax up to a record £12.0 million (2017: £11.7 million).
- Adjusted profit before tax* increased to £13.5 million (2017: £12.4 million).
- Basic earnings per share up 13% to 22.1 pence (2017: 19.5 pence).
- Adjusted basic earnings per share* up 11% to 22.9 pence (2017: 20.7 pence).
- Net cash was £6.6 million at 30 November 2018 (2017: £9.8 million) after £13.5 million (2017: £11.4 million) invested in capital expenditure and acquisitions.
- Recommended final dividend of 3.0 pence per share (2017: 2.7 pence per share), an increase of 11%.
- Rohasys B.V. acquired and traded in line with expectations in its first year.
- Keystone Filter acquired and integrated into the Aerospace & Industrial division.
- Order books for 2019 are healthy, ahead of the prior year.

*See note 2 for definition of alternative performance measures.

Turnover (£m)

£128.8m

(2017: £116.4m)

↑
+11%

Adjusted operating profit (£m)

£14.3m

(2017: £13.0m)

↑
+10%

Adjusted profit before tax (£m)

£13.5m

(2017: £12.4m)

↑
+9%

Basic earnings per share (pence)

22.1p

(2017: 19.5p)

↑
+13%

Adjusted basic earnings per share (pence)

22.9p

(2017: 20.7p)

↑
+11%

Our business at a glance

The Group is organised into three market focused divisions. We have manufacturing operations in the UK, US, Germany, the Netherlands and China and we sell our products throughout the world.

Aerospace & Industrial division



The **Aerospace & Industrial division** designs and manufactures a broad range of specialist filtration equipment for applications in aerospace, energy, and industrial applications. It has operations in the UK and US and its sales are global.

2018 performance

Revenue

£50.5m
(2017: £43.2m)

↑
+17%

Adjusted operating profit

£8.0m
(2017: £6.8m)

Our main operating companies and principal markets

• Porvair Filtration Group

- Aerospace
- General Industrial
- Energy
- Petrochemical



Laboratory division



The **Laboratory division** designs and manufactures instruments and consumables for use in environmental and bioscience laboratories with a particular focus on water analysis instruments and sample preparation equipment. It has operations in the UK, US, Germany, the Netherlands and China and its sales are global.

2018 performance

Revenue

£38.7m
(2017: £35.3m)

↑
+9%

Adjusted operating profit

£6.5m
(2017: £6.3m)

Our main operating companies and principal markets

- Seal Analytical
- Porvair Sciences
- JG Finneran ("JGF")
- Rohasys

- Environmental
- Bioscience
- Chromatography



Metal Melt Quality division



The **Metal Melt Quality division** designs and manufactures porous ceramic filters for the filtration of molten metals. It is the world leader in the filtration of cast house aluminium. It has operations in the US and China and its sales are global.

2018 performance

Revenue

£39.6m
(2017: £37.8m)

↑
+5%

Operating profit

£2.4m
(2017: £1.7m)

Our main operating companies and principal markets

- Selee Corp
- Selee China

- Global Aluminium
- US Foundry
- Super Alloys



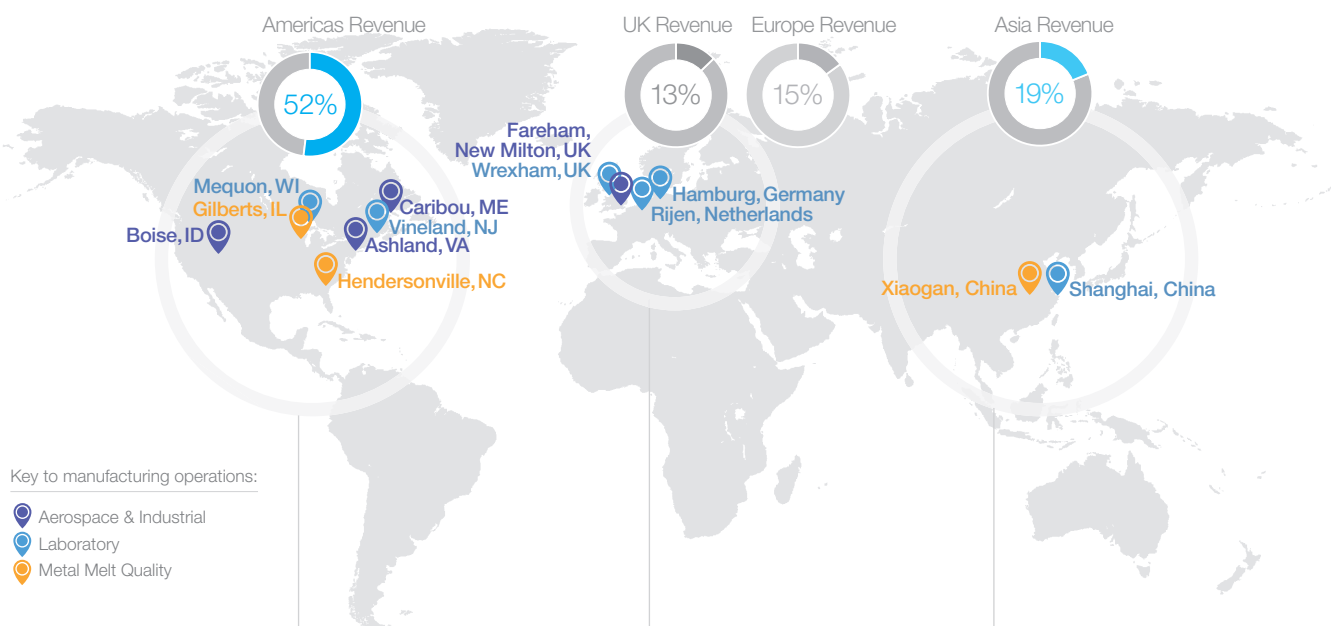
We operate in close partnership with our customers and our strategy is to expand geographically to support our chosen markets.

Enhancing our global network

Investment to support growth

£42m

Since 2013, we have invested £42 million to support growth in our operations and in the key markets we serve.



Key developments 2018

Americas (7 sites)

The Group continues to expand its footprint in North America:

- In February 2018, the Group acquired Keystone Filter and moved it to our plant in Ashland. This acquisition expands our range of products for the US.
- JGF's extended plant is scheduled to be finished and operational in Spring 2019.
- The Boise, ID, microelectronics filtration facility was expanded and refurbished in the year.
- Further improvements were made to our ceramic 3D manufacturing capability to improve productivity.

UK and Europe (5 sites)

Phased investments in the UK and Europe:

- Commissioned a new bioscience manufacturing line to increase capacity and broaden the capabilities of the Laboratory division operations in the UK.
- In December 2017 we acquired Rohasys B.V., a Dutch company that brings Robotic handling capability to the Group. It has been integrated into Seal Analytical.

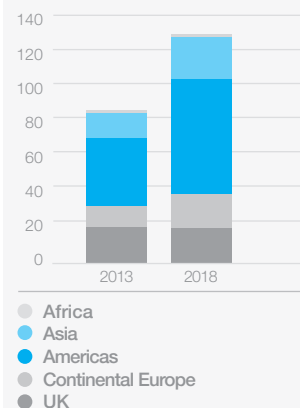
Asia (2 sites)

The Group continues to build its presence in Asia:

- Further investments were made to improve our Metal Melt Quality capabilities in China.

Revenue growth coming from the US, Continental Europe and Asia (£m)

Revenue growth since 2013 has predominantly been in the US, Continental Europe and Asia.



Market overview

We focus on markets which have long term growth potential; clear product regulation requirements; and require strong engineering or technical skills.

Strong market positions and new product development

We seek markets with robust demand drivers and where we can maintain barriers to entry through our specialist design and engineering skills, patent protection and quality accreditation.

Many of the Group's products are consumable; have long lifecycles; and are essential for safety or reliability. Our products and services are often bespoke.

Customer requirements for sustainable technological solutions which meet increasingly complex challenges drive enduring demand for our products and services.

Markets



Aerospace



Industrial



Laboratory



Metal Melt Quality

Regulation

- FAA, CAA, EASA and other specific accreditations

- International nuclear standards: NQA1, ASME, etc

- Approved methods: EPA, SEPA, EU water directives

- ISO and customer accreditations; extensive qualification requirements

Market growth

4.7%
p.a.

- Growth in pax revenue miles 2018 – 2037
(Source: Boeing 2018)

3-4%
p.a.

- Long term growth in nuclear power generation capacity
(Source: IAEA)

5-6%
p.a.

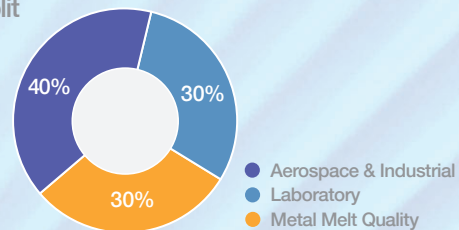
- Growth in water analysis consumables
(Source: Company estimate)

3.6%
p.a.

- Growth in primary aluminium usage to 2021
(Source: CRU 2018)

We operate in competitive global markets. Our businesses are either market leaders in their sectors or are well placed in attractive niches.

Approximate split of Group sales



Aerospace

The Group is a leading specialist in the design and manufacture of filtration components and assemblies for the aerospace industry. Our products are specified on most of the world's passenger airlines mainly in fuel systems, hydraulic systems and coolant systems.

Industrial

The Group provides filtration solutions for energy and industrial process applications. Its filters are to be found in many of the harshest industrial environments. Applications include high temperature gas filtration and the containment of waste nuclear material.

Laboratory

The Group designs and manufactures a range of equipment for use in laboratories. Seal Analytical is a global leader in the manufacture of laboratory based equipment and robotics for environmental laboratories. The Group also produces a broad range of laboratory microplates, tubing and associated consumables used in pharmaceutical and bio-technology processes.

Metal Melt Quality

The Group's Metal Melt Quality division specialises in the design and manufacture of filters for molten metal. The Group provides patent protected filters for: the aluminium cast house industry; the filtration of gray and ductile iron, mainly in the US; and the filtration of super alloys used in the manufacture of turbine blades.

Key trends and growth drivers

The Group's aerospace business supplies parts for new aircraft and for maintenance spares.

Growth drivers include:

- Aircraft new build rates
- The frequency of maintenance schedules
- New airframes and engines
- Retrofit programmes

All of these are driven by the global demand for air travel, measured in passenger miles flown. Long term growth rates for passenger miles flown are around 4.7% per annum.

The Group has a wide industrial filtration range, with a particular expertise in nuclear containment and gasification filtration.

Growth drivers include:

- Gasification build rates
- Maintenance schedules
- Nuclear clean-up
- Energy efficiency and security

The market for clean water and environmental testing is growing throughout the world as more of the world's population seeks access to clean water and environmental regulations tighten.

Growth drivers include:

- Regulated water testing
- Analytical science
 - Detection limits
 - Falling costs per test
 - Automation

Aluminium production is growing steadily. US car and light truck production, a proxy for the rate of use of iron foundry filters, was flat in 2018.

China's car production has grown significantly in the last few years and China is now the largest car producer in the world.

Growth drivers include:

- Aluminium consumption
- US auto and light truck production
- Increased use of high grade and exotic alloys
- Expansion in China

Market overview continued

New product development remains core to our strategy, with incremental range extensions and increasing product differentiation being priorities.

Aerospace



Our niche positions

The Group provides a wide range of aerospace filters but has particularly strong niche positions in:

- Fuel tank inerting
- Coolant systems for aircraft control systems
- Fuel line and hydraulic filters

Our competitive advantage

The Group has a long track record of design engineering skills using a wide range of filter media. It has a large installed base of bespoke filters, whose designs are owned by the Group.

Our recent new products

The Group's larger new aerospace products include filters for:

- Airbus and Boeing fuel tank inerting
- Airbus A380 and Boeing 787 coolant systems
- A range of Airbus A350 applications
- A range of Airbus New Engine Option applications

Industrial



Our niche positions

The Group has niche expertise in:

- Hot gas and gasification filtration
- Pulse jet filtration systems
- Nuclear containment filtration
- Polymer production filtration
- Microelectronics manufacturing filtration

Our competitive advantage

The Group has a long track record of design engineering skills using a wide range of filter media. It has a large installed base of bespoke filters, whose designs are owned by the Group.

Our recent new products

Significant products include:

- Three large gasification contracts
- A new high strength HEPA filter to the US nuclear industry
- Filters for use in ballast water applications
- A new line of polymeric filters for industrial applications acquired with Keystone

We continue to invest in research and development to provide innovative products that solve the challenges our customers face.

Laboratory



Our niche positions

The Group has a particular expertise in the development and manufacture of laboratory based equipment for testing the inorganic contaminants in water. It manufactures equipment, develops testing methodologies and supplies equipment consumables. The acquisition of JGF and Rohasys has significantly increased the Group's capabilities in sample preparation and lab automation.

It also develops functionalised porous plastics used for a variety of filtration applications in the bioscience market.

Our competitive advantage

The Group's water analysis business benefits from design protections on its equipment, its broad range of approved methods and a large and loyal customer base.

Its porous plastics are protected by intellectual property and related patents.

Our recent new products

The Group continues to broaden its range of water analysis equipment with the launch of the AA500 in 2018 being an important new product.

JGF and Rohasys bring a broad product range of laboratory consumables and automation particularly focused on sample preparation and chromatography.

Metal Melt Quality



Our niche positions

The Group has a high market share of:

- The global market for cast house aluminium filters
- The North American market for gray and ductile iron filters
- The global market for high grade and exotic alloy filters

Our competitive advantage

The Group's competitive advantage comes from its metallurgical and ceramics expertise, which enables the Group to develop differentiated and patent protected filters.

Our recent new products

The division's principal products are all patented.

The principal products are:

- Selee CSX™ for aluminium filtration
- Selee IC™ for gray and ductile iron filtration
- Selee SA™ for high grade alloys

The division continues to develop range extensions of these products. In 2018 the Group broadened its customer base for ceramic 3D printed filters for the super alloy market.

Chairman's statement

A strong and resilient performance.

John Nicholas, Chairman



+9%

Adjusted profit before tax up 9% to £13.5 million (2017: £12.4 million).

22.9p

Adjusted basic earnings per share up 11% to 22.9 pence (2017: 20.7 pence) per share.

4.6p

Dividend increased by 10% to 4.6 pence per share.

Good governance continues to provide the framework for effective delivery of our strategy.

- Leadership
- Effectiveness
- Accountability
- Remuneration
- Relations with shareholders

Introduction

I am pleased to report that Porvair continues to make progress against its financial and strategic objectives.

Results

Revenue in the year to 30 November 2018 increased 11% to £128.8 million (2017: £116.4 million). Operating profit increased to £12.9 million (2017: £12.3 million) and adjusted operating profit rose by 10% to £14.3 million (2017: £13.0 million). Basic earnings per share increased to 22.1 pence (2017: 19.5 pence) and adjusted earnings per share increased to 22.9 pence (2017: 20.7 pence), an increase of 11%.

These are record results for the Group.

Record revenue was achieved in the Aerospace & Industrial division and the Metal Melt Quality division. In its first year operating separately the Laboratory division has delivered the integration benefits that we expected.

On 7 December 2017 the Group acquired Rohasys B.V. ("Rohasys") to increase the Group's offering in the laboratory market. The acquisition brings robotic sample handling systems capability to the Laboratory division. Its automation expertise is accelerating our new product development programme.

On 28 February 2018 the Group acquired the net assets of Keystone Filter ("Keystone"), a division of CECO Environmental Corp. It provides a range of filter cartridges and housings for the food and beverage, drinking water, and chemical process markets for our Aerospace & Industrial division in the USA.

After interest and tax, net cash generated from operating activities was £12.6 million (2017: £9.3 million). £13.5 million (2017: £11.4 million) was invested in acquisitions and capital expenditure for future growth. At 30 November 2018 the Group had net cash on hand of £6.6 million (2017: £9.8 million).

Dividends

The Board re-affirms its preference for a progressive dividend policy and recommends an increased final dividend of 3.0 pence per share, a cost of £1.4 million (2017: 2.7 pence per share, a cost of £1.2 million). This makes the full year dividend increase by 10% to 4.6 pence per share, a cost of £2.1 million (2017: 4.2 pence per share, a cost of £1.9 million).

Governance

The Board sets high standards for its corporate governance and expects steady and continuous improvement in the Group's governance procedures. It has in place monitoring systems to ensure that standards are upheld throughout the Group. The Board complied with all aspects of the UK Corporate Governance Code published in 2016 throughout the year ended 30 November 2018, with the exception of:

- Fixed terms of employment for Non-Executive Directors. However, all of the Directors offer themselves for re-election at each Annual General Meeting.

In 2018 the Group has:

- Continued to refine its approach to the management of financial risk and internal controls. Amongst other improvements, we have introduced additional executive review processes in each business unit particularly focused on capital expenditure and procurement.
- Implemented a revised Remuneration policy and introduced an updated long term incentive plan, which were approved by shareholders at the AGM on 17 April 2018.
- Begun our preparations for the implementation of the new Corporate Governance Code, which will apply to the Group for the first time from 1 December 2019.

Staff

Porvair continues to grow and the Board welcomes the new staff who have joined us during 2018, particularly those at Rohasys B.V. and those recruited to support Keystone Filter. Porvair prides itself on its people and their ability to provide innovative solutions for our customers. We seek to promote equal opportunities and diversity; provide career opportunities through training and engagement; and operate with due regard for human rights and local laws. The Group now has over 850 permanent employees. We are delighted to be working with them all. We recognise that Porvair's success is largely due to the skill and commitment of its staff, to whom we offer our sincere thanks.

Board changes

Having served as Chairman since April 2006, Charles Matthews retired from the Board at the AGM in April 2018 and I replaced him. Under Charles' Chairmanship, sales revenue at Porvair grew at a CAGR of 8%; profit before tax increased at a CAGR of 13%; and the Group's market capitalisation grew approximately five-fold. He left with our sincerest thanks and best wishes.

Current trading and outlook

The Group has started 2019 with a healthy order book and is trading well. The acquisitions made during the year have expanded the Group's capabilities in industrial and laboratory markets and are performing as expected. Porvair remains in a strong financial position.

John Nicholas

Chairman

25 January 2019

Chief Executive's report

Demand across the Group's three divisions was generally robust. Porvair remains in a strong financial position.

Ben Stocks, Group Chief Executive



Performance summary

Porvair's performance in 2018 was led by strong revenue growth, new product development and capital reinvestment in our operations.

Outlook

- Healthy order books
- Strong balance sheet
- Full new product development pipeline
- Positive outlook

+11%

Revenue up 11% to £128.8 million (2017: £116.4 million).

£15.3m

Cash generated from operations (2017: £12.3 million).

£13.5m

Invested in capital expenditure and acquisitions (2017: £11.4 million).

Overview of 2018

Financial highlights 2018

	2018 £m	2017 £m	Growth %
Revenue	128.8	116.4	11
Adjusted profit before tax	13.5	12.4	9
Profit before tax	12.0	11.7	3
Adjusted earnings per share	22.9p	20.7p	11
Earnings per share	22.1p	19.5p	13
Cash generated from operations	15.3	12.3	
Net cash	6.6	9.8	

Revenue was £128.8 million, an increase of 11%. Demand across the Group's three divisions was generally robust, notably so in US industrial, nuclear, laboratory consumables, aluminium and specialist metal filtration.

Profit before tax was £12.0 million (2017: £11.7 million). Adjusted profit before tax in the year ended 30 November 2018, excluding the items disclosed in note 2, was up 9% to a record £13.5 million. Adjusted earnings per share increased 11% to 22.9 pence. After investing £13.5 million in capital expenditure and acquisitions, the Group finished the year with net cash of £6.6 million.

Over the last five years the Group has delivered revenue growth of 53% (9% CAGR) and cash from operations of £68 million. Adjusted profit before tax has increased 66% (11% CAGR). Over the same period, £42 million has been invested in capital projects and acquisitions. In 2018, the Group's after tax adjusted operating profit return on operating capital was 43% (2017: 48%).

Investment and future development

The main investments during 2018 were:

- The acquisition of Rohasys B.V. on 7 December 2017, bringing complementary instruments and automation expertise to Seal Analytical.
- The acquisition of Keystone Filter on 28 February 2018, adding the manufacture of filter cartridges for the food, beverage and nuclear markets to our US Aerospace & Industrial division.
- The expansion of our facility in Vineland, NJ, to provide increased manufacturing capacity, clean room capabilities and better plant layout.
- Expansion and refurbishment of our microelectronics facility in Boise, ID.
- A new manufacturing line for nuclear containment filters in Ashland, VA.
- The commissioning of a new manufacturing line for bioscience filters in Wrexham, UK.

New product development remains core to Porvair's strategy, with incremental range extensions and increasing product differentiation being priorities. Our biggest project in 2018 was the overhaul and upgrade of Seal Analytical's core product, a segmented flow analyser. Our new AA500 analyser is smaller, faster, quieter and more accurate than any other on the market.

Consistent strategic and operational objectives

- A focus on regulated markets with long term growth prospects in four key markets
- Concerted new product development
- Geographic expansion to support key markets
- Generate cash to invest in:
 - Organic growth
 - Acquisitions
 - Dividends

Operating structure

- The Group operates with three divisions. Each division addresses a core market: Aerospace & Industrial (approximately 40% of Group revenue); Laboratory (approximately 30% of Group revenue); and Metal Melt Quality (approximately 30% of Group revenue).
- The Group has plants in the US, UK, Germany, the Netherlands and China. In 2018, 57% of revenue was manufactured in the US, 30% in the UK, 9% in Continental Europe and 4% in China.

Market overview:
pages 04 to 07

Strategy and business model:
pages 10 and 11

Divisional performance:
pages 12 to 17

Strategy and business model

Porvair's consistent strategy, strong market positions, organic growth momentum and potential to acquire new businesses, positions us to create and deliver sustainable value.

Porvair's strategy is to generate shareholder value through the development of specialist filtration and associated environmental technology businesses, both organically and by acquisition. Such businesses have certain key characteristics in common:

- Specialist design or engineering skills are required;
- Product use and replacement is mandated by regulation, quality accreditation or a maintenance cycle; and
- Products are typically designed into a system that will have a long life-cycle.

This strategy continues to work well for the Group, which moves into 2019 in a position of financial strength, able to invest in both organic and acquired growth as appropriate.

Business model outline

We operate in attractive niche markets and our strategy is designed to respond to the challenges and opportunities in our sector. Porvair's extensive industry know-how, engineering capabilities and strong customer relationships ensure we are well positioned.

- Our customers require filtration or emission control products that perform to a given specification.
- Orders are won by offering the best technical solutions for these requirements at an acceptable commercial cost.
- Filtration expertise is applicable across all markets served with new products generally being adaptations of existing designs.
- Experience in specific markets or applications is valuable in building customer confidence. Domain knowledge is important, as is deciding where to direct resources.

Strong core competencies

Strong market positions:

- Expertise and market share in chosen niches.

Engineering capability:

- Investing in technology and having the right people, with the right skills and experience.

Strong customer relationships:

- Knowing our customers well helps us develop solutions in partnership with them.

Operational excellence

Delivering high quality products and solutions:

- Solving our customers' challenges.

A robust health and safety programme:

- Protecting our workforce and improving productivity.

A responsible business:

- Continuing to grow our business responsibly and sustainably.

Our strategic objectives provide a clear focus both in running our core operations and in developing new opportunities:

1 Focus on regulated markets where we see long term growth potential.

We focus on three operating segments: Aerospace & Industrial; Laboratory; and Metal Melt Quality. All have clear structural growth drivers.

2 Look for applications where product use is mandated and replacement demand is therefore regular.

Our products typically protect complex downstream systems and as a result are replaced regularly. A high proportion of our annual revenue is from repeat orders.

3 Make new product development a core business activity.

Through new product development the Group aims to generate growth rates in excess of the underlying market. Where possible we build robust intellectual property around our product developments.

4 Establish geographic presence where end-markets require.

Our geographic presence follows the markets we serve. 52% of revenue is in the Americas; 19% in Asia; 15% in the EU and 13% in the UK.

5 Invest in both organic and acquired growth.

We aim to meet dividend and investment needs from free cash flow and modest borrowing facilities. All investments are subject to a hurdle rate analysis based on strategic and financial priorities.

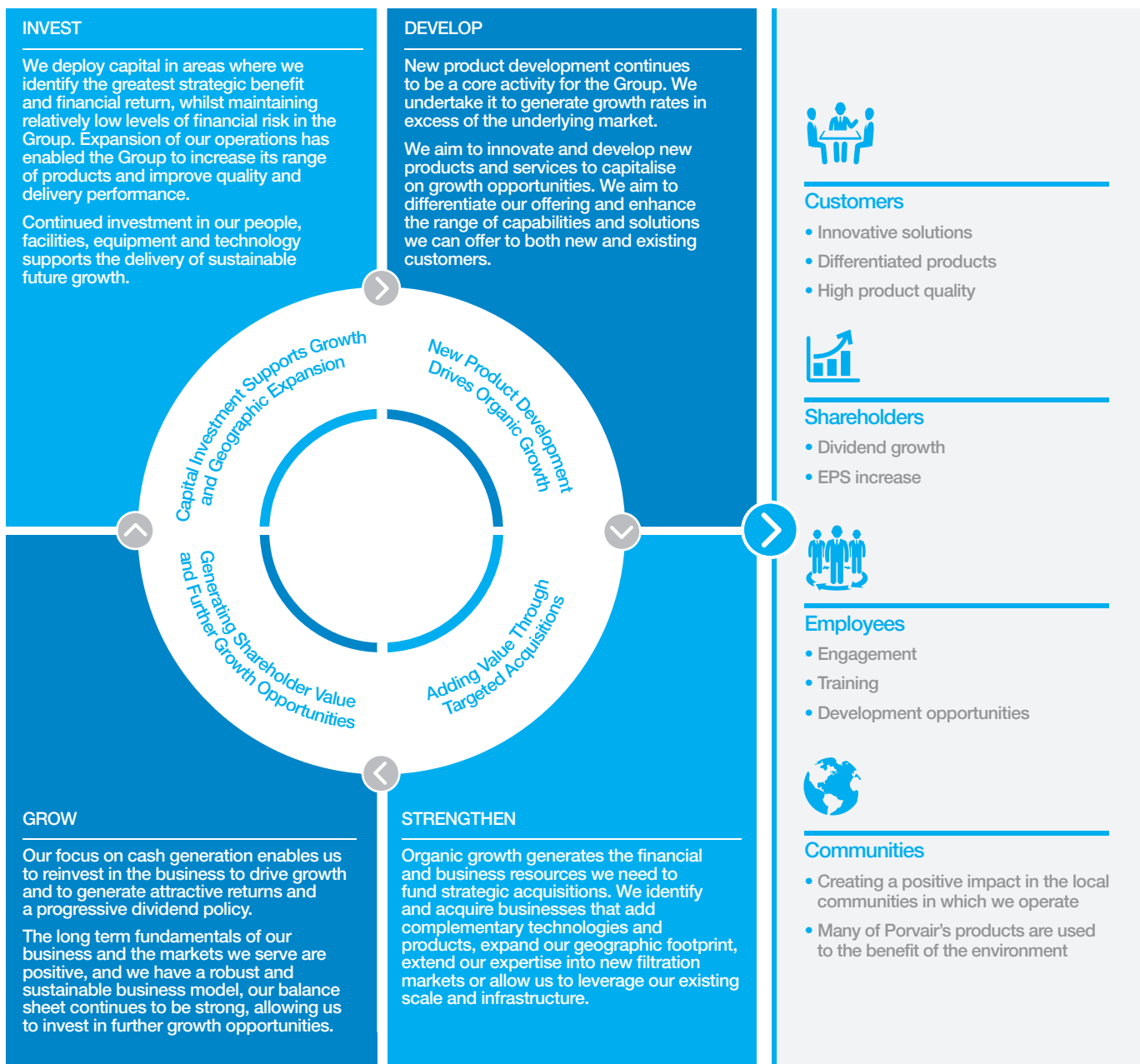
Clear strategy

We continue to make progress against our consistent strategy.

Sound governance

The Porvair Board sets high standards for its corporate governance and expects steady and continuous improvement in the Group's governance procedures.

How we create and deliver value to our stakeholders:



Operating responsibly

We recognise that operating in a responsible manner is an important component of our ability to deliver upon our strategic objectives.

Pages: 34 to 39

Managing risk

The Group has a well established governance structure with internal control and risk management systems.

Pages: 27 to 32

Measuring performance

Success of the strategy is measured by growth and cash generated from operations over the short and long term.

Pages: 24 to 26

Divisional performance

Aerospace & Industrial

Growth has been strong across industrial markets, notably in the US.



Above: Commissioning is underway at our large gasification projects. These are large complex power plants using new gasification technology for which our filter systems are a relatively small but critical component.

Performance summary

- 17% revenue growth
- US nuclear and industrial strength
- Second half aerospace strength
- Gasification spares orders

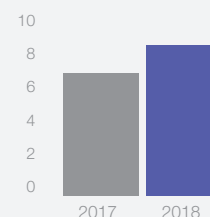
2019 outlook

- Stronger aerospace order book
- Microelectronics plant upgrade
- Gasification spares
- Keystone integration benefits

Adjusted operating profit (£m)

£8.0m

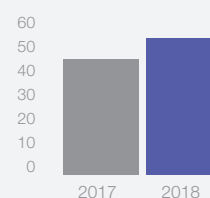
(2017: £6.8m)



2018 Revenue (£m)

£50.5m

(2017: £43.2m)



Keystone Filter integration

Keystone was acquired by the Aerospace & Industrial division in February 2018 and has now been integrated into our Ashland, VA operations. It manufactures filter cartridges for the industrial process, food, beverage and nuclear markets in the US.

The acquisition increases our presence in the US, broadening our markets and providing a range of cross-selling opportunities.



Meeting complex industry and customer challenges



Customer focus and product differentiation

Financial highlights 2018

	2018 £m	2017 £m	Growth %
Revenue	50.5	43.4	16
Inter segment revenue	–	(0.2)	
External revenue	50.5	43.2	17
Operating profit	7.7	6.8	14
Adjusted operating profit	8.0	6.8	18

Performance in 2018

Reported revenue growth was 17%, but this includes sales transferred in from the Laboratory division and acquired growth. Underlying sales growth was 10% (note 2). Adjusted operating profits in the division were up 18% to £8.0 million.

The division designs and manufactures a wide range of specialist filtration products, demand for which grows as aerospace and industrial customers seek cleaner, safer or more efficient operations. Differentiation is achieved through design engineering, with notable new products introduced this year for the US nuclear market and aerospace inerting applications.

Demand in 2018 was good across industrial markets, notably in the US, where the Keystone acquisition

contributed to growth in the second half. The US had another record year for revenues and profits with nuclear and industrial orders robust. After a quiet first half, aerospace orders increased in the second half and finished the year strongly.

Commissioning of the large gasification projects continued. These are complex power plants using new technology for which our filter systems are a relatively small but critical component. All three facilities – in Korea, India and China – experienced commissioning challenges during the year due to variations in feedstocks and operating conditions, but successful run time is accumulating. At this stage our filters are performing as expected, with spares orders delivered in the final quarter and scheduled for further deliveries in the first half of 2019.



Porvair Filtration Group worked in partnership with the Office of Environmental Management and leading construction and civil engineering company Bechtel in the US to develop a high-strength radial flow HEPA filter for use in the Department of Energy's Hanford Waste Treatment and Immobilization Plant (WTP).

Working in collaboration, the Porvair team used their experience, engineering knowledge and sector expertise to develop a first-of-a-kind high efficiency particulate HEPA filter which is not only five times stronger than a standard HEPA filter, but also meets stringent industry demands and environmental standards and conditions. Porvair's critical nuclear HEPA filters received regulatory approval in 2018 and production accelerated during the year.

Left: Stronger aerospace order book. Our aerospace order book strengthened throughout the second half of 2018.

Divisional performance continued

Laboratory

The division serves the analytical laboratory market, where increasing availability of smaller automated instruments and the growing requirement for ever improving detection limits is driving demand for sample preparation and testing.



Performance summary

- Seal: strong in US; revenue down in China
- Strong performance from JGF
- Rohasys in line with expectations

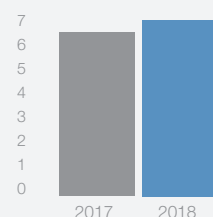
2019 outlook

- Seal AA500 introduction
- Bioscience media expansion
- JGF plant expansion
- Rohasys product family
- Molecular and Orla coatings for bioscience

Adjusted operating profit (£m)

£6.5m

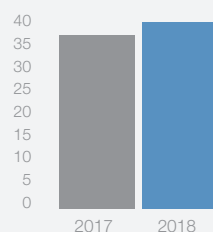
(2017: £6.3m)



2018 Revenue (£m)

£38.7m

(2017: £35.3m)



Financial highlights 2018

	2018 £m	2017 £m	Growth %
Revenue	41.2	36.8	12
Inter segment revenue	(2.5)	(1.5)	
External revenue	38.7	35.3	9
Operating profit	6.2	6.1	3
Adjusted operating profit	6.5	6.3	4

Performance in 2018

Revenue growth in the Laboratory division was 9%, including a full year of revenue from JG Finneran and the first year from Rohasys. Adjusted operating profit grew 4%, Rohasys having contributed revenue but minimal profits in its first year of ownership.

The division serves the analytical laboratory market, where increasing availability of smaller automated instruments and the growing requirement for ever improving detection limits is driving demand for sample preparation and testing. The Group addresses this market with analytical instruments and robotic systems supplied by Seal Analytical and a range of sample preparation and chromatography consumables supplied by Porvair Sciences and JG Finneran.



A global leader in laboratory based equipment

Product range extensions

Seal Analytical had a good year, compensating for slower instrument sales into China with increased demand in the US. Seal is a leading supplier of instruments and consumables to environmental laboratories and specialises in equipment for the detection of inorganic contamination in water. This market grows as water quality standards improve. Seal differentiates itself with an active new product development programme which will be boosted in 2019 by the roll out of the new AA500, a product that offers significant benefits to Seal's extensive installed base.

Rohasys finished its first year with sales and profits in line with the targets set at the time of the acquisition. Its automation expertise is accelerating our new product development programme. Seal's five-year CAGR revenue growth is 10%.

Porvair Sciences manufactures laboratory filters and associated consumables, with a focus on chromatography and laboratory sample preparation products. Differentiation is through proprietary filtration media and manufacturing capabilities, with both benefitting from continued investment in 2018. During the year we acquired some filter coating intellectual property which we expect

will add to our sample preparation capabilities. Sales of bioscience filtration media increased 26%. JG Finneran performed strongly in its first full year and will further benefit in 2019 from its improved and enlarged facilities.



Seal Analytical is a world leader in the design and manufacture of analysers for environmental and industrial applications. In 2018 it introduced a significant platform upgrade. The AA500 is a re-engineered product to replace Seal's best-selling and longest established analyser, offering better detection limits and a lower cost of operation to its substantial installed customer base.

Investment and development

Rohasys B.V., which was acquired in December 2017, is now part of the Laboratory division. It broadens Seal Analytical's product range, adding robotic handling and sample preparation expertise that complements Seal's existing technology. Its sample preparation capabilities will be of wider benefit to the Laboratory division's life science development plans.

Left: Since acquisition we have added capacity to the JG Finneran facility in Vineland, NJ, USA. In 2018 we have invested in expanding the plant which will be finished in early 2019.

Divisional performance continued

Metal Melt Quality

Performance from the US operations improved significantly in the period.



Performance summary

- Growth from cast shop and super alloys
- Improved plant efficiencies
- Record US margins
- China revenue up 30%; still loss making

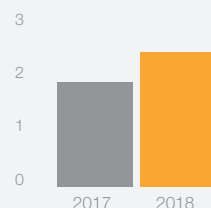
2019 outlook

- Growth in China
- Range and volume growth in ceramic 3D printing for Aerospace and IGT

Operating profit (£m)

£2.4m

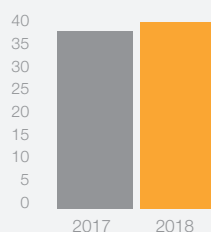
(2017: £1.7m)



2018 Revenue (£m)

£39.6m

(2017: £37.8m)



Financial highlights 2018

	2018 £m	2017 £m	Growth %
Revenue	39.6	37.8	5
Operating profit	2.4	1.7	37

Performance in 2018

Revenue was up 5% (9% in constant currency (note 2)) to a record £39.6 million. Operating profit increased 37%. Much improved US operational efficiencies were balanced by continuing losses in China.

This division serves three market segments and has a well differentiated and patented product range:

- Selee CSX™ and Selee CSW™ for aluminium cast house filtration. These products are free of phosphates and ceramic fibres, giving them a unique environmental footprint.
- Selee IC™ for grey and ductile iron filtration. This range is sold principally in the US and offers excellent filtration efficiency.

Above: Our range and volume of ceramic 3D manufactured products again increased during the year.



Leading-edge innovation in melt filtration technology



Super alloy filtration expertise

- Selee SA™ for the filtration of nickel-cobalt alloys. This niche application requires exceptional filtration performance and uses proprietary manufacturing techniques.

In the US, market share gains resulted in a fifth record year for sales of Selee CSX™ aluminium cast house filters. Demand for super alloy filters grew and the range and volume of ceramic 3D manufactured products again increased. Plant efficiencies in the US were excellent. This allowed the US business to report record margins.

Revenue in China grew by over 30%, but our Chinese plant is not yet at break even volumes and costs. As the Chinese aluminium market develops, we expect demand for our proprietary filters to grow, based on their demonstrably better quality and environmental performance. Higher grades of metal require better filtration and, in line with the Chinese Government's 'China 2025' initiative,

Chinese producers are moving to higher grade alloys. We continue to sell on value rather than price. This can initially hold back growth, but our experience in other parts of the world gives us confidence that this remains the right strategy.



SELEE is a world leader in melt filtration technology and specialises in the design and manufacture of porous technical ceramics for molten metal filtration for a wide range of demanding applications.

Its 3D printed ceramic filters are used extensively in the manufacture of super alloy turbine blades, delivering molten alloy filtration and flow control. The filters reduce our customers scrap rate on blades with very high quality requirements.

Left: Further investment in our plant in Xiaogan, China continues to improve the high quality range of filters offered to the local market.

Finance Director's review

A strong financial performance, cash generation and reinvestment in our business continues to drive growth and generate value.

Chris Tyler, Group Finance Director



Performance highlights

- Adjusted operating profit up 10% to £14.3 million (2017: £13.0 million).
- £13.5 million invested in capital expenditure and acquisitions (2017: £11.4 million).
- Return on capital employed 15% (2017: 16%).
- Return on operating capital employed was 43% (2017: 48%).

Adjusted earnings per share

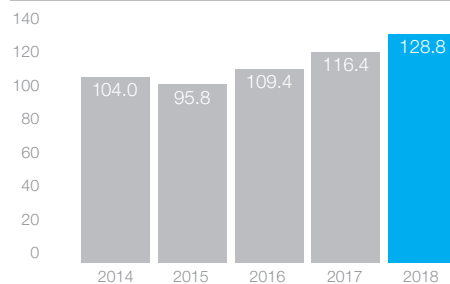
22.9p

Adjusted earnings per share increased by 11% to 22.9 pence per share (2017: 20.7 pence per share).

Turnover (£m)

£128.8m

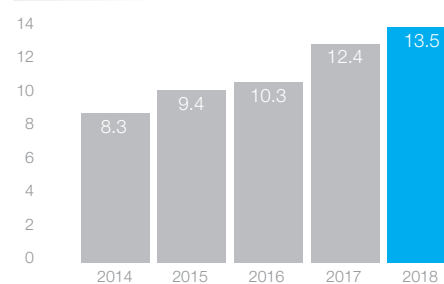
↑
+11%



Adjusted profit before tax (£m)

£13.5m

↑
+9%



Group results

	2018 £m	2017 £m	Growth %
Revenue	128.8	116.4	11
Operating profit	12.9	12.3	4
Profit before tax	12.0	11.7	3
Profit for the year	10.0	8.8	13

Reported revenue growth was 11%, 13% at constant currency. 7% was from organic growth and 6% from acquisitions. Operating profit was £12.9 million (2017: £12.3 million) and profit before tax was £12.0 million (2017: £11.7 million). Profit for the year increased by 13% to £10.0 million.

Alternative performance measures

	2018 £m	2017 £m	Growth %
Adjusted operating profit	14.3	13.0	10
Adjusted profit before tax	13.5	12.4	9
Adjusted profit for the year	10.4	9.4	11

In addition to the constant currency revenue measures disclosed in previous years, the Group has presented other alternative performance measures for the first time this year to enable a better understanding of the Group's trading performance. Adjusted operating profit and adjusted profit before tax exclude:

- The impact of acquiring businesses:
 - the amortisation of acquired intangible assets of £0.6 million (2017: £0.2 million); and
 - other adjustments to profit and loss related to acquiring businesses of £0.1 million (2017: £0.4 million).

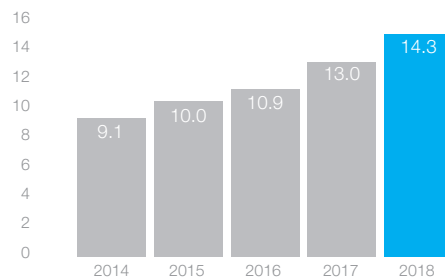
- Other items that are considered significant and where treatment as an adjusted item provides a more consistent assessment of the Group's trading:

– an exceptional charge of £773,000 (2017: £nil), following recent legal guidance, to enhance the benefits provided by the Group's defined benefit pension plan to equalise its guaranteed minimum pensions for men and women on benefits earned between 17 May 1990 and 6 April 1997.

Adjusted profit for the year excludes the adjustments to profit before tax above together with their tax effect and an exceptional one off tax credit of £778,000 (2017: £nil), reflecting a reduction in the Group's deferred tax liability from the change in US tax rates from December 2017 enacted in the US Tax Cuts and Jobs Act.

Group operating performance

The two recent acquisitions, Rohasys B.V. ("Rohasys") and Keystone Filter ("Keystone") contributed to revenue growth in the year but, as expected, neither contributed significantly to operating profit, consequently adjusted operating profit margins reduced slightly to 11.1% (2017: 11.2%). Adjusted operating margins increased in the Aerospace & Industrial division to 15.9% (2017: 15.7%). In the Laboratory division adjusted operating margins reduced to 15.8% (2017: 17.0%), as a result of the acquisition of Rohasys and margin sharing with Aerospace & Industrial on the transfer of customers between divisions. Metal Melt Quality operating margins increased to 6.0% (2017: 4.6%), a better performance in the US more than offsetting the increased losses in China. Adjusted Central costs increased to £2.6 million (2017: £1.8 million). The result in 2017 included the release of £1.0 million currency contract mark-to-market provisions.

Adjusted operating profit trend (£m)**£14.3m**↑
+10%**Impact of exchange rate movements on performance**

The international nature of the Group's business means that relative movements in exchange rates can affect reported performance. The rate used for translating the results of overseas operations were:

	2018	2017
Average rate for translating the results:		
US \$ denominated operations	\$1.34:£	\$1.29:£
Euro denominated operations	€1.13:£	€1.15:£
Closing rate for translating the balance sheet:		
US \$ denominated operations	\$1.28:£	\$1.35:£
Euro denominated operations	€1.13:£	€1.14:£

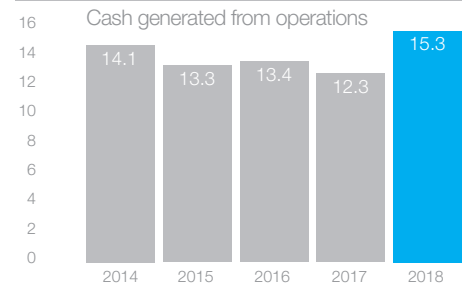
A stronger Sterling average rate against the US dollar offset by a weaker Sterling average rate against the Euro over the year reduced reported revenues on translation by 2%.

In the year, the Group sold US\$17.8 million (2017: US\$16.0 million) at an average rate of US\$1.33:£1 (2017: US\$1.29:£1) and €3.9 million (2017: €5.5 million) at an average rate of €1.13:£1 (2017: €1.12:£1).

At 30 November 2018, the Group had no outstanding forward foreign exchange contracts (2017: US\$2.0 million). It had US\$6.2 million (2017: US\$3.9 million) of net current assets on the UK operations' balance sheet.

Finance costs

Net interest payable comprises bank borrowing costs, interest on the Group's pension deficit and the cost of unwinding discounts on provisions. Overall, it remained stable at £0.8 million (2017: £0.7 million). The defined benefit pension scheme interest cost was £0.4 million (2017: £0.4 million), bank interest and borrowing facilities non-utilisation fees were £0.3 million (2017: £0.3 million) and there was a charge of £0.1 million (2017: £nil) for unwinding discounted provisions.

Cash generation (£m)**£15.3m**↑
+25%

Interest cover was 17 times (2017: 20 times). Interest cover on bank finance costs was 44 times (2017: 62 times).

Tax

The Group tax charge was £2.0 million (2017: £2.8 million). After removing the adjusting items described in note 2 to the accounts, the Group's underlying tax charge was £3.1 million (2017: £3.0 million). This is an effective rate of 23.0% (2017: 24.4%), which is higher than the UK standard corporate tax rate of 19.0% (2017: 19.3%). The tax rate in the UK compared with the standard rate was reduced by the benefit of tax relief on the exercise of share options. The tax rate was pushed up by profits made in Germany, which attract a higher tax rate. The Group has not taken a tax credit relating to the losses arising in China because it could not be certain that the asset would be recovered; this has increased the tax rate by 3.2% (2017: 2.5%).

The US tax rate reduced to an effective rate of 23% (2017: 31%) as a result of changes enacted in the US Tax Cuts and Jobs Act. This has reduced the effective tax rate on Group trading profits by 3% compared with the prior year.

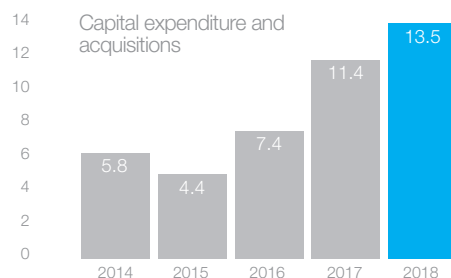
The tax charge comprises current tax of £2.7 million (2017: £2.1 million) and a deferred tax credit of £0.7 million (2017: charge of £0.8 million).

The Group carries a deferred tax asset of £2.3 million (2017: £2.9 million) and a deferred tax liability of £2.0 million (2017: £2.2 million). The deferred tax asset relates principally to the deficit on the pension fund and share-based payments. The deferred tax liability relates to accelerated capital allowances, capitalised development costs and other timing differences, predominantly arising in the US.

Finance Director's review continued

Investment (£m)

£13.5m

↑
+9%

Total equity and distributable reserves

Total equity at 30 November 2018 was £89.5 million (2017: £74.9 million), an increase of 19% over the prior year.

Increases in total equity arose from: profit after tax of £10.5 million (2017: £9.2 million) with the charge for employee share option schemes net of tax (2018: £0.4 million; 2017: £0.4 million) added back; £0.1 million (2017: £0.3 million) arising on the proceeds of the issue of shares on share option exercises; a pension scheme actuarial gain (net of tax) of £2.9 million (2017: nil); and exchange gains (net of tax) on translation of £3.5 million (2017: loss of £4.0 million). In 2018 there was no impact of hedge accounting instruments (2017: gain of £0.2 million).

Reductions in total equity arose from dividends paid of £2.0 million (2017: £1.8 million) and purchases by the Employee Benefit Trust of the Company's own shares charged directly to equity of £0.4 million (2017: £0.5 million).

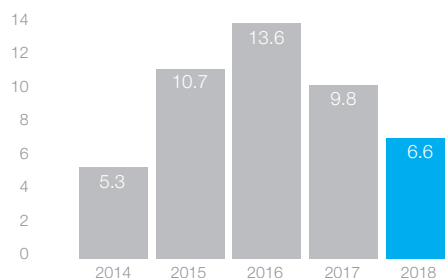
The Company had £19.5 million (2017: £12.6 million) of distributable reserves at 30 November 2018. The Company's distributable reserves increased in the year as a result of dividends received from other Group companies and an actuarial gain offset by head office costs and dividends paid to shareholders.

Return on capital employed

The Group's return on capital employed was 15% (2017: 16%). Excluding the impact of goodwill and the net pension liability, the return on operating capital employed was 43% (2017: 48%). The Group's divisions have pre-tax weighted average costs of capital of between 9% and 11%.

Net cash (£m)

£6.6m



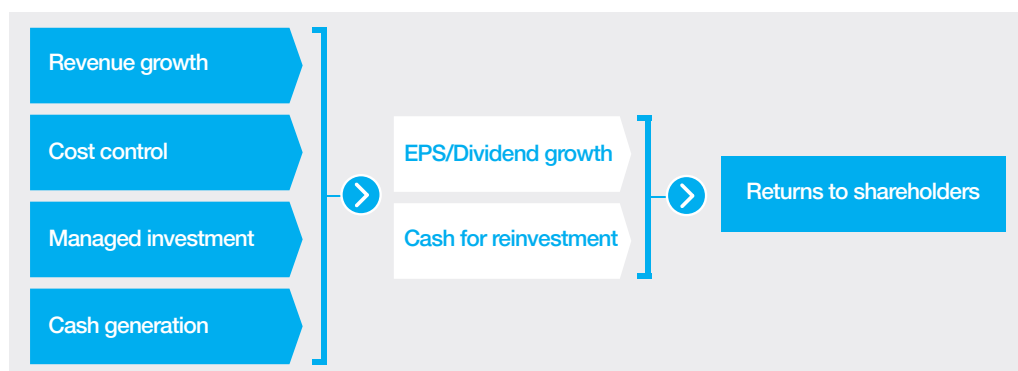
Cash flow

The table below summarises the key elements of the cash flow for the year:

	2018 £m	2017 £m
Operating cash flow before working capital	17.0	13.7
Working capital movement	(1.7)	(1.4)
Cash generated from operating activities	15.3	12.3
Interest	(0.3)	(0.2)
Tax	(2.4)	(2.7)
Capital expenditure net of disposals	(4.5)	(5.4)
	8.1	4.0
Acquisitions	(9.0)	(5.9)
Dividends	(2.0)	(1.8)
Share issue proceeds	0.1	0.3
Purchase of EBT shares	(0.4)	(0.5)
Net cash decrease in the year	(3.2)	(3.9)
Exchange gains	–	0.1
Net cash at 1 December	9.8	13.6
Net cash at 30 November	6.6	9.8

Generating free cash flow is key to the Group's business model and operating cashflow of £15.3 million, represented an 88% (2017: 80%) conversion rate of operating profit before depreciation and amortisation. Net working capital increased by £1.7 million (2017: £1.4 million), mainly arising in the Aerospace & Industrial division. A particularly strong final month and purchases made for manufacture and delivery of the strong order book meant that receivables increased by £1.6 million (2017: £0.3 million) and inventories increased by £2.5 million (2017: £0.5 million). Payables increased by £3.2 million (2017: £0.5 million).

Continuing to drive improved returns to shareholders

**Construction contracts and performance bonds**

During the year a nuclear and a gasification contract were completed. Progress on a further nuclear contract and two gasification contracts is described in the Aerospace & Industrial section of the Divisional Review. At 30 November 2018, the Group had £0.3 million (2017: £0.8 million) due from contract customers and net amounts due to contract customers of £7.3 million (2017: £8.0 million), representing the net amount by which progress billings at 30 November 2018 exceeded revenue recognised to date on these contracts. The deferred revenue will be recognised as costs are incurred and/or profits recognised.

Contract customers generally provide advance payments to fund the initial stages of the contracts and the Group provides advance payment bonds to the customer as security. The bonds are cancellable after up to six months following the shipment of goods. At 30 November 2018 there were US\$2.4 million advance payment bonds outstanding (2017: £nil).

Contract customers also generally require performance bonds to cover risks arising during the contract warranty periods. At 30 November 2018, the Group had US\$7.5 million (2017: US\$6.2 million) of performance bonds outstanding.

Capital expenditure

Capital expenditure was £4.5 million (2017: £5.4 million) in the year. The principal investments in 2018 are described in the Investment section of the Chief Executive's report.

Acquisitions

On 7 December 2017 the Group purchased 100% of the share capital of Rohasys B.V. ("Rohasys") to increase the Group's offering in the laboratory market. Rohasys manufactures robotic sample handling systems in the Netherlands. The total maximum consideration is €3,548,000 (£3,118,000); €896,000 (£787,000) was paid in cash on the acquisition date, together with €502,000 (£441,000) to settle the outstanding loan. The balance is contingent on financial performance and due for payment in cash over four years. The contingent consideration is dependent on Rohasys meeting sales and profit targets and will be settled in cash. €250,000 (£226,000) was paid in the year and, at 30 November 2018, €1.7 million (£1.5 million) was held in other payables.

On 28 February 2018 the Group purchased the net assets of Keystone Filter ("Keystone"), a division of CECO Environmental Corp. Keystone designs and manufactures a range of filter cartridges and housings for the food and beverage, drinking water, and chemical process markets and is based in the US. The total consideration of US\$7,190,000 (£5,219,000) was paid in full in the year.

Pension schemes

The Group supports its defined benefit pension scheme in the UK ("The Plan"), which is closed to new members, and provides access to defined contribution schemes for its US employees and other UK employees.

The Group's total pension cost was £3.7 million (2017: £2.7 million). £3.3 million (2017: £2.3 million) was recorded as an operating cost: £1.7 million (2017: £1.6 million) related to funding defined

Finance Director's review continued

contributions schemes; £1.5 million (2017: £0.6 million) related to the charge for The Plan and £0.1 million (2017: £0.1 million) related to the pension protection levy. £0.4 million (2017: £0.4 million) was charged as a finance cost in relation to The Plan.

The Group's cash contributions paid to The Plan were £1.6 million (2017: £1.6 million).

The Group's net retirement benefit obligation was £12.4 million (2017: £15.7 million). The Plan's liabilities reduced to £39.2 million (2017: £43.8 million). The Plan's assets reduced to £27.0 million (2017: £28.3 million). There were a further £0.2 million (2017: £0.2 million) of non-Plan liabilities.

The actuarial gain in the year was £3.6 million (2017: loss of £0.1 million). The Plan's assets suffered an actuarial loss of £1.4 million. The actuarial gain on the liabilities of £5.0 million arose principally from changes to the discount rate used to value The Plan's liabilities and a change in the mortality assumption:

- The discount rate increased from 2.5% to 3.0%, as a result of higher AA bond yields, which accounted for most of the reduction of £3.2 million in liabilities arising on changes in financial assumptions.
- During 2018, as a precursor to the triennial valuation, the Group reviewed the demographic assumptions used by The Plan. To assess the most appropriate mortality assumption for The Plan, the Group commissioned a Medically Underwritten Mortality Study and a postcode mortality analysis from its actuarial advisers, KPMG. The Company wrote to members of The Plan aged between 55 and 80 representing approximately 95% of the value of liabilities in that age range and 61% of the liabilities in total. 134 members completed the survey representing 63% of the liabilities in the 55 to 80 age range and 40% of the liabilities in total. The medical underwriter's results were analysed by KPMG and combined with the findings of a postcode mortality analysis to arrive at an overall blended mortality assumption for The Plan.

This resulted in a multiplier applied to the SAPS series 2 base tables of 122% (2017: 106%) for the IAS 19 accounting valuation. The allowance for future improvements used the 2017 CMI Core Projection (2017: 2016 CMI Core Projections) with a long term trend of 1.25% per annum. The change in demographic assumptions modestly reduced the life expectancy assumed for the members and reduced the Group's defined pension scheme liabilities by £1.8 million.

The Plan's liabilities increased by £773,000 to amend the benefits provided by The Plan to equalise its guaranteed minimum pensions for men and women on benefits earned between 17 May 1990 and 6 April 1997. This additional liability was charged to the income statement.

The triennial actuarial valuation of The Plan determines the cash contributions that the Group makes to The Plan. The next full actuarial valuation will be based on The Plan's position at 31 March 2018 and is expected to be completed before 30 June 2019. For the previous valuation, based on data at 31 March 2015, the Group agreed to set the employer's contributions at 18.9% of salary. Additionally, the Group committed to making a £0.2 million annual contribution towards the running costs of The Plan from April 2016, which will increase by 3.5% per annum thereafter. The Group also committed to make additional annual contributions, to cover the past service deficit of £1.0 million per annum.

Borrowings and bank finance

At the year end, the Group had cash balances of £11.5 million (2017: £12.5 million) and borrowings of £4.9 million (2017: £2.7 million).

In 2017, the Group secured a five year revolving credit facility of €23 million (£20.4 million) with Barclays Bank plc and Handelsbanken plc. The facility has a margin over LIBOR of 1.5% and a non-utilisation fee of 0.4375%. The Group also has a £2.5 million overdraft facility provided by Barclays Bank plc. The financial covenants require the Group to maintain interest cover of 3.5 times and net debt to be less than 2.5 times EBITDA.

Viability and going concern statement

Our viability statement sets out our assessment of the prospects of the Group over the next three years and is presented on page 33.

At 30 November 2018, the Group had net cash of £6.6 million (2017: £9.8 million), €17.3 million (£15.3 million) of unused facilities (2017: €19.6 million of unused facilities (£17.2 million)) and an unutilised overdraft facility of £2.5 million (2017: £2.5 million).

Finance and treasury policy

The treasury function at Porvair is managed centrally, under Board supervision. It seeks to limit the Group's trading exposure to currency movements. The Group does not hedge against the impact of exchange rate movements on the translation of profits and losses of overseas operations.

The Group finances its operations through share capital, retained profits and, when required, bank debt. It has adequate facilities to finance its current operations and capital plans for the foreseeable future.

Adoption of new accounting standards

The Group will adopt IFRS 9 and 15 in its accounts for the year ending 30 November 2019 and will adopt IFRS 16 in its accounts for the year ending 30 November 2020. The impact of the changes arising from the adoption of these new standards is expected to be immaterial to the opening reserves and performance of the Group. Adopting IFRS 16 will result in the gross up of fixed assets and liabilities in the opening balance sheet of the 2020 accounts and adopting IFRS 15 will result in substantially all of the amounts due to contract customers included in accruals and deferred income in the 2018 accounts being converted to accruals for future costs in the opening balance sheet of the 2019 accounts.

International Trade

Over 50% of Group revenues are manufactured in the US and changes to US tariff arrangements have had a modest effect on trading. A few customers in both the US and China have switched back to domestic suppliers, and the Group has both won and lost accounts as a result. The net effect has been small. Trading activity between the UK and the EU is less than 10% of Group revenues, so a significant perturbation due to Brexit is unlikely, nevertheless the implications of either a short term disturbance in the movement of goods or longer term tariff changes have been taken into account in the Group's planning for 2019.

Chris Tyler

Group Finance Director
25 January 2019

-  Key performance indicators:
pages 24 to 26
-  Principal risks and uncertainties:
pages 27 to 32
-  Remuneration report:
pages 50 to 65

Key performance indicators

Our KPIs are set to measure our progress in improving financial performance and in embedding sustainable long term growth.

We align our KPIs with our strategy:



Financial KPIs – what we measure

[Link to strategic objective](#)

Revenue growth

1 2 3 4 5

Revenue growth captures our performance in the main tenets of our business model: meeting customer requirements; developing new products; expanding geographically; and making acquisitions.

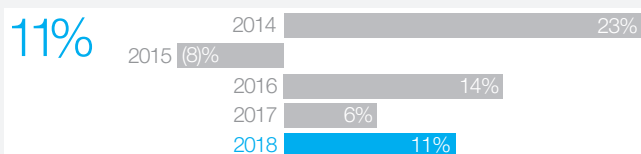
Constant currency revenue growth presents a measure of the growth of the operations in their local functional currency.

Performance in 2018

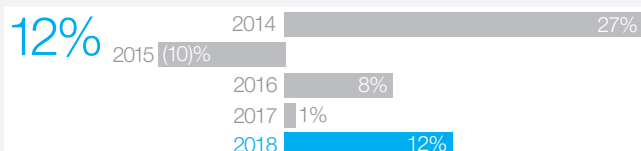
The performance of the Group, which was broadly in line with management's expectations, and that of each division is explained in full in the Chief Executive's report.

Revenue growth benefited from the weakness of Sterling compared with the prior year.

In constant currency revenue was 1% higher than underlying growth. A stronger Sterling average rate against the US dollar offset a weaker Sterling average against the Euro.



Revenue growth at constant currency



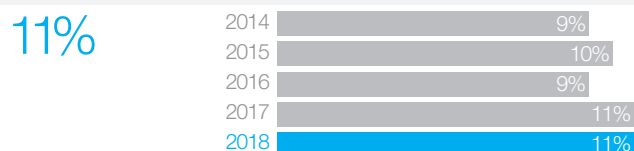
Adjusted operating margin

1 2 3

Operating margins demonstrate the Group's propensity to turn revenue into profits.




Performance in 2018

Overall adjusted operating margins remained steady. Operating margins increased in the Aerospace & Industrial division to 15.9% (2017: 15.7%). In the Laboratory division operating margins reduced to 15.8% (2017: 17.0%). Metal Melt Quality operating margins increased to 6.0% (2017: 4.6%).



Variable remuneration of the Executive Directors is based on EPS growth and cash generation from operations. Senior management variable remuneration is based on cash generation from operations and longer term operating profit. Further details on remuneration policies and the metrics used to determine them are set out in the Remuneration Report.

We recognise that the management of risk has a key role to play in the achievement of our strategy and KPIs.

-  See strategy and business model: **pages 10 and 11**
-  Principal risks and uncertainties: **pages 27 to 32**
-  Remuneration report: **pages 50 to 65**

Financial KPIs – what we measure

[Link to strategic objective](#)

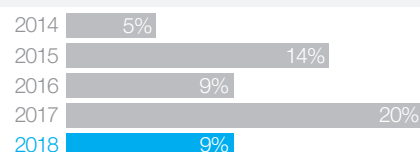
Adjusted profit before tax growth

1 2 3

A measure of the profits of the business before corporation tax and excluding the items relating to acquisition costs, amortisation of intangible assets acquired on acquisition and other significant items which when excluded give a more consistent assessment of the Group's performance.

Performance in 2018

The performance is described in full in the Chief Executive's report and the Finance Director's review.

9%


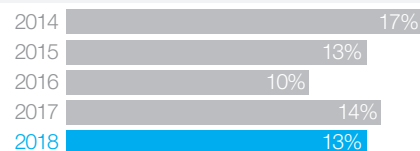
Basic earnings per share growth

1 2 3

Basic earnings per share growth gives a measure of our ability to deliver earnings growth for our shareholders.

Performance in 2018

Basic earnings per share grew faster than the profit before tax because tax included the benefit of lower tax rates enacted in the US for 2018.

13%


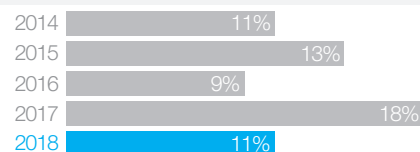
Adjusted basic earnings per share growth

1 2 3

Adjusted basic earnings per share excludes acquisitions costs, amortisation of intangible assets acquired on acquisition and other significant items which when excluded give a more consistent assessment of the Group's trading.

Performance in 2018

Adjusted basic earnings per share growth is faster than the adjusted profit before tax growth because of the benefit of a lower tax rate in the US in 2018.

11%


Cash generated from operations less interest

5

Cash generated from operations less interest gives a measure of the cash generating capabilities of the underlying operations.

Performance in 2018

The Group's cash performance was good with an 88% (2017: 80%) conversion of operating profit before depreciation and amortisation.

£15.0m


Key performance indicators continued

Financial KPIs – what we measure

[Link to strategic objective](#)

Adjusted post tax return on capital employed

5

Adjusted post tax return on capital employed gives a measure of financial return from all of the invested capital in the business. A return higher than the Group's weighted average cost of capital is satisfactory.

Performance in 2018

The Group's return on capital employed remained in line with the previous three years. It exceeded the Group's post tax weighted average cost of capital of between 7% and 9%.

15%



Adjusted post tax return on operating capital

5

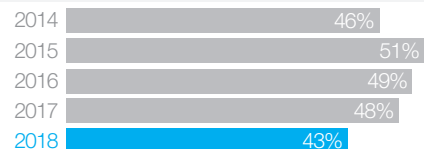
Adjusted post tax return on operating capital employed gives a measure of the Group's ability to make financial returns from the fixed assets and working capital employed in its operations. It ignores the goodwill arising on acquisitions and the impact of the pension deficit.

It gives a simple measure of the Group's ability to make returns from its investments in plant and equipment and working capital.

Performance in 2018

The Group's return on operating capital employed dropped during the year as a result of higher capital employed from investments and acquisitions made in the period which have not fully contributed to profits in the year.

43%



Non-Financial KPIs – what we measure

Lost time accidents per 100 employees

This gives a measure of the likelihood of an employee having an accident that results in time off work.

Performance in 2018

There were 12 lost time accidents in the year, compared with five in the prior year.

1.4



Days lost to accidents per 100 employees

In conjunction with the KPI above this gives a measure of the severity of accidents resulting in lost time.

Performance in 2018

One accident involving one person accounted for over 60% of the days lost. That employee has now returned to work.

35



Principal risks and uncertainties

Risk Appetite

The Board considers risk as an integral part of its normal decision making and performance management, both in relation to the current and future performance of the business. The Board manages this by linking risk appetite, which it has separately defined, to the strategic objectives and the Group's control systems in order to assess where the level of risk sits.

Our approach to risk management

Risk management is embedded in the management processes of the Group. It has adopted the April 2016 UK Corporate Governance Code and the Guidance on Risk Management, Internal Controls and Related Financial and Business Reporting. The Board has 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, and has implemented a risk management process with specific steps scheduled throughout the financial year. The process adopted by the Group to embed risk management in the Group's operations is outlined below.

- The key risks are identified by the management team of each operation facilitated by the Group Chief Executive and Group Finance Director.
- Operations management teams maintain a register of risks, mitigations and weaknesses, which:
 - Makes an initial assessment of the risks identified;
 - Identifies the mitigation processes that are already in place; and
 - Highlights weaknesses that currently exist.
- This register is reviewed quarterly, which leads to mitigating actions which are incorporated in each operation's annual plans.
- The budget and strategy planning process then incorporates:
 - Capital or staff cost implications of improving the mitigation and reducing current weaknesses; and
 - Any other budget implications of improving risk management.
- Internal audit peer reviews analyse the risk registers kept by each business and ensure that:
 - The mitigation steps identified are in place; and
 - Any commitments made in the planning process have been actioned.
- The process is refined in the following year.

Risk Governance

The Board has overall responsibility for ensuring that the Group maintains an effective risk management system and actively monitors the risk management process. Specifically the Board:

- Defines a process for ongoing monitoring of risk management taking into account:
 - The Group's risk appetite;
 - Any known incidence of significant control failure or weakness;
- Reviews the risk register and mitigation processes ahead of the strategy and budget process;
- Reviews the approach adopted to the ongoing monitoring of risk;
- Considers presentations on strategy and risk management from the operations' management as part of the strategy and budget process;
- Considers the findings of the internal audit reviews in relation to risk management; and
- Conducts a robust annual effectiveness review of the process.

Principal risks and uncertainties

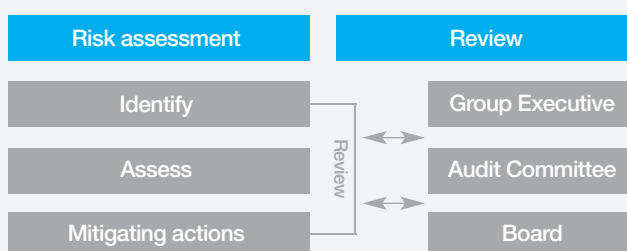
The Group maintains a comprehensive register which identifies risks and uncertainties that could impact the operations, the mitigation processes in place and outlines the weaknesses that should be addressed by the operations. The risk register includes over 140 individual risks and associated mitigation processes. The principal risks and uncertainties described on pages 28 to 32 are those which individually or collectively might be expected to have the most significant impact on the Group's long term performance and prospects.

Risk management framework

The Group has a well established governance structure with internal control and risk management systems. The risk management process provides a framework to identify, assess and manage risks in line with the Group's overall strategy and the operations of its divisions.

The Group operates in global markets. In pursuing its growth targets and strategic objectives, it is clear about the specific risks faced by the Group and has robust actions in place to manage them. Our approach to each risk will vary over time and will depend on changing circumstances and the external environment.

Risk assessment review



Our principal risks

Revenue risks

- A – Existing market
- B – New products and markets
- C – Large contracts
- D – International trade
- E – Competition

Manufacturing and operational risks

- F – Raw materials, resources, price and production
- G – Facilities and IT
- H – Cyber attack

Finance and management risks

- I – Acquisitions
- J – Pensions
- K – Financing and liquidity
- L – Financial risk management

Risk trends

The ongoing review of the Group's principal risks focuses on how these risks may evolve. The chart below makes an estimate of the relative likelihood and impact of the risks described and shows which are considered to be increasing or decreasing in severity.

Risk impact analysis



Principal risks and uncertainties continued

Revenue risks

Risk description and impact	Link to strategic objective	Mitigation	Change
<p>A – Existing market risk 1 2</p> <p>The Group serves the needs of a range of specialist filtration markets, such that it is not dependent upon any one market. However, the Group's four main markets are as follows:</p> <ul style="list-style-type: none"> • aerospace filtration, where quality and accreditation of products are critical. Although product lifecycles are long there are occasional periods of reduced demand as a result of global impacts on commercial flying. • energy and industrial process filtration, where projects tend to be large and demand would be affected by a sustained economic downturn or a long period of low oil prices. • laboratory supplies, where revenue can be affected by access to capital in customers' markets (municipal/utilities and industrial labs); and • aluminium filtration, where demand for aluminium can fluctuate, producers have consolidated and recent demand growth has been driven by Chinese industrial production. <p>Each of the above contribute more than 10% of the Group's revenue and the Group would be exposed to a significant decline in any of these markets.</p>		<p>Many of the Group's products are consumable and are essential to the safe operation of their respective systems and processes, so whilst volumes are impacted by changes in economic circumstances significant fluctuations for other reasons are rare.</p> <p>The aerospace market has traditionally been a very steady business as the product cycles are very long and the Group offers a broad range of products split evenly between after-market and new build. Revenue can fluctuate as significant programmes begin or end, the outlook for the aerospace market is for steady growth and the Group has a good pipeline of new programmes coming on stream. There is unlikely to be such a rapid decline in the aerospace market that the Group could not manage the consequences over time.</p> <p>The energy and industrial process products serve a range of customers who use filters as an integral part of processes in their plants. Sales are both for new build and after market spares. The after market spares business should ensure that there is a regular revenue stream from the installations that the Group serves.</p> <p>Laboratory supplies are chiefly sold to laboratories undertaking sample preparation, chromatography and meeting the regulatory requirements for clean water. It is expected that the consumable nature of many of these products and the regulated nature of the activities conducted by the laboratories will mitigate cyclical changes. The market is expected to grow as regulations tighten throughout the world and demand for clean water in the developing world increases.</p> <p>The Group's revenue is affected by the levels of aluminium production, however the Group has a strong market position having successfully differentiated its products through improved filter formulations. The production of aluminium has consolidated to larger smelters in regions of low cost energy. In China, new capacity capable of producing higher grade aluminium is being added and older capacity retired. The Group has developed its sales and production capability to address the requirements of larger customers requiring higher grade filtration.</p>	
<p>B – New products and markets risk 1 2 3</p> <p>The Group's strategy is to expand geographically into new markets as it becomes necessary to support its customers. Outside its traditional markets of US and Europe, the Group has invested in operations in India and China. There is a risk that the additional complexity of operating in these regions will limit the return that the Group is able to make on its investments.</p>		<p>The Group invests in new geographic markets in support of its existing customers. It starts with small operations specifically supporting existing customers to gain experience of operating in the new market before making significant investment. New investment is subjected to the Group's normal capital approval processes.</p>	

Key and links to strategy:

- 1 Focus on regulated markets where we see long term growth potential.
- 2 Look for applications where product use is mandated and replacement demand is therefore regular.
- 3 Make new product development a core business activity.
- 4 Establish geographic presence where end-markets require.
- 5 Invest in both organic and acquired growth.

Change in level of risk:

No change to risk



Risk exposure reduced



Risk exposure increased

Revenue risks continued

Risk description and impact	Link to strategic objective	Mitigation	Change
<p>C – Large contracts risk 1 2</p> <p>The Group has a number of large contracts for the installation of filtration systems. The Group's future results will be affected by the outcome of these contracts and the potential future revenue from the installations. Significant delays, engineering challenges or cost overruns with these contracts could impact the Group's expected performance.</p> <p>The Group also has a number of long term supply agreements for filters and agreements with key distributors for certain of its products. Its results will be affected should it lose a significant customer or distributor.</p>		<p>The large contracts have direct senior management involvement on a day to day basis. The Group makes every effort to ensure that its commitments are met on time and in full. Detailed engineering and financial work plans, risk assessments and forecasts are maintained for each of these projects. The financial impact of reasonably foreseeable risks are included in these plans. Reports are produced every month which detail project progress and changes to planned schedules and assessment of risk.</p> <p>The Group maintains close contact with each of its long term customers and major distributors and has a long history of working with them. In each case the Group provides unique or patented products to the customers or distributors which provide additional permanence to the relationships.</p>	
<p>D – International trade risk 1 2</p> <p>Uncertain tariffs and the consequences of trade war rhetoric could make export sales more uncertain and the profitability of those sales more difficult to predict.</p> <p>Following the UK referendum result in favour of leaving the European Union the Group has considered the associated risks.</p>		<p>The Group expects there to be impacts of tariff uncertainties, particularly in agreeing prices until tariff rates are settled, and a probable increased pressure to acquire home produced goods. The Group may have to amend how and where it manufactures goods to minimise tariff impacts, with operations in US, UK, Europe and China, the Group has some flexibility on the original source of its products. It is possible that the volume of products exported by the Group may reduce but the Group manufactures products that are often not easily sourced locally and expects that, after a short term hiatus, it should be able to pass any additional tariffs on to the end customer.</p> <p>Until specific trade arrangements and tariffs become clear, a definitive statement of risks associated with leaving the European Union cannot be made. However, the Board believes that a significant near term risk arises in the transitional period around the end of March 2019 leaving date and as a result has made plans to increase its inventory holdings of cross channel supplies in the first quarter of 2019. In addition the Group has reviewed the tariff categories that its products would apply under WTO terms and has confirmed that its EU nationals staff have a right to remain in the UK. The Board notes that more than half our revenue is generated in the US. Revenues and purchases between the UK and EU were less than 10% of total in 2018.</p>	
<p>E – Competitive risk 1 2</p> <p>Porvair operates in competitive global markets. The Group's achievement of its objectives is reliant on its ability to respond to many competitive factors including, but not limited to, new entrants, pricing pressures, technological innovations, product quality, customer service, currency movements, manufacturing capabilities and the employment and retention of qualified personnel. If the Group does not continue to compete in its markets effectively by developing innovative solutions for its customers and delivering high quality customer service, it could lose them and its results could be adversely affected.</p>		<p>The Group recognises that certain of its competitors are larger and have greater financial resources. This may enable them to deliver products on more attractive terms than the Group or to invest more resources, including research and development. The Group seeks to maintain its competitive advantage through technical differentiation and product quality rather than price.</p> <p>Through the development of a strategy that focuses on micro niches within the Group's chosen markets, the Group seeks to identify specific opportunities where it has a commercial, reputational or technological advantage that enables it to compete successfully.</p>	

Principal risks and uncertainties continued

Manufacturing and operational risks


Risk description and impact	Link to strategic objective	Mitigation	Change
<p>F – Raw materials, resources, price and production risk</p> <p>The Group uses a wide variety of different raw materials and subcontracted processes. In certain cases critical components or processes are single sourced either for regulatory or availability and performance reasons. In the event that supplies of these materials or processes become unavailable the Group's ability to produce certain products could be delayed or products may need to be redesigned.</p> <p>Prices for raw materials can be volatile and are affected by the cyclical movement in commodity prices such as oil, alumina, gas and steel. The Group's ability to pass on these price fluctuations to its customers is to some extent dependent on the contracts it has entered into and the prevailing market conditions. There may be times when the Group's results are adversely affected by an inability to recover increases in raw material prices.</p> <p>Not all of the Group's equipment is duplicated generally for cost and efficiency reasons. A significant failure of any of these pieces of equipment can result in production delays and a potential loss of revenue.</p>	1 2 5	<p>Wherever possible the Group seeks to dual source all of its supplies and processes. Where this is not possible the Group has in place long term agreements, or significant buffer stocks. It has an active programme of close monitoring of its suppliers including assisting them with improvements in quality and continuity.</p> <p>The Group is exposed to commodity price risk as a result of its operations. Where practical the Group seeks to fix its raw material prices. The Group buys certain raw materials and energy on long term or forward contracts to minimise its exposure to fluctuation in commodity prices. In all cases these contracts result in the ultimate delivery and use by the Group of the commodity.</p> <p>The Group has regular planned shutdowns for maintenance and equipment is maintained to a high standard. Failures of critical equipment are therefore rare.</p>	↔
<p>G – Facilities and IT risk</p> <p>The Group operates a number of production facilities, the largest facility generating between 20% and 25% of the Group's revenue. A disaster, such as a fire or flood, at any of the Group's facilities could have a material impact on the Group's performance.</p> <p>The Group relies on IT systems for all its record maintenance and is dependent upon good bandwidth connections between its sites. A loss of servers or bandwidth, or significant cyber or virus attack could interrupt the operations and result in a loss of data.</p>	1 2	<p>The Group maintains insurance of its equipment and facilities and carries business interruption insurance to cover loss of profits. In addition, the Group has ISO 9001 and other industry specific quality control systems which reduce the risk that a disaster will occur.</p> <p>The Group has resilient and distributed IT systems and invests in new servers, software and bandwidth to improve the resilience of its systems. It has comprehensive IT disaster recovery plans, which are periodically tested.</p>	↔
<p>H – Cyber attack risk</p> <p>The Group has experienced a number of cyber attacks and the frequency of these attacks is increasing. A cyber attack could cause loss or corruption of data or interrupt the operation of systems.</p>	1 2	<p>The Group's systems have been tested against actual cyber attacks and in each case systems have been out of action for less than 24 hours and only minimal data loss has been suffered.</p> <p>The Group has distributed systems. Each operation's systems are largely independent from the systems of the other operations, such that a virus or concerted cyber attack could be contained within one operation.</p> <p>The Board has conducted a review of the process in place to reduce the risk of cyber attack.</p> <p>The Group is vigilant to attack and ensures that its systems are regularly improved to make them more secure and resilient. Although the systems are distributed, best practice ideas are shared within the Group's IT staff.</p>	↔

Finance and management risks

Risk description and impact	Link to strategic objective	Mitigation	Change
I – Acquisitions risk 4 5 The Group has an active programme of seeking and integrating complementary acquisitions. A poorly executed acquisition could severely constrain the Group.		The Group engages in thorough due diligence on its target companies and adopts a cautious approach in its selection and completion of acquisitions. In the case of each completed acquisition it develops and implements an integration plan.	↔
J – Pensions risk 5 The Group operates a defined benefit pension scheme for UK employees which is closed to new members but remains open for future accrual for the existing active members. The Group retains the ultimate responsibility for ensuring that the trust has sufficient funds to ensure that all current and future pensions can be paid in full. A significant shortfall in the value of the assets of the scheme compared with its liabilities could impair the Group's ability to pay dividends and require the Company to make additional payments to the scheme.		The Pension scheme is financed through a separate trust fund and administered by a Board of Trustees with an independent Chairman. The Group maintains a close oversight of the pension scheme through appointment of its own trustees to ensure that the scheme is properly administered and that sound investment advice is obtained. The Board regularly reviews the performance of the scheme and its investment strategy with a focus on reducing risk to the Group. The Group has a deficit recovery plan in place that is affordable for the Company and expected to reduce the current deficit. The deficit contribution is reviewed every three years as part of the triennial valuation.	↔
K – Financing and liquidity risk 1 2 3 At certain times the Group uses borrowings to finance its operations. Damage to, or loss of, its banking relationships could have a material impact on the Group's ability to do this, which could damage the operations and profitability of the Group.		To mitigate this risk, the Group actively maintains a mixture of long term and short term debt finance that is designed to ensure the Group has sufficient available funds for operations and planned expansions. It has a policy of maintaining low gearing and significant headroom in normal circumstances in its covenants. It maintains close relationships with its bankers and carefully monitors the restrictions on its borrowings.	↔

Principal risks and uncertainties continued

Finance and management risks continued

Risk description and impact	Link to strategic objective	Mitigation	Change
L – Financial risk management	5		
<p>The Group's operations expose it to a variety of financial risks that include the effects of:</p> <ul style="list-style-type: none"> • foreign exchange risk; • credit risk; and • interest rate cash flow risk. 		<p>The Group has in place financial risk management procedures that seek to limit the adverse effects on the financial performance of financial risks. The principal procedures are described below:</p> <p>Foreign exchange risk</p> <p>The Group seeks to manage its exposure to the impact of exchange rate movements on its net investments by maintaining some borrowings in US dollars. Previously it sought to maintain borrowings in US dollars equivalent to around 60% of the carrying value of its US dollar net tangible assets in its US operations. However, as the Group's overall borrowings have reduced, so the US dollar borrowings have reduced.</p> <p>The UK operations of the business generate significant revenues in US dollars and the Group seeks to minimise the impact of movements in the US dollar exchange rate on the value of these US dollar flows by using financial instruments to fix the future value of the US dollars. The Group does not apply hedge accounting to these transactions. In the case of large contracts where the future currency income is in a different currency from the operation's functional currency, is certain, and can be specifically assigned to individual transactions, the Group takes out forward foreign exchange contracts to minimize the impact of currency fluctuations. The Group applies hedge accounting to these transactions.</p> <p>Credit risk</p> <p>The Group has implemented policies that require appropriate credit checks on potential customers before sales are made. Debtor finance is very rarely used and is reviewed on a case by case basis by the Board of Directors. The Group monitors the level of deposits held with overseas banks and financial institutions and repatriates cash as part of its treasury management.</p> <p>Interest rate cash flow risk</p> <p>The Group has only interest bearing liabilities.</p> <p>The Group has no exposure to equity securities price risk as it holds no listed or other equity investments.</p>	

Viability and going concern

Selection of Viability period

The Group has significant revenue streams of bespoke consumable parts that as a result of either quality accreditation or regulatory requirements are expected to continue for many years. However, the Board considers that a review of the Group's plans over a three year period is reasonable because:

- The Group's planning processes extend over three years and provide the Board with a reasonable timeframe over which developments can be foreseen with a degree of certainty;
- Its specific investment plans can be reasonably foreseen and will be implemented within the period covered;
- There is a reasonable expectation that changes to current market trends can be anticipated over the period;
- To the extent that the Group has long term supply contracts with its key customers these usually have three year renewal periods; and
- Where the Group has large contracts these are rarely expected to be under construction for longer than three years.

Integration with the Group strategy and business model

The Group's strategy is set out on page 10. The aspects of the strategy that have the most impact on the viability of the business are:

- The characteristics of specialist filtration and environmental technology businesses. Generally the products the Group designs and manufactures are mandated by regulation, quality accreditation or a maintenance cycle. Our products are generally protecting much more costly or complex downstream systems. Products are often designed for specific applications, which typically have long life cycles, and have regular replacement cycles. These characteristics provide the business with a degree of repeatability of orders and a reasonable level of revenue security.
- Our ability to apply our expertise to a range of attractive niche markets. Our customers require filtration and emission control products that perform to a given specification. Our filtration expertise is applicable across all our markets. We win business by applying that expertise to offer the best technical solution at an acceptable cost to a particular application.
- Our approach to investment and growth. We aim to meet our dividend and investment needs from free cash flow and modest borrowing. We aim for a mix of organic and acquisition growth funded from our own resources. Over the medium term the Group has demonstrated an ability to generate free cash flow and integrate modest acquisitions.

Annual assessment process

The Group has an annual Strategic Planning process, which comprises a strategic plan, a financial forecast for the current year and financial projections for the next three years. The strategic planning process is integrated with the risk management and reporting processes designed to produce consolidated and operating unit level business objectives, risk management plans and operating budgets.

The plans are reviewed each year by the Board as part of its strategy review process. Once approved by the Board, the plans are adopted throughout the operations and provide the basis for strategic

decision making and objective setting. Progress towards these objectives and financial performance compared with plans are monitored by the Board throughout the year.

In undertaking its strategic review in 2018, the Board considered the prospects of the Group over the one and three year periods to 30 November 2019 and 2021, respectively. The one-year planning period has a greater level of certainty and is, therefore, used to set detailed budgetary targets throughout the Group – it is also used by the Remuneration Committee to set targets for annual incentives. The three-year period provides less certainty of outcome, but sets out the medium term objectives of the Group and the investment plans and financial targets associated with those objectives. It is also used by the Remuneration Committee for setting the performance targets for the long term incentive plans.

Stress tests and scenarios

As part of the Group's planning processes, the Group has analysed the adverse impacts that could arise as a result of the risks outlined on pages 28 to 32. The central planning assumptions were adjusted to test the impacts of the potential risks including:

- A severe economic recession, modelled on the impacts that the business has faced in previous downturns and the potential impact of Brexit;
- A forced plant shutdown requiring lengthy remedial work;
- Significant adverse impacts arising from the commissioning of the Group's gasification filtration contracts;
- Loss of business or reduced profitability arising from operational challenges including material sourcing and competitor risks; and
- A worsening of the Group's pension liabilities requiring additional deficit contributions.

The results of the stress tests demonstrated that the cash generating capabilities of the business and the availability of current financing facilities would enable the Group to withstand the impact of these scenarios arising in combination over the next three years. Further mitigations would be available to the Group including reductions in capital expenditure and cost reduction programmes.

Viability and going concern assessment

On the basis of this and other matters considered by the Board during the year, the Board has a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the three year period assessed. In doing so, it is recognised that such future assessments are subject to a level of uncertainty that increases with time and, therefore, future outcomes cannot be guaranteed or predicted with certainty.

After having made appropriate enquiries and reviewing the current financial position, including all the information presented in its strategic review of the business, the Directors have a reasonable expectation that the Group and Company have adequate resources to continue in operational existence for the twelve months from the date of this report. Accordingly, they continue to adopt the going concern basis in preparing these accounts.

Corporate and social responsibility report

We recognise that the responsible and sustainable development of our business is important for our long term success and for creating value for Porvair and our stakeholders.

Introduction

S172 of the Companies Act 2006 places an onus on the Board to promote the success of the Company. In this section the Board sets out its approach to operating sustainably and responsibly to create long term value. High quality standards include promoting high standards of employee health; providing safe working conditions; behaving with integrity and ethically; attracting able people and developing them; reducing our environmental impact; and contributing to our communities. Progress towards achieving our long term aims is discussed throughout the Strategic report.

The impacts of failing to operate sustainably and responsibly are considered in the risk reviews of each operation. These non-financial risks form part of the 140 individual risks and mitigations described on page 27.

As a minimum, the Group operations are required to meet the legal and regulatory requirements of operating in their local jurisdiction.

We recognise that operating in a responsible manner is an important component of our ability to deliver upon our strategic objectives. During 2018, the Board continued to make good progress in these areas.



To support the delivery of our strategic objectives we have four key areas of responsible and sustainable focus:

1. Business integrity and ethics

Our commitment to high ethical standards strengthens our reputation with customers, suppliers and other stakeholders.

Priorities

- Ensure we operate with integrity.
- Comply with laws and regulations.
- Operate according to strict anti-corruption and anti-bribery policies.
- Operate fairly between all stakeholders of the Group.

Outcome for the business

- Maintain our reputation as a trusted business.

2. Our People

Porvair prides itself on its people and their ability to provide innovative solutions for its customers.

Priorities

- Promote equal opportunities and diversity.
- Provide career opportunities through training and engagement.
- Operate with due regard for human rights and local laws.

Outcome for the business

- Attract and retain the best people.



3. Health, Safety and Environmental performance

Porvair recognises its clear responsibilities for the health and safety of its employees and to the communities in which it operates. Many of the products developed by Porvair are used to the benefit of the environment.

Priorities

- Ensure the health and safety of our people at work.
- Minimise our environmental impact.
- Be accountable for our environmental footprint.

Outcome for the business

- Deliver a safe and clean environment for work.
- Gain commercial and cost benefits.

4. Building strong relationships and community impact

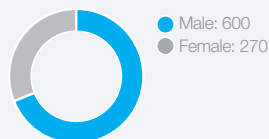
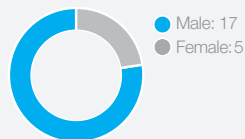
Porvair is committed to building relationships with its customers, its suppliers and the local communities in which it operates.

Priorities

- Engage with and contribute to local communities.
- Recruit, train and develop local people.
- Maintain positive relationships with our customers and suppliers.

Outcome for the business

- Build business reputation, longevity and contribute to local communities.

Employee diversity**Senior Management diversity****Our People**

Porvair provides employment in a wide range of disciplines associated with the design and manufacture of filtration and separation equipment.

Employee engagement

The Group involves employees through both formal and informal systems of communication and consultation. Managers have a responsibility to communicate effectively and to promote a better understanding by employees of the activities and performance of the Group. Information relating to trading, company strategy and any other matters of significance are communicated to all employees through local briefings.

The Group has regular consultations with staff so that their views can be taken into account in matters that affect their interests. Employees are actively encouraged to contribute to improvements in the Group's operations. The Group has a UK share save scheme that encourages employees to save and share in the Group's performance.

Diversity

It is the Group's policy to recruit, train, promote and treat all personnel on grounds solely based on individual ability and performance. These principles are applied regardless of sex, sexual orientation, religion, age, nationality or ethnic origin.

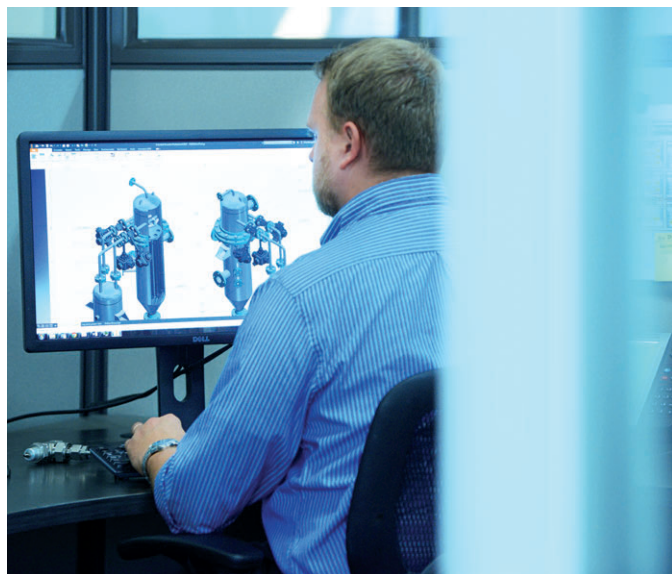
The Group's split between male and female permanent employees is shown below.

	Female	Male	Total
Directors	1	4	5
Senior Managers (General Managers and statutory officers of subsidiary entities)	4	13	17
Employees	265	583	848
Total at 30 November 2018	270	600	870

Applications for employment by disabled persons are always considered in full, bearing in mind the respective aptitudes and abilities of the applicant concerned. In the event of members of staff becoming disabled, every effort is made to ensure that their employment with the Group continues and the appropriate training is arranged. It is the policy of the Group that the training, career development and promotion of a disabled person should, so far as possible, be identical to that of all other employees.

Training and development and growing our talent

We recognise that our competitive advantage can only be maintained by developing our own talent internally as well as recruiting the best skills from outside of our organisation. Our work environment inspires innovation with continuous learning and improvement as an essential part of our philosophy.

**Porvair prides itself on its people and their ability to provide innovative solutions for its customers**

Porvair provides employment in a wide range of disciplines associated with the design and manufacture of filtration and separation equipment.

We recognise that our competitive advantage can only be maintained by developing our own talent internally as well as recruiting the best skills from outside of our organisation. Our work environment inspires innovation with continuous learning and improvement as an essential part of our philosophy.

Training and development programmes are important both for our employees to fulfil their potential and to help our business achieve its goals. Much of our training however is by experience within our own operations.

In 2018 our training programmes mainly concerned:

- Technical skills and knowledge transfer;
- Sponsorship for tertiary education qualifications;
- Team leadership;
- Training apprentices;
- Health & safety; and
- Quality.

Corporate and social responsibility report continued



Health and safety



Our approach

The Group recognises its clear responsibilities for the health and safety of its employees and to the communities in which the Group operates. By managing and controlling health and safety, and reducing accidents and injuries, the Group benefits from increased productivity, lower absenteeism, reduced insurance and healthcare premiums and ultimately a safety record which holds the Group in good stead for securing future projects.

Health and safety responsibility is delegated to senior managers within each business. These officers perform regular reviews and inspect the conditions in which the Group's employees work. Discretionary health and safety benefits for employees include the availability of gyms and onsite nursing and counselling staff at certain operations. The Group's regular reporting procedures include a review by the Board of accidents in the workplace.

The Group's insurers and insurance brokers carry out a rolling programme of reviews of the Group's operations as part of their risk assessments and the recommendations of the consultants are generally implemented in full.

Progress against our objectives in 2018

Health and safety progress in the year has included:

- A full audit of fire safety in all our plants and offices was undertaken and corrective action where necessary has been implemented.
- Our Metal Melt Quality plant in Hendersonville, NC was accepted as a Rising Star site by the North Carolina Department of Labor for advanced health and safety programs that go beyond the standards and demonstrate best practices.
- We continued our programme to introduce LED lighting throughout our plants to improve working conditions and reduce costs.
- We continued with our ongoing programme of safety training for employees.
- Our machinery now has clearly displayed Safe Operating Procedure (SOP) information attached to each machine.
- Safety equipment to reduce manual handling and improve safe working at height has been installed in our UK Laboratory division plant.
- Fume and gas monitoring and sensors have been installed in risk areas of various plants throughout the Group.



We have a robust health and safety programme

By managing and controlling health and safety, and reducing accidents and injuries, the Group benefits from increased productivity, lower absenteeism, reduced insurance and healthcare premiums and ultimately a safety record which holds the Group in good stead for securing future projects.

During 2018 we completed a full fire risk assessment in all our plants and implemented improvements where the need was identified.

Lost time accidents per 100 employees

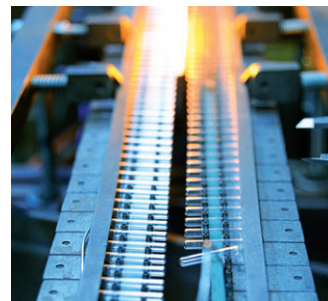
1.4



Days lost to accidents per 100 employees

35





Environmental performance



Our products

Many of the products developed by Porvair are used to the benefit of the environment. Examples include:

- The Group's water analysis equipment ensures drinking water is fit for consumption and waste water is not contaminated.
- The Group's on board ship water analysis equipment monitors small changes in the oceans' chemical composition.
- The Group's nuclear filters prevent emissions of fissile material.
- The Group's Metal Melt Quality products prevent contamination of aluminium and iron and help to improve the strength to weight ratio of metal components.
- The Group's ballast water filters control emissions of petrochemicals into the sea.
- Many of the Group's filters provide protection from contamination for systems and processes, which helps improve their longevity.

The Group consistently considers methods of improving its environmental profile. Environmental impacts are managed in conformity with local regulatory requirements. The Group's manufacturing processes have only a limited potential emissions impact. The Group uses solvents in certain of its processes and has procedures in place for their control. Its Metal Melt Quality division manages the emissions from its kiln firing operations within agreed regulatory parameters.

Our operations

Recent environmental changes we have made include:

Aerospace & Industrial

- The division has introduced an online database resource of over 500 chemical COSHH (control of substances hazardous to health) assessments. This provides material safety data sheets for all the chemicals the division anticipates using.
- Our plant in Boise, ID has introduced a new waste water treatment system to ensure that it exceeds the requirements of the Idaho authorities for returning waste water to the water infrastructure. In Caribou we installed a closed loop water cooling system to reduce water use and waste water production.
- A redesign and retrofit of the air handling system in the Boise cleanroom, has resulted in a significant energy and noise reduction. The project received an energy conservancy award from Idaho Power under its Commercial and Industrial Energy Efficiency program.

Laboratory

- JGF makes all its packaging from recycled PETG, essentially recycled plastic bottles.
- Our UK plant has reduced its plastic bag packaging by over 80%, now recycles over 80% of its waste and has eliminated single use plastic cups from its plant. Our plant in Mequon, WI has introduced a reusable cup initiative and eliminated all single use plastic from the employees' canteen facilities.



We drive for continuous improvements in environmental performance

The Group consistently considers methods of improving its environmental profile. Environmental impacts are managed in conformity with local regulatory requirements. The Group's manufacturing processes have only a limited potential emissions impact.

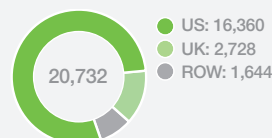
During 2018 we have significantly reduced our waste sent to landfill and have reduced our use of single use plastic in our packaging and our canteen facilities.

Metal Melt Quality

- Our plant in Hendersonville, NC was named The Green Business of the Year in Western North Carolina.
- Our plant in China implemented a new waste water treatment process.
- Our plant in Hendersonville, NC reduced solid waste sent to landfill by over 50 tons compared to the prior year.

Corporate and social responsibility report continued

Geographical breakdown (tonnes CO₂)



Total for year ended 30 November 2018

Environmental performance continued



Greenhouse gas emissions

The Group has implemented the UK Government's guidance on measuring and reporting greenhouse gas emissions, in line with DEFRA guidelines, using conversion units published by Carbon Trust. The Group reports 'Scope 1 and 2' emissions in tonnes of carbon dioxide. Scope 1 covers direct emissions: those that emanate directly from Group operations. This is principally natural gas burned in manufacturing and fuel used in company owned vehicles. Scope 2 covers indirect emissions, those generated by key suppliers, which is principally electricity.

The Metal Melt Quality division runs gas powered furnaces to fire its ceramic filters. The gas to run these furnaces is the largest component of the Group's emissions. Electricity provides heat, light and power for the Group's premises and other plant and equipment. The plant and equipment is mainly light manufacturing equipment but does include some high pressure presses and electric furnaces.

2010 is used as a base year and 'kilogrammes of CO₂ emission per pound sterling of revenue' as a measure of intensity. The Group aims to reduce its total intensity ratio over time. Intensity in 2018 remained in line with the previous year.

Energy Saving Opportunity Scheme (ESOS)

The UK Government established ESOS to implement Article 8 (4-6) of the EU Energy Efficiency Directive (2012/27/EU). ESOS is the mandatory energy assessment scheme for larger organisations in

the UK meeting the qualification criteria. The Environment Agency (EA) is the UK scheme administrator.

Porvair has completed all of the first audits and complied with the EA's 5 December 2015 submission deadline. Porvair is required to carry out further ESOS assessments every 4 years. Reports by the auditors will incorporate and include recommendations identifying opportunities for cost saving energy measures.

REACH

The first significant impacts of REACH (the European Union regulation concerning the Registration, Evaluation, Authorisation & restriction of Chemicals) have had an impact on some Porvair processes.

Trichloroethylene and chromium trioxide appear on the ECHA Annex XIV list of products that have been banned unless specifically authorised for use. Porvair Filtration Group's Segensworth site has eliminated Trichloroethylene from its processes. To replace chromium trioxide, used in Alocrom 1200, it has begun to design new products using a replacement treatment (SURTEC). For existing products, it has joined an aerospace group which has special dispensation to continue to use Alocrom 1200 on existing products. Air and manual handling procedures for the use of Alocrom 1200 have been significantly improved.

The Metal Melt Quality division keeps under review its use of boric acid, which is a substance named in the Candidate List of the REACH regulations, to ensure that it meets its REACH reporting obligations on filters shipped into the EU.



Greenhouse gas (GHG) emissions

Scope 1 - Direct GHG Emissions

	Year ended 30 November 2018 tCO ₂	Year ended 30 November 2017 tCO ₂	Year ended 30 November 2010 tCO ₂
Gas	12,324	11,680	8,571
Owned vehicles	414	426	368
Total scope 1 gross emissions	12,738	12,106	8,939

Scope 2 - Indirect GHG Emissions

	Year ended 30 November 2018 tCO ₂	Year ended 30 November 2017 tCO ₂	Year ended 30 November 2010 tCO ₂
Electricity	7,994	7,734	5,204
Total scope 2 gross emissions	7,994	7,734	5,204
Total gross emissions	20,732	19,840	14,143

	kCO ₂ /£	kCO ₂ /£	kCO ₂ /£
Scope 1 intensity ratio	0.099	0.104	0.142
Scope 2 intensity ratio	0.062	0.066	0.082
Total intensity ratio	0.161	0.170	0.224

Geographical breakdown (tonnes of CO₂)

	Year ended 30 November 2018			Year ended 30 November 2017			Year ended 30 November 2010		
	Scope 1 tCO ₂	Scope 2 tCO ₂	Total tCO ₂	Scope 1 tCO ₂	Scope 2 tCO ₂	Total tCO ₂	Scope 1 tCO ₂	Scope 2 tCO ₂	Total tCO ₂
UK	502	2,226	2,728	403	2,381	2,784	479	1,497	1,976
US	10,943	5,417	16,360	10,307	5,053	15,360	8,350	3,639	11,989
ROW	1,293	351	1,644	1,396	300	1,696	110	68	178
Total	12,738	7,994	20,732	12,106	7,734	19,840	8,939	5,204	14,143

We create positive social impacts through our activities and local job creation where our global operations are located.

Relationships with customers

The Group's products are generally bespoke for specific customers and generally have a very long product lifecycle. This naturally requires the Group to build close relationships with its customers. A high percentage of the Group's annual revenue comes from repeat business from existing customers. Most new product introductions are developed with existing customers and when new customers are gained it is often after a long development period over which a close relationship has developed and a long term relationship is expected.

Particularly in aerospace and energy, the Group builds relationships with the immediate customer for the product and also with the ultimate end user or manufacturer, who is often the party that certifies the product. For example the airframe manufacturer will be an important stakeholder but the customer will usually be a sub assembly manufacturer.

Relationships with suppliers

The Group has an extensive network of suppliers and subcontractors, many of whom are critical to the manufacture of specific parts. The Group has a stable supplier base. It seeks to increase its supplier base by extending the number of suppliers only where there are perceived to be risks of under capacity or resilience in its existing supply chain. Suppliers are generally only removed from the approved list for persistent quality or delivery failures.

Wherever possible, the Group seeks local suppliers to fulfil its requirements. The Group carefully selects its suppliers. As part of building a long term relationship with its critical suppliers, the Group works closely with them to ensure that the quality and delivery standards required by the Group are achieved.

Anti-bribery and corruption policy

The Group prohibits all forms of bribery and corruption within its business and complies with the requirements of all applicable laws designed to combat bribery and corruption. The Group requires all employees, agents, intermediaries and consultants to conduct themselves in accordance with the Group's anti-bribery and corruption policy. The Group conducts an annual compliance review and periodically provides training for its staff who have contact with customers and suppliers.

Porvair and the local community

The management of each operation is aware of its role within its local communities. They seek to recruit locally and retain a skilled local workforce and are encouraged to build relationships with local community organisations.

The Aerospace & Industrial division has contributed to a number of local charities to support disadvantaged local people and communities.

The Metal Melt Quality plant in Hendersonville, NC supports the United Way of Henderson County (UWHC), a charity local to its main plant; the division makes donations and employees make payroll deductions to donate to the charity. A number of employees participate in projects to repair homes and provide facilities for the disadvantaged in the community and are active in mentoring and providing support for the children of single parent families.

The plant leads a team working every month to clean a local stream under the adopt-a stream programme.

The Laboratory division in the US has contributed to a number of water initiatives and charities. Employees made donations to charities supporting cancer relief and local deprived children.

The Group is a significant employer in the Caribou area and one of the few businesses in the area to be expanding its workforce. It maintains close relations with the local mayor's office and has joined programmes to promote local businesses and services in the area.

Modern Slavery

The Group has zero tolerance of slavery and human trafficking in all its different forms in any part of its business and in its supply chain. The approach reflects a commitment to act ethically and responsibly in all business relationships and to ensure that slavery and human trafficking are not present in any part of its business or in its supply chain.

A copy of the Group's policy on Modern Slavery is available on the Group's website at www.porvair.com.

Human rights

The Group supports and is committed to upholding the UN Guiding Principles on Business and Human Rights and the core labour standards set out by the International Labour Organisation.

The Group is aware of its requirements to respect human rights in all jurisdictions in which it operates. It pays particular attention to its responsibilities in its operations in China and India. The Group has nothing further to disclose.

Chris Tyler

Company Secretary
25 January 2019

Board of Directors

The Board provides effective and strategic leadership to the Group within a framework of robust corporate governance.



John Nicholas

Non-Executive Chairman

A N R

Appointed to the Board in October 2017.

Experience and external appointments:

John is an experienced Non-Executive Director with broad experience in manufacturing and service industries. During the year he became Executive Chairman of Diploma PLC having previously been Non-Executive Chairman. He was previously Senior Non-Executive Director of Mondi plc, Rotork plc and Ceres Power Holdings plc and Chairman of the Audit Committee of Hunting plc. He was Group Finance Director of Tate & Lyle plc from 2006 to 2008 and prior to that Group Finance Director of Kidde plc from its demerger from Williams plc in 2000 until its acquisition by United Technologies in 2005. John was a member of the UK Financial Reporting Review Panel for six years until April 2015. He holds an MBA from Kingston University and is a Chartered Certified Accountant.

Committee membership:

Chairman of the Nomination Committee and member of the Remuneration and Audit Committees.



Ben Stocks

Group Chief Executive

Appointed to the Board in February 1998.

Experience and external appointments:

Ben was previously Managing Director of the Speciality Packaging Division of Carnaud Metal Box. He holds an MBA from INSEAD.

Committee membership:

None.



Chris Tyler

Group Finance Director

Appointed to the Board in September 2004.

Experience and external appointments:

Chris had previously held a number of senior financial positions at Cable & Wireless, latterly as Chief Financial Officer of Cable & Wireless in the Caribbean. He is a Chartered Accountant. He was a Non-Executive Director of Plant Impact plc until March 2018.

Committee membership:

Group Company Secretary and Pension Scheme Trustee.



Paul Dean

Senior Non-Executive Director

A N R

Appointed to the Board in August 2012.

Experience and external appointments:

Paul is a Non-Executive Director and Chair of the Audit Committee of Wincanton plc, Focusrite plc and Polypipe plc, where he is also the Senior Independent Director. He was Finance Director of Ultra Electronics plc from 2009 to 2013 having previously been Finance Director of Foseco from 2001. From 1989 to 2001, Paul held a number of senior finance roles in Burmah Castrol plc. He is a Chartered Management Accountant.

Committee membership:

Senior Independent Non-Executive Director, Chairman of the Audit Committee and member of the Remuneration and Nomination Committees.



Sally Martin

Non-Executive Director

A N R

Appointed to the Board in October 2016.

Experience and external appointments:

Sally is Supply and Trading Operations Manager for Europe & Africa in the Shell International Trading and Shipping Company Limited. In a thirty-year career with Shell, Sally has built a strong track record in strategy; M&A; international business development; and engineering and operations. She is a member of the Chartered Institute of Electrical Engineers.

Committee membership:

Chairman of the Remuneration Committee and member of the Audit and Nomination Committees.

Composition of the Board

Executive and Non-Executive Directors



● Executive Directors
● Non-Executive Directors
● Non-Executive Chairman

Non-Executive Tenure



● 0 – 3 years
● 6 – 9 years

Key to Board Committee Membership

- A Audit Committee
- N Nomination Committee
- R Remuneration Committee
- Blue background denotes Committee Chairman

Chairman's introduction to governance

Dear shareholder

The Board is committed to maintaining high standards of corporate governance and ensuring values and behaviours are consistent across the business. The Board expects steady and continuous improvement in the Group's governance procedures.

In the Governance section of this report the Board sets out the information, policies and procedures adopted by the Group to ensure compliance with the relevant governance codes and financial law. The Governance section includes the Directors' Report, the Corporate Governance Report, the Report of the Audit Committee and the Remuneration Report and Remuneration Policy.

The Board

The Board consists of three Non-Executive Directors and two Executive Directors. The Board provides strategic leadership and guidance with the aim of allowing the Executive team to develop the business profitably within the framework of risk management and compliance.

The Board has established three Committees to advise the Board:

- The Audit Committee advises the Board on matters relating to internal controls and financial reporting of the Group.
- The Remuneration Committee determines and recommends the framework and policy for the remuneration of the Executive Directors.
- The Nomination Committee provides a process and procedure for the appointment of new Directors.

Each Committee comprises all of the Non-Executive Directors.

Compliance with the Code

The Board complied with all aspects of the UK Corporate Governance code throughout the year ended 30 November 2018, with the exception of:

- Fixed terms of employment for Non-Executive Directors. However, all of the Directors offer themselves for re-election at each Annual General Meeting.

Developments in 2018

In 2018 the Group has:

- Changed Chairman. Charles Matthews retired from the Board on 17 April 2018 and I took over the Chairmanship.
- Continued to refine its approach to the management of financial risk and internal controls. We have introduced additional executive review processes in each business unit particularly focused on capital expenditure and procurement.
- Implemented a revised Remuneration policy and introduced an updated long term incentive plan, which were approved by shareholders at the AGM on 17 April 2018.
- We have begun our preparations for the implementation of the new Corporate Governance Code, which will apply to the Group for the first time from 1 December 2019.

John Nicholas

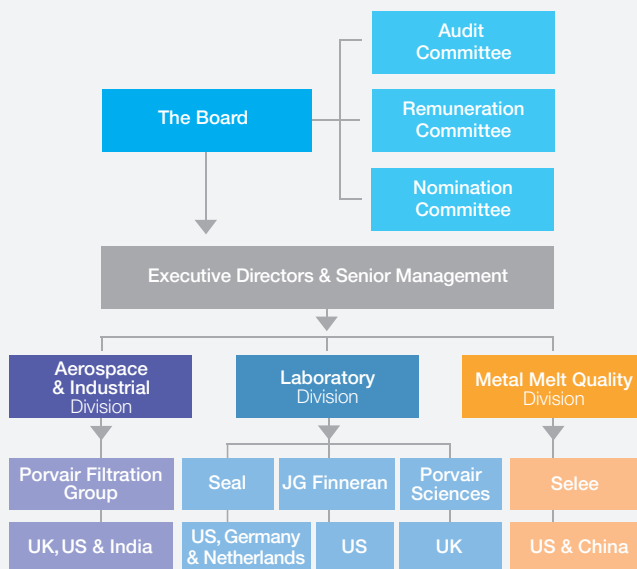
Chairman
25 January 2019

Porvair's governance structure

Good governance continues to provide the framework for effective delivery of our strategy.

The Board is committed to maintaining very high standards of corporate governance and ensuring values and behaviours are consistent across the business.

The Board provides strategic leadership and guidance with the aim of allowing the Executive team to develop the business profitably within the framework of risk management and compliance.



Our Code Principles – how they are applied

- **Leadership**
Continued focus on strategy and its execution.
- **Effectiveness**
A strong, open and effective Board.
- **Accountability**
Close scrutiny of risks and controls.
- **Remuneration**
Prudent oversight of Executive remuneration.
- **Relations with shareholders**
Open engagement with shareholders.

Directors' report

The Directors are pleased to present their Annual Report and the audited accounts of the Group for the year ended 30 November 2018.

The Company

Porvair plc is a public limited company incorporated in England and Wales and domiciled in the UK with a listing on the London Stock Exchange under the symbol PRV. The address of its registered office is 7 Regis Place, Bergen Way, King's Lynn, Norfolk PE30 2JN.

Business review

The business review is covered in the Strategic report. The Group's strategy, objectives, key performance indicators, likely future developments and risks and uncertainties are discussed throughout the report.

Dividends

An interim dividend of 1.6 pence per share (2017: 1.5 pence per share) was paid on 31 August 2018. The Directors recommend the payment of a final dividend of 3.0 pence per share (2017: 2.7 pence per share) on 7 June 2019 to shareholders on the register on 3 May 2019; the ex-dividend date is 2 May 2019. This makes a total dividend for the year of 4.6 pence per share (2017: 4.2 pence per share).

Directors and their interests

The names and biographical details of the Directors are set out on page 40. Charles Matthews retired immediately following the Annual General Meeting on 17 April 2018. All the other Directors served throughout the year. In accordance with best practice, it is the Board's policy that all Directors, who continue to serve, should offer themselves for re-election each year.

The appointment and replacement of Directors is governed by the Articles, the Companies Act 2006, the UK Corporate Governance Code and related regulation and legislation applying to UK listed companies. The Articles require there to be a minimum of three Directors (and permit a maximum of 15) and provide that the business of the Company shall be managed by the Board of Directors which may exercise all powers of the Company. The Board of Directors may make such arrangements as they see fit to delegate those powers except that the Board retains specific authority over the matters reserved for the Board, which are summarised in the Board of Directors section in the Corporate governance report on page 45.

During the year, and up to the date of this report, the Group maintained insurance providing liability cover for its Directors.

Details of all the beneficial and non-beneficial interests of the Directors in the shares of the Company, share options and service contracts are set out in the Remuneration report on pages 50 to 65. None of the Directors had a material interest in any contract of significance in relation to the Company or its subsidiaries during the year.

There are no agreements between the Company and its Directors or employees that provide for compensation for loss of office or employment in the event of a takeover of the Company.

The Company has in place procedures to deal with conflicts of interest. The Company follows the guidance on conflicts of interest issued by the Association of General Counsel and Company Secretaries of the FTSE.

Research and development

The Group continues to undertake a research and development programme with the objective of identifying and developing new materials and products which have the potential to contribute to the growth of the Group. During the year £4.0 million (2017: £3.9 million), of development expenditure was written off to the income statement and £0.1 million (2017: £nil) was capitalised. The expenditure is of a development nature and is largely undertaken in-house rather than by third parties.

Greenhouse gas emissions

The disclosure of the Group's greenhouse gas emissions is given in the Corporate and social responsibility report on page 38, which forms part of this report and is incorporated into it by cross-reference.

Share capital

The Company has one class of ordinary share capital which carries no right to fixed income. All of the Company's shares in issue are fully paid and each share carries the right to vote at general meetings of the Company. During the year, the Company issued 202,424 shares to satisfy the exercise of share options.

Further details of the share capital of the Company are given in note 22 to the financial statements.

There are no specific restrictions on the size of a holding in the Company nor on the transfer of shares, which are both governed by the provisions of the Articles and prevailing regulation and legislation governing UK listed companies. The Directors are not aware of any agreements between holders of the Company's shares that may result in restrictions on voting rights. No person has special rights of control over the Company's share capital.

Each year the Board seeks shareholder approval to renew the Board's authority to allot relevant securities and to purchase its own shares.

Contracts

The Company is a party to a number of agreements that take effect, alter or terminate upon a change of control of the Company such as commercial contracts, banking agreements, property lease arrangements and employee share plans.

Substantial shareholders

As at 25 January 2019, the Company has been notified of the following substantial shareholdings comprising 3% or more of the issued share capital of the Company.

	Ordinary shares (number)	Percentage (%)
GGG Spa	7,729,427	16.9
Vind LV AS	5,129,000	11.2
Lion Trust PLC	3,079,786	6.7
Aberdeen Standard Life Investments	2,793,880	6.1
Impax Asset Management	1,904,102	4.2
Financiere de L'Echiquier	1,846,908	4.0
AXA Investment Managers	1,435,051	3.1

Corporate governance

The Company's statement on corporate governance can be found in the Corporate governance report on pages 45 to 46 of these financial statements. The Corporate governance report forms part of this Directors' report and is incorporated into it by cross-reference.

Employment policies

The Group's employment policies are described in the Corporate and social responsibility report on page 35, which forms part of this report and is incorporated into it by cross-reference.

Financial risk management

The Group's operations expose it to a variety of financial risks that include the effects of price risk, foreign exchange risk, credit risk, liquidity risk and interest rate cash flow risk. The Group has in place risk management procedures that seek to limit the adverse effects on the financial performance of the Group of these financial risks.

Given the size of the Group, the Directors have not delegated the responsibility of monitoring financial risk management to a sub-committee of the Board. The policies set by the Board of Directors are implemented by the Company's finance department, which has a policy and procedures manual that sets out specific guidelines to manage interest rate risk and credit risk and circumstances where it would be appropriate to use financial instruments to manage these.

Further details on the specific risks related to financial management and their mitigation are given on page 32.

Acquisitions

On 7 December 2017 the Group, through its subsidiary Seal Analytical Limited, purchased 100% of the share capital of Rohasys B.V. ("Rohasys") to increase the Group's offering in the laboratory market. The trade is the manufacture of robotic sample handling systems and is based in the Netherlands. The total maximum consideration is €3,548,000 (£3,118,000); €896,000 (£787,000) was paid in cash on the acquisition date, together with €502,000 (£441,000) to settle the outstanding loan. The balance is contingent on financial performance and due for payment in cash in instalments until 2021. The first €250,000 instalment was paid in March 2018.

On 28 February 2018 the Group, through its subsidiary Porvair Filtration Group Inc., purchased the net assets of Keystone Filter ("Keystone"), a division of CECO Environmental Corp. The trade is the design and manufacture of a range of filter cartridges and housings for the food and beverage, drinking water, and chemical process markets and is based in the USA. The total consideration is US\$7,190,000 (£5,219,000); US\$5,290,000 (£3,840,000) of this was paid in cash on 28 February 2018, with the balance paid in August 2018.

Going concern

The Directors statement on going concern is incorporated in its review of viability and going concern on page 33.

Annual General Meeting

The Annual General Meeting of the Company is to be held on Thursday 11 April 2019. The notice for this meeting and proxy forms have been sent to shareholders separately.

Statement of Directors' responsibilities

The Directors are responsible for preparing the Annual Report, the Directors' Remuneration report and the financial statements in accordance with applicable law and regulations.

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 the Parent Company financial statements in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards and applicable law), including Financial Reporting Standard 101, Reduced Disclosure Framework (FRS 101). 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 the Company and of the profit or loss of the Group for that period. In preparing these financial statements, the Directors are required to:

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

Directors' report continued

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions and disclose with reasonable accuracy at any time the financial position of the Company and the Group 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. They are also responsible for safeguarding the assets of the Company and the Group and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

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.

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

Each of the Directors, whose names and functions are listed on page 40, confirms that, to the best of their knowledge:

- the Group financial statements, which have been prepared in accordance with IFRSs as adopted by the EU, give a true and fair view of the assets, liabilities, financial position and profit of the Group; and
- the Strategic report and the Directors' report include a fair review of the development and performance of the business and the position of the Group, together with a description of the principal risks and uncertainties that it faces.

Directors' responsibility for provision of information to the auditor

So far as each Director is aware, there is no relevant audit information of which the Company's auditor is unaware; and each Director has 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.

This confirmation is given and should be interpreted in accordance with the provisions of s418 of the Companies Act 2006.

Independent auditor

Deloitte LLP has indicated its willingness to continue in office as the Company's auditor. A resolution concerning its appointment will be put to the Annual General Meeting.

By order of the Board

Chris Tyler

Company Secretary
25 January 2019

Corporate governance

Compliance

The following sets out the main principles of good governance in the 2016 UK Corporate Governance Code that have been followed by the Board and how those principles have been applied. The Directors are of the opinion that the Company has complied with the provisions of the UK Corporate Governance Code (which is publicly available at www.frc.org) throughout the year except:

- The Non-Executive Directors do not have a specific period for their appointment.

Role of the Board

The Group is directed and controlled by the Board. It provides strategic leadership and support with the aim of developing the business profitably, whilst at the same time assessing and managing the associated risks. The Board ensures that the financial management, controls and resources are in place to enable the business to meet its objectives. The Directors take collective responsibility for the Group's performance.

The Board has a formal schedule for reviewing the Group's operating performance and has other specific responsibilities reserved to it, which include:

- Approval of the published financial results and dividends;
- Appointments to the Board and other Board committees;
- Approval of the strategic direction of the business;
- Approval of expenditure over certain limits;
- Approval for acquisitions and disposals;
- Approval of treasury policy and significant new financing; and
- Approval of the funding policies of the defined benefit pension scheme.

The Chairman is responsible for leadership of the Board. The responsibilities of the Chairman are set out clearly in a written document approved by the Board.

The Executive Directors manage the day to day operations of the business within the framework set out by the Board. Outside the formal schedule of Board meetings the Chairman and Non-Executive Directors make themselves available for consultation with the Executive team as necessary.

All Directors have access to the advice and services of the Company Secretary, who is responsible to the Board for ensuring that Board procedures are complied with. The Company Secretary is responsible for advising the Board, through the Chairman, on all governance matters.

The appointment and removal of the Company Secretary is a matter for the Board as a whole.

The Board has a schedule of six pre-arranged meetings during the year. In addition, such other meetings as are required are arranged to deal with specific issues or transactions. During the year there was full attendance at all pre-arranged Board meetings.

The Board undertook a rigorous self assessment review during the year to consider its own performance. The procedures included individual interviews by the Chairman with each Director, review of an assessment form and discussion of the findings at a Board meeting. The Senior Independent Non-Executive Director maintains regular contact with the other Independent Non-Executive Directors and the Executive Directors, sufficient to monitor the performance of the Chairman. The Chairman, in consultation with the Executive Directors, monitors the performance of the Non-Executive Directors.

Board of Directors

The Board consists of five Directors; two Executive Directors and three Non-Executive Directors, including the Chairman. The Board is chaired by John Nicholas. Ben Stocks is the Group Chief Executive and Chris Tyler is the Group Finance Director. Paul Dean, Sally Martin and John Nicholas are Independent Non-Executive Directors. Paul Dean is the Senior Independent Non-Executive Director. Charles Matthews retired from the Board and as Chairman at the 17 April 2018 AGM.

The Directors' appointment and removal is a matter for the Board as a whole. The Senior Non-Executive Director is available for consultation with shareholders through the Company Secretary, by written submission. The Executive Directors and the Chairman have met with the Company's major shareholders and other potential investors on a regular basis and have reported to the Board on those meetings.

The Board considers the independence of each Non-Executive Director and assesses relationships and circumstances likely to affect each Director's judgement. The Board considers each Non-Executive Director to be independent of management.

The Non-Executive Directors' terms of appointment do not specify a specific period for their appointment and therefore the terms are not in compliance with provision B.2.3 of the UK Corporate Governance Code. However, in accordance with best practice all of the Directors offer themselves for re-election at each Annual General Meeting.

The Chairman has conducted interviews and assessments with each Director and the performance of the Executive Directors has been considered in detail by the Remuneration Committee. The Senior Non-Executive Director has reviewed the performance of the Chairman in consultation with the other Directors. The Chairman considers that, following the application of the Board's formal performance evaluation programme, each Director's performance continues to be effective and each Director has demonstrated commitment to their role.

On joining the Board a new Director receives appropriate induction including meeting with other Directors, visiting the Group's principal operations and meeting with senior management and the Group's principal advisers.

The Board has put in place a procedure by which any Director may take independent professional advice at the expense of the Company in furtherance of their duties as a Director of the Company.

The Company maintains Directors' and Officers' liability insurance.

Board Committees

Audit Committee

The Board has established an Audit Committee to review and advise the Board on matters relating to the internal controls and financial reporting of the Group.

The Report of the Audit Committee on pages 48 and 49 includes details of the Audit Committee's remit, composition, attendance, scope of work in the year and related judgements.

The Audit Committee's full terms of reference are available on the Group's website, www.porvair.com.

Corporate governance continued

Remuneration Committee

The Board has established a Remuneration Committee to review and advise the Board on matters relating to the Executive Directors' remuneration.

The Remuneration report on pages 50 to 65 includes details on remuneration policy, practices and the remuneration of the Directors.

The Remuneration Committee's full terms of reference are available on the Group's website, www.porvair.com.

Nomination Committee

The Board has established a Nomination Committee to provide a transparent process and procedure for the appointment of new Directors to the Board.

The Report of the Nomination Committee on page 47 includes details of the Nomination Committee's remit, composition, attendance and scope of work in the year.

The Nomination Committee's full terms of reference are available on the Group's website, www.porvair.com.

Takeover Directive

Disclosures relating to the Takeover Directive are included in the Directors' report (under "Share capital") on page 42.

Internal control

The Board has overall responsibility for ensuring that the Group maintains a system of internal controls and for reviewing its effectiveness. The system is not designed to eliminate the risk that the Group's objectives will not be achieved but to ensure that there is an ongoing process for identifying, evaluating and managing the significant risks. As with any such system, it can only provide reasonable, but not absolute, assurance against material misstatement or loss. The Board has reviewed the effectiveness of the process regularly throughout the year. The Group's key procedures are as follows:

Control environment – each operating business has its own management group which meets regularly to monitor operational matters. Each operating business is responsible for establishing its own system of internal controls and for ensuring compliance with those controls. The Managing Director of each operating business reports to the Group Chief Executive, and clearly defined lines of responsibility have been established within this organisational structure. The senior finance executive in each operation has a dual responsibility to report within their operation to the Managing Director and to the Group Finance Director. The Executive Directors visit all operations regularly to perform detailed reviews.

Risk management – operating business management have a clear responsibility for the identification of risks facing each operation, and for establishing procedures to investigate and monitor such risks. A review of each operation's risk management is included in the normal cycle of Executive Directors' reviews of the operations. The Board reviews a group register of risks and mitigation on a regular basis as part of its normal Board reporting. The Board also commissions independent reviews of the key risks facing the Group as appropriate. Full details of the Group's risk management processes are given in the section on Principal risks and uncertainties on page 27.

Information and control systems – provide management with regular and reliable management information. The Group has a comprehensive process of annual budgets, target setting, and detailed monthly reporting. The annual budget of each operating business and the consolidated Group budget are approved by the Board as part of its normal responsibilities. Each operation produces full monthly management accounts comprising a profit and loss account, cash flow statement, balance sheet and a forecast for the full year. These are consolidated at a Group level. The Executive management team review the performance with the operations' management. The Board receives copies of the monthly management accounts for each month and the performance of the Group is reviewed in detail at each Board meeting.

Monitoring system – the Board has established a framework of controls encompassing procedures applicable to all businesses that are subject to executive review. The Group operates a self-assessment process so that the operating businesses can quantify the extent of their compliance with control objectives. Each separate accounting entity completes an annual self assessment questionnaire which highlights areas where control improvements could be made. The results of these control questionnaires are reviewed with senior management and new controls are implemented as necessary.

The Group operates an internal audit cycle conducted by peer reviews by the Group's financial controllers or other suitably experienced employees. The scope of the reviews each year is agreed in advance with the Audit Committee and the formal reports on each review are considered by the Audit Committee. The Audit Committee considers the Group's internal audit arrangements to provide an acceptable level of review and to be appropriate for the current size of the business.

The Group has a formal whistleblowing procedure which gives employees the opportunity to escalate their concerns, ultimately to the Senior Non-Executive Director. There were no whistleblowing incidents in 2017 or 2018.

Consolidation process – full management accounts for each entity in the Group are consolidated each month and review and analysis is carried out on those results. These consolidated accounts form the basis of reports that are provided to Board members every month. Statutory consolidated results are prepared at each half year and full year and these are reconciled with the consolidated management accounts.

The Audit Committee and the Board have reviewed the effectiveness of the Group's internal controls for the period 1 December 2017 up to the date of approval of the Annual Report and Accounts and have addressed issues as they have been identified.

Chris Tyler

Company Secretary
25 January 2019

Report of the Nomination Committee

Governance

The Company's Nomination Committee provides a transparent process and procedure for the appointment of new Directors to the Board. The Nomination Committee comprises all of the Non-Executive Directors and is chaired by the Chairman of the Company. The Nomination Committee's responsibilities include:

- Identifying and nominating candidates to fill Board vacancies;
- Evaluating the balance of skills, diversity, knowledge and experience on the Board and the leadership needs of the organisation; and
- Succession planning.

The balance of skills, diversity, knowledge and experience, the leadership of the organisation and succession planning are considered by the Board as a whole at least annually.

When recruiting new Directors, the Committee seeks to include candidates for a specific vacancy, if appropriate, from the existing employees. An external search consultancy will generally be appointed to advise on all appointments to the Board. An initial list of candidates are interviewed by the Chairman and Chief Executive. Following selection by the Chairman and Chief Executive, a shortlist, generally, of no more than three candidates are then interviewed by the other Directors. Once a suitable candidate has been identified, the Chairman of the Committee recommends to the Board that the Company make a formal offer of employment to the candidate.

Boardroom diversity

Recruitment of Board candidates is conducted, and appointments made, on merit and suitability against objective selection criteria with consideration of, amongst other things, the benefits of diversity on the Board, including gender. The Board has not set a diversity quota. The Board encourages applications for roles being recruited from women subject to the selection criteria being met. The gender ratio of the Board was 17% female: 83% male up until the Annual General Meeting on 17 April 2018, since when it has been 20% female: 80% male.

2018 activities

The Nomination Committee did not meet during the year. The Group's leadership and succession planning was considered in a meeting of the full Board.

Charles Matthews retired from the Board at the AGM on 17 April 2018. John Nicholas assumed the Chairmanship from the end of that meeting.

All Directors are required to submit themselves for re-election every year at the AGM.

John Nicholas

Chairman of the Nomination Committee
25 January 2019

Report of the Audit Committee

Statement by the Chairman of the Audit Committee

The Committee's role is to assist the Board by reviewing: the integrity of the Group's financial reporting; the quality of the external and internal audit review processes; the appropriateness of the Group's internal controls; and compliance with a range of financial, governance and other compliance issues.

The Committee has put a particular emphasis in the year on:

- Further refinements of the programme of the Group's internal audit reviews to extend the focus on reviewing the Group's risk management procedures to other specific areas of risk within the Group's accounting. There was a particular focus on the authorisation of capital expenditure and the review of past capital expenditure projects.
- The fair value accounting adopted for the acquisition of Rohasys B.V. and Keystone Filter with particular regard to the split between goodwill and intangible assets.
- Reporting on the risks related to and progress of the Group's long term projects.
- The basis adopted for the Group's provision for tax and the related provision for uncertain tax liabilities.
- Considering the most appropriate format for the Group's consolidated income statement and related notes.
- The scope of the audit performed by Deloitte LLP for the year ended 30 November 2018.
- Progress towards the implementation of IFRS15 – Revenue from Contracts with Customers – which will be adopted by the Group for the first time in the accounts for the year ended 30 November 2019.

Paul Dean

Chairman of the Audit Committee
25 January 2019

Report of the Audit Committee

The Audit Committee has an agreed timetable of meetings with agendas. Representatives of the Group's auditor, Deloitte LLP, attend meetings by invitation. Other employees of the Company may be invited to attend meetings as and when required.

The Audit Committee currently comprises all the Independent Non-Executive Directors of the Company. The Chairman of the Audit Committee is Paul Dean. The Committee includes John Nicholas, the Chairman of the Company. The Board has designated Paul Dean and John Nicholas as the members of the Committee with recent and relevant financial experience. All members of the Committee are deemed to have the necessary ability and experience to understand the financial statements. The Committee as a whole has competence relevant to the sector in which the Group operates.

The Audit Committee met three times during the year. There was full attendance by the members. Two of those meetings were held prior to the Board meetings to approve the announcement of the Group's full year and interim announcements to consider the financial reporting judgements made by the management. Its deliberations are informed by accounting papers and financial reports prepared by management and reviews prepared by the Group's auditor.

The particular areas of focus for the Committee in reviewing the judgements underlying the financial statements this year are:

Accounting for large contracts

The Group has five long term contracts in the Aerospace & Industrial division. Two of which were completed in the year. Although amounts of revenue recognised in the year were a small proportion of overall revenue, there are material amounts of deferred revenue recognised on the balance sheet.

Where the outcome of a long term contract can be estimated reliably, revenue is recognised in line with the percentage of completion method; otherwise, revenue is recognised only to the extent of recoverable contract costs incurred. There is a large degree of judgement and estimation involved in predicting the quantum and timing of future costs to complete, and expected warranty costs, which drives the accounting for the long term contracts and their associated revenue in line with IAS 11 and the Group's accounting policy.

The accounting policy and critical accounting judgements are disclosed in note 1 to the financial statements. Note 17 details relevant information with regard to the construction contracts.

The Board receives monthly updates on the progress of these contracts, which highlight technical, performance and commissioning challenges arising on each project. In addition, the Committee has reviewed reports from management detailing the future potential risks in these contracts and the estimates that have been made for the resulting future costs expected. The Committee considers the future costs provided represent a reasonable assessment of the potential costs to be incurred.

Tax and provision for uncertain tax liabilities

Porvair plc is a multi-national Group with locations across many global jurisdictions. The Group is affected significantly by tax legislation in each jurisdiction in which it trades. Some of these locations require the Group to recognise tax provisions for uncertain future liabilities.

The Group's largest trading jurisdiction is the US. The Group holds a FIN48 reserve for uncertain tax liabilities in its US holding company, Porvair Corporation.

The Committee has reviewed reports from the management and from the Group's tax advisers on the provisions included in the accounts for taxation and the status of tax returns to the relevant authorities. The Committee has reviewed the basis for the provision for uncertain tax liabilities in the US and is satisfied that the provision has been carefully and consistently prepared.

Other areas of focus

The Committee also reported to the Board that it considered that, taken as a whole, the 2018 Annual Report was fair, balanced and understandable and included the necessary information to assess the performance, business model and strategy of the Group. The Committee reviewed papers specifically relating to pension accounting, the carrying value of goodwill and intangible assets, and the disclosure of alternative performance measures on the face of the income statement and in note 2.

In addition to its work reviewing the Group's financial statements, the Committee has:

- reviewed announcements relating to the financial performance and reviewed significant financial reporting judgements contained therein;
- the Committee reviewed the work carried out by BDO LLP to assist in the valuation of the assets arising on the acquisition of Rohasys B.V. and Keystone Filter. The increased focus on intangible assets led the committee to recommend that the format of the consolidated income statement should be amended to show alternative profit measures that would allow a reader of the accounts better to understand the impact of the acquisition on the performance of the business.
- monitored the Group's internal financial controls and the Group's internal control and risk management systems and ensured that these are properly reviewed by the Group's management in line with the procedures set out on page 46;
- reviewed the scope of the internal audit work done in assessing the operating companies' internal controls and procedures. The internal audit work is undertaken mainly through a system of peer reviews by the Group's finance function. For the first time this year the internal audit work was enhanced by the use of Group specialists from outside the finance function. The Committee considers the Group to be too small to justify a dedicated internal audit function, however, this year the Committee engaged PricewaterhouseCoopers LLP to provide a local team to review the Group's operation in China.
- reviewed the Group's preparations for the introduction of IFRS15 including a report from PricewaterhouseCoopers LLP setting out the main adjustments that the Group would require. The Group will apply IFRS15 for the first time in the year ending 30 November 2019 and a summary of the impact on the Group is given in note 1 of the accounts on page 82.
- agreed the scope, remuneration and terms of engagement of the external auditor;
- monitored the external auditor's effectiveness, independence and objectivity. The Committee, in conjunction with management, considered the robustness of the audit process; the quality and timeliness of its delivery; the quality of the auditor's staff and reporting; and its value for money;
- reviewed arrangements by which staff of the Group may raise concerns about possible improprieties in matters of financial reporting or other matters;
- considered its own effectiveness by means of a professionally prepared checklist and made recommendations to the Board for improvements where necessary; and
- reported to the Board on how it has discharged its responsibilities.

The Audit Committee has set a policy which is intended to maintain the independence and objectivity of the Company's auditor when acting as auditor of the Group accounts. The policy governs the provision of audit and non-audit services provided by the auditor and limits the fees and scope of the services that may be performed by the Group's auditor. In summary, the auditors are limited to fees of no more than 70% of the average fees agreed for the audit in the prior three years and may only undertake:

- reporting required by law or regulation to be provided by the auditor;
- reviews of the interim financial information;
- reporting on regulatory returns;
- reporting on government grants;
- reporting on internal financial controls when required by law or regulation;
- extended audit work that is authorised by the Audit Committee performed on financial information and/or financial controls where this work is integrated with the audit work and is performed on the same principal terms and conditions;
- reports required by competent authorities/regulators supervising the Group where the authority/regulator has either specified the auditor or identified to the Group that the auditor would be an appropriate choice of service provider; and
- audit or other services provided as auditor or reporting accountant that an objective, reasonable and informed third party would conclude that the understanding of the Group obtained by the auditor is relevant to the service and the nature of the service provided would not compromise independence.

All non-audit services in excess of £20,000 provided by the auditor must be approved by the Committee.

The fees paid to the auditor for audit services, audit related services and other non-audit services are set out in note 4 of the consolidated financial statements.

The Committee has carefully monitored the work undertaken by the auditor, Deloitte LLP, in the year and is satisfied by the quality and independence of their work. Deloitte LLP have not provided any other services to the Group in the year.

The Audit Committee is authorised to engage the services of external advisers, as it deems necessary, at the Company's expense in order to carry out its function.

Remuneration report

Annual Statement by the Chairman of the Remuneration Committee ("the Committee")

On behalf of the Board, I am pleased to present our Remuneration report for 2018. In line with the Government reporting regulations on Directors' pay, introduced in October 2013, this report has been split into three sections:

- A statement by the Chairman of the Committee;
- An annual report on remuneration – that discloses how the current remuneration policy has been implemented during the year ended 30 November 2018 and includes a summary of the plans in place for 2019; and
- A policy statement – that sets out the components of the Company's remuneration policy, which was subject to shareholder approval at the Company's 2018 Annual General Meeting.

We will seek your support for the annual report on remuneration, in the form of an advisory vote at the AGM in April 2019. The Remuneration Policy included in this report was subject to approval by the shareholders at the Annual General Meeting in April 2018 and will remain in force until a new policy is approved in a general meeting no later than April 2021.

We would like to thank shareholders for their support of the 2017 Remuneration report. At the AGM on 17 April 2018, the advisory vote on the 2017 Directors' remuneration report received 96% of the votes in favour of the resolution and the Remuneration Policy received 98% of the votes in favour of the resolution.

The Committee's remit is to set policies and levels of remuneration to encourage actions by management that are in the long term interests of the Company and its shareholders. The Remuneration Committee met three times during the year and was fully attended by all of its members.

Porvair's strategy, as stated in the section "Strategy and business model" of the Annual Report, is to generate shareholder value through the development of specialist filtration and environmental technology businesses, both organically and by acquisition. Success of the strategy is measured by growth and cash generated from operations over the short and long term. The annual bonus is based on cash generated from operations as well as achievement of strategic objectives. Growth, measured by growth in earnings per share, is rewarded through the long term incentive award.

In the past year the cash generation performance of the Group has been good. £15.6 million of adjusted operating cash was generated in the year, exceeding the budget by £2.1 million. This resulted in full payout of the 50% of salary for the financial component of the annual bonus being awarded. Progress was made towards some of the agreed strategic objectives, resulting in 12% of the available 25% of base salary for the non-financial component of the bonus being awarded.

In 2015 the Committee set a target to achieve 100% vesting of the long term incentive award, that was granted in January 2016 and matures in January 2019, of earnings per share of 21.1 pence in the year ended 30 November 2018; this required growth in earnings per share over the three year period of 36%. Earnings per share in the year ended 30 November 2018 are 22.1 pence, a growth of 43% over the three year period. This growth allows 100% of the long term incentive award maturing in January 2019 to vest.

The Remuneration Committee aims to provide remuneration packages that:

- are competitive, but not excessive;
- are designed to attract, retain and motivate managers of high quality to deliver growth for the business;
- are aligned with shareholders' interests;
- include an element of the potential reward linked to personal performance; and
- encourage the Executive Directors to accumulate shares in the Company.

For 2019 the Committee has decided that the bonus should continue to have a maximum of 75% with 50% available for achievement of financial objectives and 25% available for progress on strategic objectives.

Sally Martin

Chairman of the Remuneration Committee
25 January 2019

ANNUAL REPORT ON REMUNERATION

This report complies with the UK Corporate Governance Code published in April 2016 (the “UK Corporate Governance Code”) and other relevant regulation, including the remuneration reporting regulations (The Large and Medium-sized Companies and Groups (Accounts and Reports) (Amendment) Regulations 2013) (the “Remuneration Regulations”). It sets out the Group’s remuneration policy and details of Directors’ remuneration. A resolution to approve this report will be proposed at the Annual General Meeting in April 2019.

The Committee

The Remuneration Committee recommends to the Board the framework or broad policy for the remuneration and long term incentive arrangements of the Company’s Executive Directors. The Committee also has an advisory role in relation to major changes in employee benefit structures throughout the Company and the Group. The Committee uses external published benchmark data to guide its deliberations. The remuneration of the Non-Executive Directors, including the Chairman, is set by the Executive Directors.

The members of the Remuneration Committee are drawn solely from the independent Non-Executive Directors. The Remuneration Committee currently comprises all of the independent Non-Executive Directors of the Company, Charles Matthews resigned from the Committee on 17 April 2018. To be quorate at least two members of the Committee must attend.

Sally Martin is the Chairman of the Committee. The Group Chief Executive may be invited to attend and speak at meetings of the Remuneration Committee, but does not participate in any matter which impacts upon his own remuneration arrangements. The Committee met three times during the year and was fully attended by all of its members.

INFORMATION REQUIRED TO BE AUDITED

Summary of Executive Directors’ remuneration packages

The Executive Directors’ remuneration packages consist of: a base salary; a discretionary annual cash bonus earned for the achievement of financial and non-financial objectives; the grant of share options and long term incentives with three year financial performance targets; and the provision of other benefits comprising pension benefits and cash allowance in lieu of pension benefits, a cash allowance in lieu of a company car, medical insurance and wellness benefits, life insurance, and permanent health insurance.

Executive Directors’ remuneration

The following table shows the total remuneration of the Executive Directors for the year:

	Basic salary and fees £'000	Taxable benefits £'000	Pension £'000	Annual bonus £'000	Long term incentives £'000	Other £'000	Total 2018 £'000
<i>Executive Directors</i>							
B D W Stocks	305	33	97	189	454	–	1,078
C P Tyler	214	22	45	133	318	–	732
	Basic salary and fees £'000	Taxable benefits £'000	Pension £'000	Annual bonus £'000	Long term incentives £'000	Other £'000	Total 2017 £'000
<i>Executive Directors</i>							
B D W Stocks	297	32	76	193	423	8	1,029
C P Tyler	209	24	44	136	294	4	711

In 2018 the Executive Directors incurred PAYE tax and national insurance contributions amounting to £774,000 (2017: £870,000) including amounts payable on the exercise of Long Term Incentive share options. On 1 December 2018 Ben Stocks and Chris Tyler were awarded an increase to their basic salary of 3% (2017: 2.5%). This salary rise was in line with the general salary rise awarded to all other employees.

Chris Tyler was a Non-Executive Director of Plant Impact plc until 27 March 2018. He received £15,000 (2017: £26,000) in the year in fees, which he retained.

Benefits

Benefits for the Executive Directors comprised: a cash allowance in lieu of a company car; medical insurance and wellness benefits; life assurance; and permanent health insurance. Life assurance benefits covering a lump sum of four times salary on death in service and a 20% of salary spouse’s pension were provided for Ben Stocks through the Porvair Pension Plan. Life assurance benefits of eight times salary on death in service were provided for Chris Tyler through an excepted life trust. The Executive Directors are covered by the Group’s permanent health insurance scheme.

Pension entitlements

The Porvair plc Pension and Death Benefit Plan (“the Plan”) is a contributory defined benefit scheme, which is now closed to new employees. Pension benefits from the Plan were subject to the HMRC earnings cap and the Group has continued to maintain an earnings cap since the HMRC limits were removed in April 2006.

Remuneration report continued

Pension benefits up to the capped limit of £145,440 of salary until 31 March 2018 and £150,600 thereafter were provided in the period for Ben Stocks by the Plan. Ben Stocks is entitled to the same pension benefits from the Plan as all other members. The Plan has a normal retirement age of 65. Only basic salary is pensionable. Ben Stocks was aged 56 on 30 November 2018. In the event that he retires early he may, at the discretion of the Trustees of the Plan, apply to draw a reduced pension. There is no actuarial benefit to the individual to retiring early.

Ben Stocks also received 21% additional salary on the difference between his full salary and the capped limit in lieu of pension benefits. This additional salary is not included in calculations for annual bonus or Long Term Share Plan awards.

Chris Tyler received 21% additional salary in lieu of pension benefits. This additional salary is not included in calculations for annual bonus or Long Term Share Plan awards.

Annual bonus

Bonus payments to Executive Directors are made at the discretion of the Committee for achievement of Group financial performance targets and strategic objectives. In 2017 and 2018, awards were capped at 75% of base salary. Up to 50% related to achievement of financial performance targets and up to 25% related to achievement of strategic objectives. Bonuses are not pensionable but may be paid directly into the Executive Directors' pension schemes if requested.

The table below shows the targets set for 2018:

Target	Target at operating plan level	Target for maximum payout	% salary awarded for operating plan achievement	% salary awarded for maximum achievement	Achieved	% of salary awarded
Adjusted operating cash flow	£13.5m	£15.0m	25%	50%	£15.6m	50%
Strategic: Improved performance for Metal Melt Quality in China; and developing the business through acquisition.	N/A	N/A	10%	25%	See below	12%

The adjusted operating cash flow can be reconciled to the cash generated from operations. It is a measure that is impacted by Group profitability and control of working capital. The measure used for bonus purposes is based on the management accounts for the year which are translated at constant exchange rates. This ensures that the cash flows in foreign subsidiaries are based on the same exchange rates as the target.

In 2018 the Committee noted that, although losses had increased, significant work had been accomplished towards improving the operations of the Metal Melt Quality plant in China and that two acquisitions had been made and integrated in the year. The Committee concluded that a 12% of salary award should be made.

For 2019 awards will be capped at 75% of base salary. Up to 50% may be paid on achievement of financial performance targets, based on adjusted operating cash flow and up to 25% on achievement of strategic objectives. The targets for plan and maximum adjusted operating cash flow are £16.4 million and £18.4 million respectively. Non financial targets will subjectively be based on the performance of the Metal Melt Quality China plant, the commissioning and spares orders for gasification plants and further acquisitions.

The Committee considers these targets to be consistent with driving improved performance from the Group.

Vesting of Long Term Share Plan

2017 vesting

Options granted in 2015 under the 2008 scheme could only be exercised in full if the Committee was satisfied that in the financial year ended 30 November 2017 ('FY2017'), the Group had achieved EPS of at least 20.0 pence. 30% of the award vested if the Group had achieved EPS of 17.0 pence in FY2017. 50% of the award vested if the Group had achieved EPS of 18.0 pence in FY2017. A sliding scale operated if the EPS was between 17.0 pence and 18.0 pence and between 18.0 pence and 20.0 pence. No shares vested if the EPS in FY2017 was below 17.0 pence. 87.5% of these options vested as a result of the performance in the year. In the table of Executive Directors' remuneration these options were valued at 476 pence per share. The EPS used to vest these shares was 19.5 pence per share.

2018 vesting

Options granted in 2016 under the 2008 scheme could only be exercised in full if the Committee was satisfied that in the financial year ended 30 November 2018 ('FY2018'), the Group had achieved EPS of at least 21.1 pence. 30% of the award vested if the Group has achieved EPS of 17.5 pence in FY2018. 50% of the award vested if the Group had achieved EPS of 18.2 pence in FY2018. A sliding scale operated if the EPS was between 17.5 pence and 18.2 pence and between 18.2 pence and 21.1 pence. No shares vested if the EPS in FY2018 was below 17.5 pence. 100% of these options vested as a result of the performance in 2018. In the table of Executive Directors' remuneration these options were valued at 471 pence per share.

Share options and long term incentive plan shares

Awards of share options and long term incentive plan shares are at the discretion of the Committee.

The Company operates a discretionary share option plan, which was updated in 2018. The LTSP 2008 scheme may not grant any awards after 8 April 2018. A resolution put to the AGM on 17 April 2018 introduced a new LTSP ('LTSP 2018') on substantially the same terms as the old scheme. The schemes provide nominally priced options or share awards with a ten year life subject to vesting conditions after three years based on performance conditions set by the Committee. The principal differences between LTSP 2008 and the LTSP 2018 are:

- Malus provisions are embedded in the LTSP 2018 scheme documentation.
- Clawback provisions are available at the discretion of the Committee.
- A cap of 250% of base salary on the discretion available to the Committee to make awards in exceptional circumstances. LTSP 2008 had an uncapped discretion.
- The Committee may make normal awards up to 150% of salary per annum to an Executive.
- LTSP 2018 makes provision for the Committee to introduce a holding period of up to two years after the end of the vesting period.

The Company also periodically offers invitations to all UK permanent employees to join Save As You Earn ('SAYE') schemes. Currently there are three year and five year schemes running following invitations in October 2014, October 2016 and October 2017.

The maximum number of shares that may be issued under the Company's option schemes may not exceed 10% of the Company's issued share capital in any 10 year period.

The market price of the Company's ordinary shares at 30 November 2018 was 425 pence per share (2017: 465 pence per share).

The range of market prices during the year was 550 pence to 425 pence.

Directors' holdings in shares and share options

In awarding long term incentive shares to the Executive Directors, the Remuneration Committee encourages the Executive Directors to build up a holding of shares in the Company. The Committee prefers Executive Directors to hold the equivalent of at least the value of one year's base salary in Porvair shares. The Executive Directors have exceeded this guideline since April 2013.

The beneficial interests at 30 November 2018 and 30 November 2017 of the Directors and their connected persons in the ordinary shares of the Company are shown below. There have been no changes in those interests up to the date of this report.

	2018		2017	
	Ordinary shares (number)	Share options (number)	Ordinary shares (number)	Share options (number)
<i>Executive Directors</i>				
B D W Stocks	739,420	244,737	698,078	269,687
C P Tyler	479,311	176,680	452,186	193,605
<i>Non-Executive Directors</i>				
P Dean	5,000	—	5,000	—
S J Martin	—	—	—	—
C L Matthews (resigned on 17 April 2018)	N/A	N/A	30,000	—
J E Nicholas	7,500	—	—	—

Remuneration report continued

Details of the share options held by the Executive Directors at the end of the year, which have been granted under Porvair Share Option Schemes, are as follows:

	At 30 November 2017 (number)	Granted in the year (number)	Lapsed in the year (number)	Exercised in the year (number)	At 30 November 2018 (number)	Exercise price	Grant date	Exercisable from	Expiry date
B D W Stocks									
Vested									
2008	89,250	–	–	(89,250)	–	2p	28/01/2015	28/01/2018	28/01/2025
2008	96,700	–	–	–	96,700	2p	27/01/2016	27/01/2019	27/01/2026
Unvested									
2008	76,200	–	–	–	76,200	2p	31/01/2017	31/01/2020	31/01/2027
SAYE	7,537	–	–	–	7,537	398p	01/10/2017	01/10/2022	01/04/2023
2008	–	64,300	–	–	64,300	2p	01/02/2018	01/02/2021	01/02/2028
	269,687	64,300	–	(89,250)	244,737				
C P Tyler									
Vested									
2008	62,125	–	–	(62,125)	–	2p	28/01/2015	28/01/2018	28/01/2025
2008	67,900	–	–	–	67,900	2p	27/01/2016	27/01/2019	27/01/2026
Unvested									
SAYE	6,312	–	–	–	6,312	240p	01/10/2014	01/10/2019	01/04/2020
2008	53,500	–	–	–	53,500	2p	31/01/2017	31/01/2020	31/01/2027
SAYE	3,768	–	–	–	3,768	398p	01/10/2017	01/10/2022	01/04/2023
2008	–	45,200	–	–	45,200	2p	01/02/2018	01/02/2021	01/02/2028
	193,605	45,200	–	(62,125)	176,680				

Scheme interests awarded during the financial year

The table below sets out the options granted during 2017 and 2018:

	Date of grant	Scheme	Number	Exercise price	Share price used to value grant	Face value of grant £'000
B D W Stocks	31 January 2017	2008	76,200	2p	391p	298
	1 October 2017	SAYE	7,537	398p	498p	38
	1 February 2018	2008	64,300	2p	476p	306
C P Tyler	31 January 2017	2008	53,500	2p	391p	209
	1 October 2017	SAYE	3,768	398p	498p	19
	1 February 2018	2008	45,200	2p	476p	215

For performance over the three year period to 30 November 2021 the Committee has decided that Ben Stocks will be awarded 66,600 2 pence options and Chris Tyler will be awarded 46,800 2 pence options under LTSP 2018 immediately after the announcement of the Group's results. The share price used to value the grant was 471 pence per share.

The Long Term Share Plan shares granted in 2016, 2017 and 2018 were calculated to equal a year's salary for each Executive Director based on the average share price over the final quarter of the financial year ended 30 November 2015, 30 November 2016 and 30 November 2017 respectively. Future awards will be calculated on the same basis. The Long Term Share Plan shares are options issued at the nominal value of the Company's ordinary shares of 2 pence. The face value of the grants in 2017 and 2018 are determined from average share price over the final quarter of the financial years ended 30 November 2016 and 2017 respectively.

Performance conditions of the unvested share options

Options granted in 2017 under the 2008 scheme can only be exercised in full if the Committee is satisfied that in the financial year ending 30 November 2019 ('FY2019') the Group has achieved EPS of at least 23.2 pence. 30% of the award will vest if the Group has achieved EPS of 18.0 pence in FY2019. 50% of the award will vest if the Group has achieved EPS of 19.2 pence in FY2019. A sliding scale will operate if the EPS are between 18.0 pence and 19.2 pence and between 19.2 pence and 23.2 pence. No shares vest if the EPS in FY2019 are below 18.0 pence.

Options granted in 2018 under the 2008 scheme can only be exercised in full if the Committee is satisfied that in the financial year ending 30 November 2020 ('FY2020') the Group has achieved EPS of at least 26.7 pence. 30% of the award will vest if the Group has achieved EPS of 22.6 pence in FY2018. A sliding scale will operate if the EPS are between 22.6 pence and 26.7 pence. No shares vest if the EPS in FY2020 are below 22.6 pence.

The Committee intends to grant options in 2019, after publication of these results, under LTSP 2018, which can only be exercised in full if the Committee is satisfied that in the financial year ending 30 November 2021 ('FY2021') the Group has achieved Adjusted EPS of at least 30.9 pence. 30% of the award will vest if the Group has achieved EPS of 26.5 pence in FY2021. A sliding scale will operate if EPS are between 26.5 pence and 30.9 pence. No shares vest if the EPS in FY2021 are below 26.5 pence. These shares are subject to an additional two year holding period after the end of the vesting period. After the vesting period, before the end of the two year holding period, the option holder may exercise the option but may only sell sufficient shares to settle the option price and the income tax payable.

The options granted under the SAYE scheme in 2014, 2016 and 2017 were issued at a 20% discount to the market price at the date of grant. These options have no performance conditions.

The Company funds the Employee Benefit Trust, approved at the 2015 AGM, to settle incentive share awards granted in 2016 and the future. At 30 November 2018 the Trust held 196,000 shares (2017: 112,000).

The table below sets out the options exercised during 2018:

	Date of exercise	Scheme	Number	Exercise price	Share price on date of exercise
B D W Stocks	20 September 2018	2008	89,250	2p	500p
C P Tyler	20 September 2018	2008	62,125	2p	500p

The table below sets out the options exercised during 2017:

	Date of exercise	Scheme	Number	Exercise price	Share price on date of exercise
B D W Stocks	27 June 2017	2008	104,880	2p	542p
	11 October 2017	SAYE	7,500	240p	489p
C P Tyler	22 March 2017	SAYE	16,586	93p	496p
	27 June 2017	2008	73,150	2p	542p

The Executive Directors' total gain on the exercise of options in 2018 was £754,000 before deduction of income tax and national insurance. On exercise, the Executive Directors sold some shares in part to fund the option acquisition costs and the related PAYE and national insurance costs. As a result of these option exercises Ben Stocks and Chris Tyler's holdings in shares in the Company increased by 39,250 shares and 27,125 shares, respectively.

The Executive Directors' total gain on the exercise of options in 2017 was £1,047,000 before deduction of income tax and national insurance. On exercise, the Executive Directors sold some shares to fund the option acquisition costs and the related PAYE and national insurance costs and certain other personal financial commitments. The remaining shares were retained. As a result of these option exercises Ben Stocks and Chris Tyler's holdings in shares in the Company increased by 29,880 shares and 19,736 shares, respectively.

Non-Executive Directors

The table below gives the salary and fees of the Non-Executive Directors:

	Basic salary and fees £'000
2018	
P Dean	37
C L Matthews (resigned 17 April 2018)	31
S J Martin	37
J E Nicholas	69
	174
2017	Basic salary and fees £'000
P Dean	36
C L Matthews	81
S J Martin	36
J E Nicholas (appointed on 1 October 2017)	6
	159

Remuneration report continued

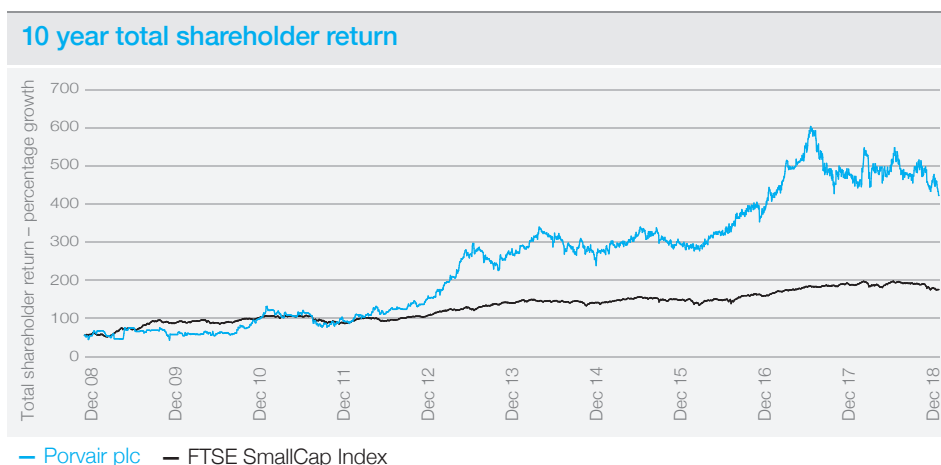
Payments to Directors leaving the Group

No payments (2017: £nil) were made during the year ended 30 November 2018 to any former director of the Company or any other Group company.

INFORMATION NOT REQUIRED TO BE AUDITED

Performance graph and table

The following graph charts total shareholder return against the FTSE SmallCap Index for the last ten years. Given the size and nature of the Group, the FTSE SmallCap Index is the logical comparator index.



The table below shows the total remuneration for the Chief Executive Officer and the percentages of the maximum awards of performance related pay received over the past ten years.

Year	CEO	Single figure total remuneration £'000	Annual variable element % of max	Long term incentives % of max
2018	Ben Stocks	1,078	83%	100%
2017	Ben Stocks	1,029	87%	87.5%
2016	Ben Stocks	991	90%	95%
2015	Ben Stocks	1,151	97%	100%
2014	Ben Stocks	1,298	100%	100%
2013	Ben Stocks	1,169	97%	100%
2012	Ben Stocks	927	93%	92%
2011	Ben Stocks	518	100%	100%
2010	Ben Stocks	432	95%	0%
2009	Ben Stocks	337	0%	0%

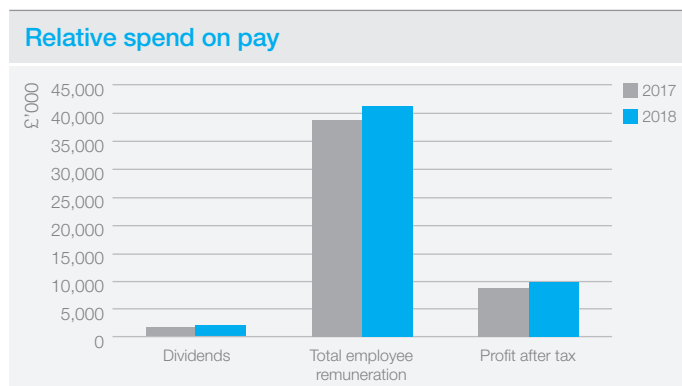
The table below shows the percentage change in remuneration of the Chief Executive Officer and the Group's UK employees as a whole between 2017 and 2018.

	Percentage increase/(decrease) in remuneration in 2018 compared with 2017	
	Chief Executive Officer	UK employees
Salary and fees	2.5%	2.1%
Taxable benefits	(2.8)%	(23)%
Annual bonuses	(2.2)%	5%
Total	0.5%	2%

The UK employees are considered a suitable comparator group because the Chief Executive Officer is UK based and subject to the same macro-economic conditions as other UK employees.

Relative importance of spend on pay

As required by the Remuneration Regulations, the table below compares total staff remuneration with the amounts paid in dividends to shareholders and the profit after tax of the Group.



Statement of voting at the Annual General Meeting

A resolution to approve the Report of the Remuneration Committee included in the 2017 Report and Accounts was passed by the shareholders at the AGM on 17 April 2018. 95.7% of votes were cast in favour of the resolution. 4.3% of votes were cast against the resolution and 31,145 votes were withheld.

A resolution to approve the Remuneration Policy included in the 2017 Report and Accounts was passed by the shareholders at the AGM on 17 April 2018. 98.2% of votes were cast in favour of the resolution. 1.8% of votes were cast against the resolution and 41,908 votes were withheld.

A resolution to approve the Report of the Remuneration Committee included in the 2016 Report and Accounts was passed by the shareholders at the AGM on 11 April 2017. 95.9% of votes were cast in favour of the resolution. 4.1% of votes were cast against the resolution and 11,498 votes were withheld.

Advisers to the Committee

During the year the Committee has reviewed published surveys of the remuneration of directors of similar sized companies. It has not taken independent advice on the remuneration of Directors in 2018. In 2017 the Committee took advice from Travers Smith, the Company's lawyers, and MM&K, remuneration consultants, in formulating its revised Remuneration Policy and LTSP. MM&K were appointed to advise the Committee because the Group had previously bought their remuneration surveys. The advice requested was only in conjunction with responses required following circulation of the revised policy to major shareholders and the fee was less than £2,000 based on the time involved.

The Committee received input into its decision-making from reports prepared by the Executive Directors, none of whom were present at any time when their own remuneration was being considered.

Remuneration Policy

The Remuneration Policy, which was approved at the Annual General Meeting held on 17 April 2018 and is expected to remain in force for three years from the date of that meeting, forms part of this report and is set out on pages 58 to 65.

On behalf of the Board

Sally Martin

Chairman of the Remuneration Committee
25 January 2019

Remuneration report continued

REMUNERATION POLICY AS APPROVED AT THE GROUP'S 2018 AGM

Introduction

The Group's policy is to provide remuneration packages for its senior executives that reflect their contribution to the business, the performance of the Group, and the need to attract and retain executives of the highest quality.

The Remuneration Committee ("the Committee") seeks to provide straightforward and easily understood remuneration packages, which align the interest of the Directors with those of shareholders. The general principles that the Committee adopt are to provide remuneration arrangements that incentivise the Executives to deliver on the Group's long term strategy and short term goals with an appropriate mix of fixed and variable pay. The Committee aims to provide remuneration packages that:

- are competitive, but not excessive;
- are designed to attract, retain and motivate managers of high quality to deliver growth for the business;
- are aligned with shareholders' interests;
- include an element of the potential reward linked to personal performance; and
- encourage the Executive Directors to accumulate shares in the Company.

The policy set out below was approved by shareholders at the April 2018 Annual General Meeting and will remain in force until the Annual General Meeting in 2021.

Changes from the previous policy

The Committee believes that the two previous remuneration policies have served the Group and its shareholders well and consequently the changes adopted in this policy are mainly of disclosure and improving the alignment of the policy with the underlying remuneration schemes operated by the Group.

Specifically this policy includes:

- the introduction of a holding period of two years post vesting for the LTSP for options granted under the LTSP 2018;
- greater detail of the operation of each component of remuneration and the maximums applied;
- disclosure of the discretions available to the Committee; and
- greater detail of the termination arrangements for Executive and Non-Executive Directors.

The new LTSP includes:

- malus provisions embedded in the scheme documentation.
- the ability to include clawbacks at the discretion of the Committee.
- a limit of 250% of base salary on the discretion available to the Committee to make awards in exceptional circumstances. This was previously an uncapped discretion.
- provisions in the scheme to include holding requirements after vesting at the discretion of the Committee.

These terms are reflected in additional disclosure in the new policy.

The policy

In this forward looking section the Group's remuneration policies and potential future outcomes for each Executive Director and the Group's policy for rewarding Non-Executive Directors are described.

These policies and the individual elements of the reward package are reviewed each year to ensure that they remain in line with good practice and support the delivery of the Group's strategy.

The table below summarises the main components of the existing remuneration package for Executive Directors.

Fixed remuneration components

Remuneration component	How the component operates	Maximum payouts
Base salary Purpose: <ul style="list-style-type: none"> To attract and retain executives of high quality. 	<p>Initial salaries on joining or appointment to the role are set by reference to:</p> <ul style="list-style-type: none"> The level of skill and experience of the individual. The scope of responsibilities required in the role. Market comparators for similar roles in similar sized quoted businesses. <p>Salaries are reviewed annually and fixed for a year. The rate of increase is influenced by:</p> <ul style="list-style-type: none"> The annual increase given to other UK employees. The current rate of UK CPI inflation. Market comparators for similar roles in similar sized quoted businesses. 	<p>The current salary levels are disclosed in the Remuneration report. Salary increases will normally be in line with salary increases applied in the UK operations of the Group. Increases above this level may be made in specific situations, such as progression and development in the role, material changes to the business, remit or responsibilities and internal promotion.</p> <p>An increase in salary to a current Executive Director will not result in the salary exceeding the competitive market rate.</p>
Pensions Purpose: <ul style="list-style-type: none"> To provide a competitive package for Executive Directors. 	<ul style="list-style-type: none"> The Executive Directors are provided with a cash contribution in lieu of pension benefits. Ben Stocks is a member of the closed Porvair Pension Plan and his benefits up to a capped limit of salary are provided by the plan. Above the limit he receives a cash contribution in lieu of pension benefits. 	<p>The current level of contribution provided to the Executive Directors is disclosed in the Remuneration Report. The maximum Company contribution will not exceed 25% of base salary.</p> <p>The Committee may change the Directors' pension arrangements in response to new legislation or regulations provided that any changes do not materially increase the cost to the Company.</p>
Benefits Purpose: <ul style="list-style-type: none"> To provide a competitive package for Executive Directors. 	<p>Benefits comprise:</p> <ul style="list-style-type: none"> A company car or allowance, including car insurance. Medical insurance and health benefits. Life insurance/spouse's pension. Permanent health insurance. Certain professional and membership fees. 	<p>The Committee reserves the power to deliver benefits which, in aggregate, have a cost of up to 25% of base salary.</p> <p>The Committee may exceed this limit in exceptional circumstances, including (but not limited to) where there are changes in the underlying benefits provided, changes to benefit providers and changes in individual circumstances (such as health status or location).</p>

Performance conditions

No performance measures apply to the fixed elements of remuneration; however the performance of the Group and the individual are taken into account in determining annual pay and benefit awards.

Remuneration report continued

Variable remuneration components

Remuneration component	How the component operates	Maximum payouts
Annual bonus Purpose: <ul style="list-style-type: none"> To encourage and reward actions consistent with the near term (annual) priorities of the Group. To motivate and incentivise Executive Directors to deliver performance in the current financial year. 	<p>Executive Directors' contracts make them eligible to participate in the annual bonus scheme but it is an entirely discretionary scheme and the amounts are not covered by contract obligations. The Committee administers the scheme, which is governed by terms set out in the minutes of the Committee's meetings. The performance targets for the year are generally agreed following the Group's annual strategy review and their delivery is assessed after the Group's financial year end. The final determination of payouts is based on the Group's audited financial statements. The principal elements of the scheme are:</p> <ul style="list-style-type: none"> The Committee determines the maximum potential annual payout at the start of each financial year. An element of the annual bonus is based on the financial performance of the Group in the year and an element based on the delivery of strategic objectives, which may be financial or non-financial. The annual bonus is not pensionable. The bonus is paid after the announcement of the Group's annual results. The bonus is normally paid in cash. However, the Committee may direct that an agreed proportion of the post-tax annual bonus be paid in shares, where an Executive Director's shareholding is less than the Committee's designated target shareholding in the Group. 	<p>The Committee determines, at the start of each year, the maximum amount that the Executives may earn under the annual bonus scheme. The maximum that the Executives can earn in annual bonuses in each year is disclosed in the Remuneration report. The Committee may not offer an annual bonus scheme with the potential to earn more than 100% of base salary. The minimum payout is £nil.</p>

Performance conditions

At the start of each financial year, the Committee sets performance targets based on Group financial operating performance targets and strategic objectives designed to reward the Executives for delivering near term priorities of the Group. At the same time, the Committee determines the ratio of awards between each element of the bonus.

Performance targets, set with reference to the Group's annual operating plan and strategic priorities for the year, are disclosed in the Remuneration report. The Group's annual operating performance targets, which typically relate to adjusted annual operating profit, annual operating cash flow or similar annual operating measure, are measured on a sliding scale with the maximum payout reserved for significant outperformance compared to plan. The strategic targets are typically based on achievement of specific identified objectives critical to the delivery of the Group's annual or three-year operating plans; their achievement is based on the judgement of the Committee.

Variable remuneration components (continued)

Remuneration component	How the component operates	Maximum payouts
<p>Long term share plan and share options</p> <p>Purpose:</p> <ul style="list-style-type: none"> To motivate and incentivise Executive Directors to deliver sustained performance over the longer term in line with shareholder interests. 	<p>Awards of LTSP are generally made in the form of 2 pence options but may also be made as direct awards of shares. Awards have been made to the Executive Directors under the Porvair Long Term Share Plan 2008. No further awards may be made under the scheme after the Annual General Meeting 2018. Awards made after the Annual General Meeting 2018 will, conditional on shareholder approval, be made under the Porvair Long Term Share Plan 2018. The schemes are operated by the Committee under the specific scheme rules. Each year the Committee determines:</p> <ul style="list-style-type: none"> The period of time over which performance will be judged, which may not be shorter than three years under the scheme rules. For options issued under the LTSP 2018, the Remuneration Committee will require a holding period of up to two years following the end of the performance period, such that the period from the date of grant to the first time that awards may be realised will be five years. The number of shares to be awarded as options and to whom. The performance criteria. <p>Vested awards may be settled by the issue of new shares or, for issues made after the 2015 Annual General Meeting, from shares held by an Employee Benefit Trust ("EBT").</p> <p>Shares awarded under the LTSP 2018 are subject to malus and clawback provisions as described below.</p> <p>For options issued under the LTSP 2018 after the vesting period but before the end of the holding period, the Executive may exercise the options and sell only sufficient shares to settle the option price and tax liability arising on the exercise. The remaining shares must be held until the end of the holding period.</p> <p>For shares awarded under the LTSP 2018, the Executive may sell sufficient shares on vesting to settle any tax liability arising but must hold the remainder until the end of the holding period.</p> <p>Shares or options that vest are eligible for dividend equivalent payments for the period from award to the end of the holding period at the discretion of the Committee.</p>	<p>The Committee determines, at the start of each year, the amount of option or award shares that the Executives will be granted in the year. This amount is disclosed in the Remuneration report each year. The Committee may offer awards up to 150% of base salary in any one year and retains a discretion in exceptional circumstances (for example on recruitment) to offer awards up to 250% of annual salary.</p>

Performance conditions

The scheme rules require the Remuneration Committee to set performance criteria for vesting each LTSP award. The Committee aims to set stretching vesting criteria based on achievement of financial goals set out in the Group's three year strategic plan. It seeks to set criteria that are simple to manage and understand and which are, if applied consistently, aligned over the longer term with the delivery of value to shareholders. The Committee discloses in the Remuneration report the performance criteria for each unvested award including those awards to be made in the coming year.

There is generally a minimum metric below which there is no vesting and a maximum metric which earns 100% of the award. A sliding scale of vesting operates between the maximum and minimum.

The Remuneration Committee has adopted stretching EPS growth as the performance criteria for the LTSP as it believes that this provides a reliably measurable target in line with the Group's medium and long term objectives. As part of its annual awards process, the Committee considers each year whether this basis remains appropriate. Each year the Remuneration report discloses the prospective awards and performance conditions that will apply. The Committee has discretion to adopt alternative performance metrics should they conclude that alternative targets better align the Executive performance with the long term delivery of value to shareholders.

Remuneration report continued

Variable remuneration components (continued)

Remuneration component	How the component operates	Maximum payouts
Save as you earn scheme Purpose: <ul style="list-style-type: none"> To encourage and incentivise regular saving for all UK employees. To allow UK employees to benefit from tax efficient HMRC approved gains from any growth in the Group's share price. To encourage ownership of the Group's shares. 	<p>UK employees are entitled to subscribe for options under the Group's three and five year save as you earn schemes. The scheme is governed by the rules set out in the Porvair Plc SAYE share Options Plan 2014.</p> <p>The Group offers new SAYE schemes to coincide with the maturity of previous SAYE schemes. This means that schemes generally commence on 1 October in years when a scheme matures.</p> <p>The scheme rules allow the options to be issued at up to a 20% discount to the prevailing market price, which is determined at the time the offer is made to employees, generally approximately two months before the start of the scheme.</p> <p>At the end of the savings period, provided the employee has maintained the monthly savings plan, the option shares vest and the employee has the choice of a return of the cash saved in the building society account or to use the savings to acquire the option shares. The options must be exercised within six months of the date of vesting.</p> <p>Vested awards may be settled by the issue of new shares or, for issues made after the 2015 Annual General Meeting, from shares held by an Employee Benefit Trust ("EBT").</p> <p>Non-Executive Directors may not join the scheme.</p>	<p>SAYE schemes allow a maximum of £500 per month to be saved. The Group offers three and five year saving schemes. The number of shares under option is determined by the amount saved in an authorized building society account plus interest over the vesting period divided by the option price determined at the date of subscription to the scheme.</p>
Performance conditions The scheme has no performance conditions.		

Shareholding requirement

The Committee has set a target for Executive Directors to hold the equivalent of at least the value of one year's base salary in Porvair shares within five years of joining the Board.

External appointments

Executive Directors are able to undertake one Non-Executive Directorship outside the Company with the consent of the Board. Any fees received may be retained by the Director.

Discretions

The Committee retains certain discretions over the management and operation of the variable elements of the Executive Directors' remuneration. The annual bonus scheme is discretionary and therefore the Committee retains full authority to vary its terms and its payouts in each financial year. Its powers are limited by the maximums set out in this policy and by the limits it sets for the Executives within the Committee minutes. The limits and targets for each annual bonus are published in advance in the Remuneration report.

The long term share plans are governed by the scheme rules approved by shareholders. The rules of the scheme allow for the fair operation of the scheme through discretions delegated to the Committee. Under these discretions the Committee may:

- waive the requirement for the employee to pay the employer's National Insurance.
- grant options with a shorter life than 10 years.
- award the option holder with additional shares equivalent to the dividends that the option holder would have earned if the shares had been held throughout the option period.
- increase the number of shares that can be exercised by a good leaver or the personal representatives of an employee dying in service, which would normally be based on the proportion of the performance period that has elapsed prior to their cessation of employment, having due regard for the likelihood that the performance conditions will be met.
- allow an employee leaving for reasons other than as a good leaver to be able to exercise their options after the date that they have given notice to leave employment.
- amend the performance conditions if an event has occurred such that the performance of the Company should be measured by a fairer measure affording a more effective incentive to the employee.

- in determining whether a performance condition has been met, make such adjustments as they consider necessary to take account of underlying performance.
- determine whether performance conditions have been met in the event of a corporate event such as change of control or demerger.
- in the event of a change of control, in exceptional circumstances, permit more award shares or options to become vested than would be calculated by the proportion of the performance period that has elapsed.
- in the event of a rights issue or capitalisation issue, make such adjustments as it considers appropriate to the number of shares under option.
- make minor amendments to the plan to improve its administration, reflect changes in legislation, or to maintain favourable tax treatment for the participants or the Company.

Long Term Share Plan – Performance adjustment (malus)

The Committee may, at its absolute discretion, require an Executive Director to forfeit all or a proportion of his unvested award shares and/or all or a proportion of the vested award shares in respect of which the option award has not otherwise been settled, in the exceptional circumstances of misconduct or misstatement by the Executive Director (or for which the Executive Director is determined, in the Committee's absolute discretion, to be solely or jointly accountable). The terms of any forfeiture shall be determined by the Committee.

Long Term Share Plan – Forfeiture of vested awards (clawback)

At the award date, the Committee determines whether an award should be granted subject to clawback. If it is decided that the award should be subject to clawback then in the exceptional circumstances of misconduct or misstatement by the Executive Director (or for which the Executive Director is determined, in the Committee's absolute discretion, to be solely or jointly accountable); which had it been known at the time of vesting would have caused the Committee to take a different decision regarding the vesting of the award shares; the Committee may, in its absolute discretion, take any or all of the following steps in respect of the vested award shares:

- reduce the number of unvested award shares to which the Executive Director is entitled under any other award and/or proportion of the vested award shares in respect of which the Executive Director has not exercised an option award (or in respect of which the option award has not otherwise been settled);
- require the Executive Director to transfer any vested award shares back to the Company, or to such other person or persons as the Company shall nominate, for nil consideration;
- reduce the amount of any further awards to be granted to the Executive Director;
- reduce the amount of any cash bonus or shares payable to the Executive Director under any other plan operated by the Company; and/or
- require the Executive Director to pay to the Company or any Group company an amount equal to the amount of any or all of the proceeds the Executive Director realised on the disposal of any of the shares acquired pursuant to the award.

When enforcing the clawback terms, the Committee shall take into account:

- the amount (if any) paid by the Executive Director to acquire any shares in relation to the award;
- the amount of tax and national insurance contributions actually paid or still to be paid by the Executive Director in relation to the award or the sale of any of the shares acquired in relation to the award (after taking account of any relief available); and
- the number of shares subject to the award that would have vested (if any) had the misconduct or misstatement been known by the Remuneration Committee at the time.

If the Committee wishes to exercise its right to enforce clawback in respect of any award (or part of an award) in accordance with its powers, it shall communicate the clawback terms to the Executive Director in writing on or around the time that the misconduct or misstatement is discovered.

Clawback ceases to apply to any award (or part of an award) after three years from the date on which the award shares became vested award shares.

Annual Bonus – Malus and Clawback

The annual bonus is discretionary and therefore the Committee retains full authority to vary its terms each year within the framework set out in this policy. In the exceptional circumstances of misconduct or misstatement by the Executive Director, the Committee may take any, or all, of the following steps:

- Cancel or reduce the bonus earned by the Executive Director in the year in which the misconduct or misstatement comes to light.
- Reduce the amount of awards in future years.
- Require the Executive Director to repay bonuses relating to the financial years affected by the misconduct or misstatement.

When enforcing any clawback of bonus the Committee will take into account amounts of tax and national insurance paid or still to be paid in relation to previously awarded bonuses, which cannot be recovered.

Remuneration report continued

Estimate of the total future potential remuneration

The charts below set out estimates of the potential remuneration for each of the Executive Directors based on their current remuneration packages. The assumptions included in each scenario are described below:

- The Porvair share price is assumed to remain constant at the average of the last quarter's share price.

Fixed

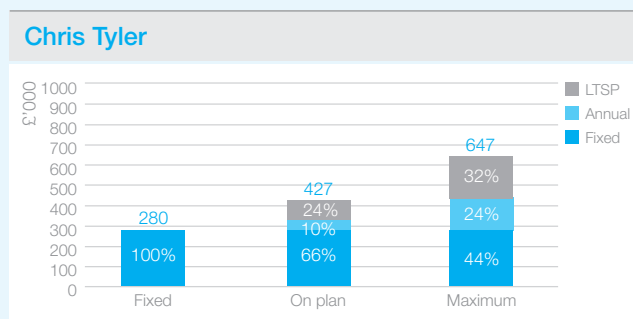
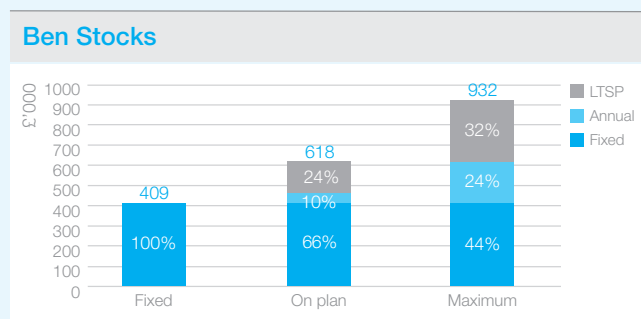
- Consists of base salary, pension and benefits.
- Base salary is the current salary.
- Benefits are assumed to be in line with those received in 2017.
- Pensions are assumed to be in line with current practice.

For performance in line with both the annual and three year operating plan

- Annual bonus of 20% of salary.
- Long term share plan ('LTSP') award of 50% of maximum.

For performance significantly above both the annual and three year operating plan, the maximum award currently is:

- Annual bonus of 75% of salary.
- LTSP award of 100% of salary.



Policy on Non-Executive Directors

The Non-Executive Directors receive letters of appointment with a maximum notice of three months. They are subject to annual re-election, in common with the Executive Directors, in accordance with the best practice set out in the UK Corporate Governance Code. The Board, excluding the Non-Executive Directors, reviews the Non-Executives' fees annually. They receive a fixed annual fee plus expenses reimbursement, which reflects their time commitment to the business and comparatives from similar sized quoted companies. No additional fees are paid for acting as Senior Non-Executive Director or for chairing committees but the Board reserves the right to introduce these in appropriate circumstances. Non-Executives are not eligible for any bonus or incentive or pension schemes. In the event that a Non-Executive Director fails to be re-elected at the Annual General meeting they are required to resign with immediate effect.

The current scale of remuneration is:

	£'000
Chairman	82
Other Non-Executive Directors	36

Engagement with shareholders

The Committee considers shareholder feedback received during the AGM and any other shareholder meetings as part of its annual review of its remuneration. The Chairman of the Remuneration Committee is available, on request, to discuss issues of remuneration with shareholders of the Group.

Where the Remuneration Committee proposes to introduce new long term incentive plans, the Committee seeks the views of major shareholders prior to seeking general shareholder approval at a general meeting.

Discussions were held with a number of shareholders prior to the 2018 AGM to explain some of the terms of the remuneration policy. Key shareholders have been made aware of the Company's intention to refresh its Long Term Share Plan at the 2018 AGM and have given their support.

Relationship with employees' pay

All employees receive a salary, pension and benefit package with levels of salary commensurate with their responsibilities. Executives throughout the Group participate in various bonus schemes designed to reward good performance in their operations.

The Committee takes into account proposed or agreed changes to employees' pay and conditions as part of its review of the remuneration of Executive Directors. Except in exceptional circumstances, this results in the annual pay increases awarded to Executive Directors being broadly in line with increases applied to other UK employees.

The Committee maintains an overview of the remuneration policies throughout the Group. It seeks to ensure that employees are paid a market rate for their particular roles and that there is consistency in targets set where performance related pay might be awarded. Employees are not consulted in the process of setting the policy for Executive Directors' remuneration.

Recruitment of Directors

In the event that the Company appoints a new director, in determining appropriate remuneration arrangements, the Committee will take into consideration all relevant factors (including but not limited to quantum, the type of remuneration being offered and the candidate's background) to ensure that arrangements are in the best interests of both the Company and its shareholders without paying more than is necessary to recruit a director of the required calibre. The Committee will align the remuneration package offered with the remuneration policy outlined in the policy table on pages 59 to 62.

Depending on an individual's prior experience, the Committee may set salary below market norms, with the intention that it is realigned over time, typically two to three years, subject to performance in the role. In this situation, the Committee is permitted to exceed the "normal" rate of annual salary increase set out in the policy table on pages 59 to 62.

In the year of appointment, the Committee may offer additional remuneration arrangements that it considers appropriate and necessary to recruit and retain the individual. The Committee may authorise:

- awards to 'buy-out' remuneration arrangements forfeited on leaving a previous employer. In such circumstances any arrangement will only compensate for remuneration foregone. The Committee will take account of relevant factors including any performance conditions attached to these awards, the form in which they were granted (e.g. cash or shares) and the time over which they would have vested. Any 'buy-out' of long term incentives on joining or initial incentives would be in Long Term Share Plan shares, and subject to the rules of that scheme. Awards would be limited to a maximum of 250% of basic salary on joining, subject to suitably stretching performance criteria and a minimum vesting period of three years; and
- other payments in relation to relocation expenses and other incidental expenses as appropriate.

For internal promotions, the Committee reserves the right to satisfy pre-existing executive incentive awards and other obligations which may be in place at the time of appointment.

Service contracts and policy in respect of payments for loss of office

The Executive Directors have rolling contracts with the Company which can be terminated on giving twelve months' notice. This is considered to be an appropriate balance between flexibility and commitment by both parties.

Executive Directors' employment contracts provide for the Executive to receive salary; private medical insurance; use of a company car; and participate in the Group's annual bonus, share option plans and pension scheme.

Payments for loss of office are determined by the Committee based on the contractual entitlements of the Director concerned under service contracts and the terms of the Porvair Plc Long Term Share Plan 2015 and 2018 and Porvair Plc SAYE share option plan 2014.

The LTSP and SAYE plans have normal good leaver and bad leaver provisions which determine the extent to which options and awards may be vested and exercised in the event of the Executive leaving the Group. The schemes also include provisions to determine the extent that options may be exercised or award shares received in the event of a change in control of the Group. Annual bonus payments are normally only payable to Executives that are in employment and not in a notice period at the date when the bonuses are approved by the Committee.

The Committee retains discretions to vary the prescribed terms of the leaver provisions in the LTSP and SAYE scheme rules and to vary the annual bonus scheme entitlements. As such the particular circumstances of the Executive Director's loss of office will be taken into account by the Committee to determine the extent to which mitigation of payments should apply; options can be vested and exercised; and the extent to which payments under the discretionary annual bonus plan would be paid.

Independent auditor's report to the members of Porvair plc

Report on the audit of the financial statements

Opinion

In our opinion:

- the financial statements of Porvair plc (the 'parent company') and its subsidiaries (the 'group') give a true and fair view of the state of the group's and of the parent company's affairs as at 30 November 2018 and of the group's profit for the year then ended;
- the group financial statements have been properly prepared in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union;
- the parent company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice including Financial Reporting Standard 101 "Reduced Disclosure Framework"; 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 of which comprise:

- the Consolidated Income Statement;
- the Consolidated Statement of Comprehensive Income;
- the Consolidated Balance Sheet;
- the Consolidated Statement of Changes in Equity;
- the Consolidated Cash Flow Statement;
- the related Consolidated notes 1 to 30;
- the Parent Company Balance Sheet;
- the Parent Company Statement of Changes in Equity; and
- the related Parent Company notes 1 to 18.

The financial reporting framework that has been applied in the preparation of the group financial statements is applicable law and IFRSs as adopted by the European Union. The financial reporting framework that has been applied in the preparation of the parent company financial statements is applicable law and United Kingdom Accounting Standards, including FRS 101 "Reduced Disclosure Framework" (United Kingdom Generally Accepted Accounting Practice).

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the auditor's responsibilities for the audit of the financial statements section of our report.

We are independent of the group and the parent company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the Financial Reporting Council's ('the FRC's') Ethical Standard as applied to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We confirm that the non-audit services prohibited by the FRC's Ethical Standard were not provided to the group or the parent company.



We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Summary of our audit approach

Key audit matters

The key audit matters that we identified in the current year were:

- Revenue recognition: long-term contract accounting; and
- Provisions for uncertain tax liabilities.

Within this report, any new key audit matters are identified with  and any key audit matters which are the same as the prior year are identified with .

Materiality

The materiality that we used for the group financial statements was £0.87 million which was determined based on income before tax.

Scoping

The scope of our audit was driven by our risk assessment and understanding of the business. This consisted of seven components subjected to full scope audits, five components subjected to specific audit procedures and four components subjected to analytical procedures at Group level.

Significant changes in our approach

In the current year we identified a new key audit matter, provisions for uncertain tax liabilities, in response to the complexity and significance of judgements surrounding these provisions.

We have removed accounting for acquisitions as a key audit matter in this year's report in response to the lower risk level identified for acquisitions made in the current period. This is due to the Group's experience with acquisitions and the lower aggregate value of acquisitions made in this period.

Conclusions relating to going concern, principal risks and viability statement

Going concern

We have reviewed the directors' statement in note 1 to the financial statements about whether they considered it appropriate to adopt the going concern basis of accounting in preparing them and their identification of any material uncertainties to the group's and company's ability to continue to do so over a period of at least twelve months from the date of approval of the financial statements.

We confirm that we have nothing material to report, add or draw attention to in respect of these matters.

We are required to state whether we have anything material to add or draw attention to in relation to that statement required by Listing Rule 9.8.6R(3) and report if the statement is materially inconsistent with our knowledge obtained in the audit.

Principal risks and viability statement

Based solely on reading the directors' statements and considering whether they were consistent with the knowledge we obtained in the course of the audit, including the knowledge obtained in the evaluation of the directors' assessment of the group's and the company's ability to continue as a going concern, we are required to state whether we have anything material to add or draw attention to in relation to:

- the disclosures on pages 27 to 32 that describe the principal risks and explain how they are being managed or mitigated;
- the directors' confirmation on page 27 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; or
- the directors' explanation on page 33 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 are also required to report whether the directors' statement relating to the prospects of the group required by Listing Rule 9.8.6R(3) is materially inconsistent with our knowledge obtained in the audit.

We confirm that we have nothing material to report, add or draw attention to in respect of these matters.

Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our 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) that we identified. These matters included 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 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.

Revenue recognition: long term contract accounting ➤

Key audit matter description



The Group has four long-term contracts in Porvair Filtration Group Limited, and one long-term contract in Porvair Filtration Group Inc. These two entities sit within the Aerospace & Industrial division. Due to their long-term nature, although amounts of revenue recognised in the year were a small proportion of overall revenues at £2.7m (2017: £0.9m), there are material amounts of deferred revenue recognised on the balance sheet.

We consider there to be a key risk with respect to the accounting for these long-term contracts and the requirements of IAS 11.

Where the outcome of a long-term contract can be estimated reliably revenue is recognised in line with the percentage of completion method; otherwise, revenue is recognised only to the extent of recoverable contract costs incurred. There is a large degree of judgment and estimation involved in predicting the quantum and timing of future costs to complete, and expected warranty costs. These costs directly affect the accounting for long term contracts and the associated revenue to be recognised in line with IAS 11 and the Group's accounting policy. We also identified it as a potential area susceptible to fraud given the susceptibility of the accounting for these contracts to be manipulated by management as the percentage of completion is usually highly judgemental.

The accounting policy is disclosed in note 1 to the financial statements and note 2 to the financial statements provides details of the critical accounting judgements. Note 17 details relevant information with regard to the construction contracts. Further explanation is also provided in the Finance Director's review at page 21, and Principal Risks and Uncertainties at page 29, and the Report to the Audit Committee at page 48 of the financial statements.

How the scope of our audit responded to the key audit matter



In responding to the risk associated with accounting for significant projects revenue the following procedures were undertaken to challenge management's position and outcome:

- we obtained, reviewed, and challenged management's IAS 11 special projects paper on a contract-by-contract basis through obtaining evidence from operational personnel and third parties;
- we agreed total contracted revenue to a signed agreement for each project;
- we selected a sample of costs incurred to date on the special projects and agreed these back to third party documentation to test that the cost had been allocated to the correct project;
- we challenged the judgements made by management in assessing forecast costs to complete, including performing a review of warranty and re-work costs to confirm they had been included in the forecast as they form part of the cost to complete under IAS 11;
- we held discussions with operational management to identify any production issues which could materially impact the associated forecast costs, and treatment of performance bonds and warranties.

Independent auditor's report to the members of Porvair plc continued

Revenue recognition: long term contract accounting (continued)

Key observations



Based on the audit procedures performed, for each long-term contract we concurred with management's judgement on the revenue recognised to date and the percentage completion as at the year-end.

Provisions for uncertain tax liabilities

Key audit matter description



Porvair plc is a multi-national group with locations across many global jurisdictions. On this basis the group is affected significantly by tax legislation in each jurisdiction it trades. Some of these locations require the group to recognise tax provisions for uncertain future liabilities.

We consider there to be a key risk surrounding the recognition and calculation of the £0.8m (2017: £0.7m) of uncertain tax provisions due to the complexity of tax regulations across multiple jurisdictions and the reliance on management judgement for recognition and measurement. It was noted that the uncertain provisions had not moved materially in the year and were consistent with previous periods.

IAS 12 requires where there exist future uncertain events which may give rise to a tax liability to the Group that a provision is recognised within the financial statements.

Further explanation regarding provisions for uncertain tax liabilities can be found in the Report to the Audit Committee at page 49 of these financial statements. Further detail regarding current tax and deferred tax can be found in the accounting policies at note 1, as well as note 7 and note 19 of the financial statements.

How the scope of our audit responded to the key audit matter



The provision for uncertain tax liabilities for the Group relates to the FIN48 reserve held in the US holding company, Porvair Corporation. We have therefore worked with a US tax specialist to audit the FIN48 reserve.

With involvement of the US tax specialist we gained an understanding of the uncertain tax positions through enquiries of management, receipt of tax workings, and corroboration of the different elements of the provision to external evidence. We also considered the adequacy of any uncertain tax provisions in the accounts, including the appropriateness of the calculation, taking into account prior year estimates.

Key observations



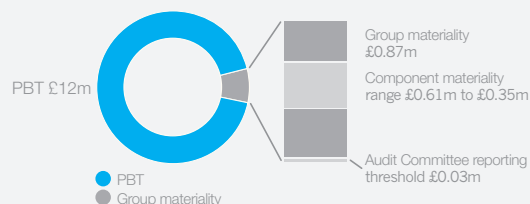
Based on the audit procedures performed, the uncertain provisions had not moved materially in the year and were consistent with previous periods. We concurred with management that these uncertain tax provisions were appropriately recognised in the financial statements.

Our application of materiality

We define materiality as the magnitude of misstatement in the financial statements that makes it probable that the economic decisions of a reasonably knowledgeable person would be changed or influenced. We use materiality both in planning the scope of our audit work and in evaluating the results of our work.

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

	Group financial statements	Parent company financial statements
Materiality	£0.87m (2017: £0.8m)	£0.61m (2017: £0.56m)
Basis for determining materiality	<p>7.3% of income before tax.</p> <p>In 2017 a blended rate of materiality was used based on income before tax, revenue, and net assets.</p> <p>A blended rate was used as a benchmark in the previous year due to an acquisition that artificially lowered management's income before tax. In the current year the impact of acquisitions was lower and therefore income before tax was considered the appropriate benchmark.</p>	<p>Parent company materiality equates to 1.5% of net assets, which is capped at 70% of group materiality (2017: 1.5% of net assets, capped at 70% of group materiality)</p>
Rationale for the benchmark applied	<p>Income before tax is considered the most appropriate materiality benchmark as it is a key performance metric for users of the group financial statements.</p>	<p>Net assets is considered the most appropriate benchmark as it is the key performance indicator for users of the Porvair plc company only financial statements.</p>



We agreed with the Audit Committee that we would report to the Committee all audit differences in excess of £0.03m (2017: £0.02m), as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds. We also report to the Audit Committee on disclosure matters that we identified when assessing the overall presentation of the financial statements.

An overview of the scope of our audit

Porvair plc is a multi-national group operating across the UK, central Europe, the US, and Asia. Its key operations are located in the UK and the US, with its head-quarters based in the UK.

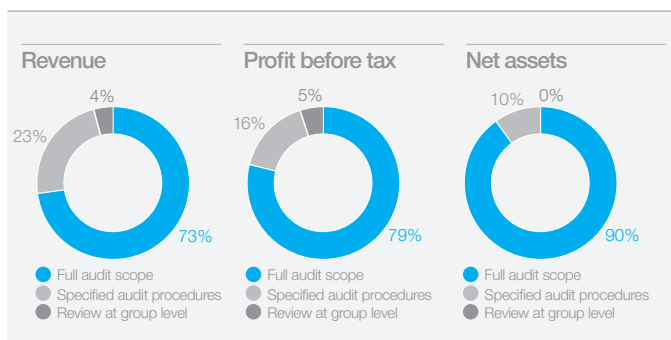
Our group audit was scoped by obtaining an understanding of the group and its environment, including group-wide controls, and assessing the risks of material misstatement at the group level.

The group's accounting process is structured around local finance functions. Each local finance function reports into the central Group finance function based at the Group's head office. Based on our assessment of the Group, we focused our group audit scope primarily on group businesses within the UK and the significant operations in the US. These businesses were subject to a full scope audit performed by the group auditors and other Deloitte UK component audit teams.

With regard to component auditors, the group audit team had substantial oversight of the component audit process. This was achieved through continuous communication; an active involvement in the risk assessment and scoping process for the component; on-site visits; and attendance at planning, progress update, and close meetings.

In addition, five other businesses were subject to specific audit procedures on material account balances, where the extent of our testing was based on our assessment of the risks of material misstatement and of the materiality of the Group's operations at those businesses. The specific audit procedures were performed by the Group audit team.

The twelve components subject either to a full audit or specified audit procedures account for 96% of the Group's revenue, 95% of the Group's profit before tax and 100% of the Group's net assets.



The remaining four entities were subject to analytical review by the Group team.

Our audit work for each component was executed at levels of materiality applicable to each individual component which were lower than Group materiality. The component materiality ranges were between £0.35m to £0.61m.

At the parent entity level we also tested the consolidation process.

Other information

The directors are responsible for the other information. The other information comprises the information included in the annual report, other than the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion 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 such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in 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.

In this context, matters that we are specifically required to report to you as uncorrected material misstatements of the other information include where we conclude that:

- *Fair, balanced and understandable* – the statement given by the directors that they consider the annual report and financial statements taken as a whole is fair, balanced and understandable and provides the information necessary for shareholders to assess the group's position and performance, business model and strategy, is materially inconsistent with our knowledge obtained in the audit; or
- *Audit committee reporting* – the section describing the work of the audit committee does not appropriately address matters communicated by us to the audit committee; or
- *Directors' statement of compliance with the UK Corporate Governance Code* – the parts of the directors' statement required under the Listing Rules relating to the company's compliance with the UK Corporate Governance Code containing provisions specified for review by the auditor in accordance with Listing Rule 9.8.10R(2) do not properly disclose a departure from a relevant provision of the UK Corporate Governance Code.

We have nothing to report in respect of these matters.

Independent auditor's report to the members of Porvair plc continued

Responsibilities of directors

As explained more fully in the statement of directors' responsibilities, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the directors 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 parent 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 parent company or to cease operations, or have no realistic alternative but to do so.

Auditor's 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 auditor's 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.

Details of the extent to which the audit was considered capable of detecting irregularities, including fraud are set out below.

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

Extent to which the audit was considered capable of detecting irregularities, including fraud

We identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and then design and perform audit procedures responsive to those risks, including obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion.

Identifying and assessing potential risks related to irregularities

In identifying and assessing risks of material misstatement in respect of irregularities, including fraud and non-compliance with laws and regulations, our procedures included the following:

- enquiring of group management, financial management of key operating units, and the audit committee, including obtaining and reviewing supporting documentation, concerning the group's policies and procedures relating to:
 - identifying, evaluating and complying with laws and regulations and whether they were aware of any instances of non-compliance;

- detecting and responding to the risks of fraud and whether they have knowledge of any actual, suspected or alleged fraud;
- the internal controls established to mitigate risks related to fraud or non-compliance with laws and regulations;
- discussing among the engagement team, including significant component audit teams, and involving relevant internal specialists, including tax, valuations, and pensions specialists regarding how and where fraud might occur in the financial statements and any potential indicators of fraud. As part of this discussion, we identified potential for fraud in the following area: revenue recognition of long-term contracts under IAS 11; and
- obtaining an understanding of the legal and regulatory frameworks that the group operates in, focusing on those laws and regulations that had a direct effect on the financial statements or that had a fundamental effect on the operations of the group. The key laws and regulations we considered in this context included the UK Companies Act, Listing Rules, pensions legislation, and tax legislation.

Audit response to risks identified

As a result of performing the above, we identified revenue recognition on long-term contracts as a key audit matter. The key audit matters section of our report explains the matters in more detail and also describes the specific procedures we performed in response to this key audit matter.

In addition to the above, our procedures to respond to risks identified included the following:

- reviewing the financial statement disclosures and testing to supporting documentation to assess compliance with relevant laws and regulations discussed above;
- enquiring of management and the audit committee concerning actual and potential litigation and claims;
- performing analytical procedures to identify any unusual or unexpected relationships that may indicate risks of material misstatement due to fraud;
- reading minutes of meetings of those charged with governance, reviewing internal audit reports and reviewing correspondence with relevant tax authorities; and
- in addressing the risk of fraud through management override of controls, testing the appropriateness of journal entries and other adjustments; assessing whether the judgements made in making accounting estimates are indicative of a potential bias; and evaluating the business rationale of any significant transactions that are unusual or outside the normal course of business.

We also communicated relevant identified laws and regulations and potential fraud risks to all engagement team members, including internal specialists and significant component audit teams, and remained alert to any indications of fraud or non-compliance with laws and regulations throughout the audit.

Report on other legal and regulatory requirements

Opinions on other matters prescribed by the Companies Act 2006

In our opinion the part of the directors' remuneration report to be audited has been properly prepared in accordance with the Companies Act 2006.

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the strategic report and the directors' report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the strategic report and the directors' report have been prepared in accordance with applicable legal requirements.

In the light of the knowledge and understanding of the group and of the parent company and their environment obtained in the course of the audit, we have not identified any material misstatements in the strategic report or the directors' report.

Matters on which we are required to report by exception

Adequacy of explanations received and accounting records

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 parent company, or returns adequate for our audit have not been received from branches not visited by us; or
- the parent company financial statements are not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

Directors' remuneration

Under the Companies Act 2006 we are also required to report if in our opinion certain disclosures of directors' remuneration have not been made or the part of the directors' remuneration report to be audited is not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

Other matters

Auditor tenure

Following the recommendation of the audit committee, we were appointed by the members at the AGM on 11 April 2017 to audit the financial statements for the year ending 30 November 2017 and subsequent financial periods. The period of total uninterrupted engagement including previous renewals and reappointments of the firm is two years, covering the years ending 30 November 2017 to 30 November 2018.

Consistency of the audit report with the additional report to the audit committee

Our audit opinion is consistent with the additional report to the audit committee we are required to provide in accordance with ISAs (UK).

Use of our report

This report is made solely to the company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Paul Schofield FCA (Senior statutory auditor)

For and on behalf of Deloitte LLP
Statutory Auditor
Cambridge, United Kingdom
25 January 2019

Consolidated income statement

For the year ended 30 November	Note	2018 £'000	2017 £'000
Continuing operations			
Revenue	2,3	128,823	116,423
Cost of sales		(84,444)	(78,091)
Gross profit		44,379	38,332
Distribution costs		(2,172)	(1,645)
Administrative expenses		(29,339)	(24,348)
<i>Adjusted operating profit</i>		14,343	13,021
<i>Adjustments</i>			
<i>Equalisation of guaranteed minimum pension</i>	2	(773)	–
<i>Amortisation of acquisition intangibles</i>	2	(564)	(244)
<i>Other acquisition related adjustments</i>	2	(138)	(438)
Operating profit	3,4	12,868	12,339
Finance income	6	6	4
Finance costs	6	(836)	(661)
Profit before income tax	3,4	12,038	11,682
<i>Adjusted income tax expense</i>		(3,113)	(3,011)
<i>Adjustments</i>			
<i>Tax effect of operating profit adjustments</i>	2	325	171
<i>Exceptional reduction of US deferred tax liability</i>	2	778	–
Income tax expense	7	(2,010)	(2,840)
Profit for the year		10,028	8,842
Profit attributable to:			
– Owners of the parent		10,045	8,861
– Non-controlling interests		(17)	(19)
Profit for the year		10,028	8,842
Earnings per share (basic)	8	22.1p	19.5p
Adjusted earnings per share (basic)	8	22.9p	20.7p
Earnings per share (diluted)	8	22.0p	19.4p
Adjusted earnings per share (diluted)	8	22.8p	20.5p

Consolidated statement of comprehensive income

For the year ended 30 November	2018 £'000	2017 £'000
Profit for the year	10,028	8,842
Other comprehensive income/(expense):		
Items that will not be reclassified to profit or loss		
Actuarial gain/(loss) in defined benefit pension plan net of tax	2,948	(66)
Items that may be subsequently reclassified to profit or loss		
Exchange gains/(losses) on translation of foreign subsidiaries	3,606	(3,985)
Tax relating to components of other comprehensive income	(149)	–
Changes in fair value of foreign exchange contracts held as a cash flow hedge	–	157
	3,457	(3,828)
Other comprehensive income/(expense) for the year	6,405	(3,894)
Total comprehensive income for the year	16,433	4,948
Comprehensive income attributable to:		
– Owners of the parent	16,450	4,967
– Non-controlling interests	(17)	(19)
Total comprehensive income for the year	16,433	4,948

Consolidated balance sheet

Company registered number 01661935

As at 30 November

	Note	2018 £'000	2017 £'000
Non-current assets			
Property, plant and equipment	10	21,827	19,997
Goodwill and other intangible assets	11	67,001	57,227
Deferred tax asset	19	2,304	2,933
		91,132	80,157
Current assets			
Inventories	13	19,856	16,067
Trade and other receivables	14	22,336	19,186
Derivative financial instruments	12	–	40
Cash and cash equivalents	15	11,492	12,497
		53,684	47,790
Current liabilities			
Trade and other payables	16	(32,826)	(27,736)
Current tax liabilities		(1,530)	(1,164)
Provisions for other liabilities and charges	21	(506)	(1,217)
		(34,862)	(30,117)
Net current assets		18,822	17,673
Non-current liabilities			
Borrowings	18	(4,867)	(2,711)
Deferred tax liability	19	(2,032)	(2,166)
Retirement benefit obligations	20	(12,356)	(15,670)
Other payables	25	(1,008)	(2,216)
Provisions for other liabilities and charges	21	(219)	(178)
		(20,482)	(22,941)
Net assets		89,472	74,889
Capital and reserves			
Share capital	22	917	913
Share premium account	22	35,958	35,831
Cumulative translation reserve		10,570	6,964
Retained earnings		42,024	31,161
Equity attributable to owners of the parent		89,469	74,869
Non-controlling interests		3	20
Total equity		89,472	74,889

The financial statements on pages 72 to 109 were approved by the Board of Directors on 25 January 2019 and were signed on its behalf by:

B D W Stocks

C P Tyler

Consolidated cash flow statement

For the year ended 30 November	Note	2018 £'000	2017 £'000
Cash flows from operating activities			
Cash generated from operations	24	15,335	12,257
Interest paid		(345)	(220)
Tax paid		(2,419)	(2,741)
Net cash generated from operating activities		12,571	9,296
Cash flows from investing activities			
Interest received		6	4
Acquisition of subsidiaries (net of cash acquired)	25	(9,007)	(5,932)
Purchase of property, plant and equipment	10	(3,796)	(5,248)
Purchase of intangible assets	11	(656)	(177)
Share capital from non-controlling interests		–	39
Net cash used in investing activities		(13,453)	(11,314)
Cash flows from financing activities			
Proceeds from issue of ordinary share capital	22	131	325
Purchase of EBT shares		(416)	(475)
Increase in borrowings		1,913	3,021
Dividends paid to shareholders	9	(1,957)	(1,769)
Net cash (used in)/from financing activities		(329)	1,102
Net decrease in cash and cash equivalents		(1,211)	(916)
Exchange gains/(losses) on cash and cash equivalents		206	(220)
		(1,005)	(1,136)
Cash and cash equivalents at 1 December		12,497	13,633
Cash and cash equivalents at 30 November	15	11,492	12,497

Reconciliation of net cash flow to movement in net cash

	2018 £'000	2017 £'000
Net decrease in cash and cash equivalents	(1,211)	(916)
Effects of exchange rate changes	(37)	90
Increase in borrowings	(1,913)	(3,021)
Net cash at 1 December	9,786	13,633
Net cash at 30 November	6,625	9,786

Consolidated statement of changes in equity

	Note	Share capital £'000	Share premium account £'000	Cumulative translation reserve £'000	Retained earnings £'000	Equity attributable to owners of the parent £'000	Non-controlling interest £'000	Total equity £'000
Balance at 1 December 2016		906	35,513	10,949	24,078	71,446	–	71,446
Profit for the year		–	–	–	8,861	8,861	–	8,861
Other comprehensive (expense)/income		–	–	(3,985)	91	(3,894)	–	(3,894)
Total comprehensive income for the year		–	–	(3,985)	8,952	4,967	–	4,967
Consideration paid for purchase of own shares (held in trust)		–	–	–	(475)	(475)	–	(475)
Share based payments inclusive of tax		–	–	–	375	375	–	375
Proceeds from shares issued	22	7	318	–	–	325	–	325
Dividends paid	9	–	–	–	(1,769)	(1,769)	–	(1,769)
Total transactions with owners recognised directly in equity		7	318	–	(1,869)	(1,544)	–	(1,544)
Adjustment arising from change in non-controlling interest		–	–	–	–	–	20	20
Balance at 30 November 2017		913	35,831	6,964	31,161	74,869	20	74,889
Profit for the year		–	–	–	10,045	10,045	–	10,045
Other comprehensive income		–	–	3,606	2,799	6,405	–	6,405
Total comprehensive income for the year		–	–	3,606	12,844	16,450	–	16,450
Consideration paid for purchase of own shares (held in trust)		–	–	–	(416)	(416)	–	(416)
Share based payments inclusive of tax		–	–	–	392	392	–	392
Proceeds from shares issued	22	4	127	–	–	131	–	131
Dividends paid	9	–	–	–	(1,957)	(1,957)	–	(1,957)
Total transactions with owners recognised directly in equity		4	127	–	(1,981)	(1,850)	–	(1,850)
Adjustment arising from change in non-controlling interest		–	–	–	–	–	(17)	(17)
Balance at 30 November 2018		917	35,958	10,570	42,024	89,469	3	89,472

Notes to the consolidated financial statements

1 Summary of significant accounting policies

Porvair plc is a public company limited by shares incorporated in the UK under the Companies Act and listed on the London Stock Exchange. The Company is registered in England and Wales and its registered office is 7 Regis Place, Bergen Way, King's Lynn, PE30 2JN.

The principal activities of the Group and the nature of the Group's operations are set out in the Strategic Report.

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

Basis of preparation

The consolidated financial statements of the Group have been prepared in accordance with International Financial Reporting Standards (IFRSs) and the IFRS interpretations committee, as endorsed by the European Union, and those parts of the Companies Act 2006 applicable to companies reporting under IFRS. The Company has elected to prepare its entity accounts in accordance with United Kingdom Generally Accepted Accounting Practice ("UK GAAP"), including Financial Reporting Standard 101 Reduced Disclosure Framework (FRS101), and these are presented on pages 110 to 117.

The financial statements have been prepared on a going concern basis and under the historical cost convention as modified by the recognition of certain financial assets and financial liabilities (including derivative financial instruments) at fair value through profit or loss.

Basis of consolidation

The Group applies the acquisition method to account for business combinations. The consolidated financial statements incorporate the financial statements of the Company and entities controlled by the Company (its subsidiaries) made up to 30 November each year. Control is achieved where the Company has the power to govern the financial and operating policies of an investee entity so as to obtain benefits from its activities.

On acquisition, the assets and liabilities and contingent liabilities of a subsidiary are measured at their fair values at the date of acquisition. Any excess of the cost of acquisition over the fair values of the identifiable net assets acquired is recognised as goodwill. Acquisition related costs are expensed as incurred.

The results of subsidiaries acquired or disposed of during the year are included in the consolidated income statement from the effective date of acquisition or up to the effective date of disposal, as appropriate. Where necessary, adjustments are made to the financial statements of subsidiaries to bring the accounting policies used into line with those used by the Group.

Any contingent consideration to be transferred by the Group is recognised at fair value at the acquisition date. Subsequent changes to the fair value of the contingent consideration that is deemed to be an asset or liability is recognised in accordance with IAS 39 either in profit or loss. Contingent consideration that is classified as equity is not re-measured, and its subsequent settlement is accounted for within equity.

All intra-group transactions, balances, income and expenditures are eliminated on consolidation.

Going concern

The Directors have, at the time of approving the financial statements, a reasonable expectation that the Group has adequate resources to continue in operational existence for the foreseeable future. They continue to adopt the going concern basis of accounting in preparing the financial statements. Further detail is contained in the viability statement included in the Strategic Report on page 33.

Critical accounting judgements and key sources of estimation uncertainty

In the application of the Group's accounting policies the Directors are required to make judgements, estimates and assumptions about the carrying value of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the periods of the revision and future periods if the revision affects both current and future periods.

(a) Critical judgements in applying the Group's accounting policies

In the course of preparing the financial statements, no judgements have been made in the process of applying the Group's accounting policies, other than those involving estimations, that have had a significant effect on the amounts recognised in the financial statements.

(b) Key sources of estimation uncertainty

Material estimates and assumptions are made in particular with regard to: establishing uniform depreciation and amortisation periods for the Group, goodwill and intangible assets valuation (cash flows and discount rate), impairment testing, assumptions used in the calculation of share based payments, parameters for measuring pension and other provisions and the likelihood that tax assets can be realised. The key assumptions concerning the future, and other key sources of estimation uncertainty at the reporting period that may have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are discussed below:

- **Contract revenue**

The Group applies the percentage of completion method in accounting for its construction contracts. Use of the percentage of completion method requires the Group to estimate the construction performed to date as a proportion of the total construction to be performed. The estimation of costs to complete (which include potential warranties and claims) is considered to be a material estimate. If management's estimate of the outstanding costs of its construction contracts were increased/decreased by 10% at the balance sheet date, then the reported revenue in the year would decrease/increase by £644,000/£674,000, respectively, and the reported profit before tax in the year would decrease/increase by £546,000/£571,000, respectively.

1 Summary of significant accounting policies continued

• Goodwill

The Group tests annually whether goodwill has suffered any impairment. The recoverable amounts of cash-generating units have been determined based on value-in-use calculations. These calculations require the use of assumptions (see note 11), and no impairment is required, whether or not these assumptions are adversely changed by 10% at the balance sheet date, either separately or concomitantly.

• Pension obligation

The Group operates a defined benefit pension scheme, The Porvair plc Pension and Death Benefit Plan (the 'Plan'), covering a number of employees in the UK. The pension scheme is financed through a separate trust fund and is closed to new entrants. The present value of the obligations of this scheme is subject to financial assumptions and management contracts external actuarial guidance on this. Sensitivities in the principal assumptions on valuing the Plan's defined benefit obligation at 30 November 2018 have been calculated and are given in note 20. The Group calculates deferred tax on the defined benefit pension obligation using the latest substantively enacted UK corporation tax rate; any movements in the year are taken directly to equity. If the UK government increased/decreased the UK corporation tax rate by 1% then the related deferred tax asset on the pension obligation would increase/decrease by £122,000, respectively.

Goodwill

Goodwill arising on consolidation represents the excess of the cost of acquisition over the Group's interest in the fair value of the identifiable assets and liabilities of a subsidiary at the date of acquisition. The cost of acquisition includes the fair value of deferred and contingent consideration.

Goodwill is recognised as an asset at cost less accumulated impairment losses and reviewed for impairment annually, and more frequently if events or changes in circumstances indicate potential impairment. Any impairment is recognised immediately in the income statement and is not subsequently reversed.

For the purpose of impairment testing, goodwill acquired in a business combination is allocated to each of the cash generating units that is expected to benefit from the synergies of the combination.

On disposal of a subsidiary, the attributable amount of goodwill is included in the determination of the profit or loss on disposal.

Revenue recognition (excluding construction contracts)

Revenue comprises the invoiced value of goods and services supplied net of value added tax and other sales taxes. Revenue is recognised when goods are despatched to the customer, at which point the risks and rewards of ownership are transferred. Revenue from service contracts is recognised on a straight line basis over the contract period.

Interest income

Interest income is accrued on a straight line basis, by reference to the principal outstanding and the effective interest rate applicable, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount.

Construction contracts

Where the outcome of a construction contract can be estimated reliably, revenue and costs are recognised by reference to the stage of completion of the contract activity at the balance sheet date. This is normally measured by the proportion that contract costs incurred for work performed to date bear to the estimated total contract costs (including provisions for re-work, warranty risks and late delivery risks), except where this would not be representative of the stage of completion. Variations in contract work, claims and incentive payments are included to the extent that the amount can be measured reliably and its receipt is considered probable. Contract costs include costs directly related to the specific contract and indirect costs attributable to the contract.

Where the outcome of a construction contract cannot be estimated reliably, contract revenue is recognised to the extent of contract costs incurred where it is probable they will be recoverable. Contract costs are recognised as expenses in the period in which they are incurred.

When it is probable that total contract costs will exceed total revenue, the expected loss is recognised as an expense immediately.

Leasing

Rentals payable under operating leases are charged to the income statement on a straight line basis over the term of the relevant lease.

Foreign currencies

The consolidated financial statements are presented in Pounds Sterling, which is the Company's functional and presentation currency. The Group determines the functional currency of each entity based on the primary economic environment in which the entity operates and items included in the financial statements of each entity are measured using that functional currency.

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuation where items are re-measured. At each balance sheet date, monetary assets and liabilities that are denominated in foreign currencies are retranslated at the rates prevailing on the balance sheet date. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the income statement, except when deferred in other comprehensive income as qualifying cash flow hedges.

On consolidation, the assets and liabilities of the Group's overseas operations, borrowings and other currency instruments are translated at exchange rates prevailing on the balance sheet date. Income and expense items are translated at the average exchange rates for the period unless exchange rates fluctuate significantly. Exchange differences arising, if any, are classified as other comprehensive income and transferred to the Group's translation reserve.

Notes to the consolidated financial statements continued

1 Summary of significant accounting policies continued

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate.

Borrowing costs

All borrowing costs are typically recognised in the income statement in the period in which they are incurred, with the exception of borrowing costs incurred on the arrangement of new facilities which are capitalised and subsequently recognised in the income statement over the period of the borrowings.

Government grants

Government grants for the development of new products are recognised over the periods necessary to match them with the related costs and are deducted in reporting the related expense.

Retirement benefit costs

Payments to defined contribution retirement benefit schemes are charged as an expense as they fall due.

For defined benefit retirement schemes, the cost of providing benefits is determined using the Projected Unit Credit Method, with actuarial valuations being carried out at each balance sheet date. Actuarial gains and losses are recognised in full in the period in which they occur. They are recognised in the consolidated statement of comprehensive income.

The retirement benefit obligation in the balance sheet represents the present value of the defined benefit obligation as adjusted for unrecognised past service cost and as reduced by the fair value of scheme assets.

Taxation

The tax expense represents the sum of the current tax and deferred tax.

Current tax is based on taxable profit for the period. Taxable profit differs from net profit as reported in the income statement because it excludes items of income or expense that are taxable or deductible in other periods and it further excludes items that are never taxable or deductible. The Group's liability for current tax is calculated using tax rates that are relevant to the period.

Deferred tax is the tax expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit, and is accounted for using the balance sheet liability method. Deferred tax liabilities are generally recognised for all taxable temporary differences and deferred tax assets are recognised to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilised. Such assets and liabilities are not recognised if the temporary difference arises from goodwill or from the initial recognition (other than a business combination) of other assets and liabilities in a transaction that affects neither the tax profit nor the accounting profit.

Deferred tax liabilities are recognised for taxable temporary differences arising on investments in subsidiaries and associates, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. The carrying amount of deferred tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all, or part, of the asset to be recovered.

Deferred tax is calculated at the tax rates which have been enacted or substantively enacted by the balance sheet date and are expected to apply in the period when the liability is settled or the asset is realised. Deferred tax is recognised in the income statement, except when it relates to items recognised directly to other comprehensive income or directly to equity. In this case, the deferred tax is also recognised in other comprehensive income or directly in equity, respectively.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied by the same taxation authority and the Group intends to settle its current tax assets and liabilities on a net basis.

Property, plant and equipment

Property, plant and equipment for use in the production or supply of goods or services, or for administrative purposes, are stated in the balance sheet at their cost less any subsequent accumulated depreciation and subsequent accumulated impairment losses.

Property, plant and equipment in the course of construction for production or administrative purposes are carried at cost, less any recognised impairment loss. Cost includes professional fees and, for qualifying assets, borrowing costs capitalised in accordance with the Group's accounting policy. Depreciation for these assets, on the same basis as other assets, commences when the assets are ready for their intended use.

Depreciation is charged so as to write assets down to their residual value, other than assets under construction, over their estimated useful lives, using the straight line method, on the following bases:

Buildings	2.5 – 3%
Plant, machinery and equipment	10 – 33%

Freehold land is not depreciated.

The gain or loss arising on the disposal or retirement of an asset is determined as the difference between the sales proceeds and the carrying amount of the assets and is recognised in the income statement.

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

1 Summary of significant accounting policies continued

Internally generated intangible assets – research and development expenditure

Expenditure on research activities is recognised as an expense in the period in which it is incurred.

An internally generated intangible asset arising from the Group's product development expenditure is recognised only if all of the following criteria are demonstrable:

- The technical feasibility of completing the intangible asset so that it will be available for use or sale;
- The intention to complete the intangible asset and use or sell it;
- The ability to use the intangible asset or to sell it;
- The way in which the intangible asset will generate probable future economic benefits;
- The availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- The ability to measure reliably the expenditure attributable to the intangible asset during its development.

Internally generated intangible assets are stated at cost and held at cost less accumulated amortisation and impairment losses, and are recognised as an expense on a straight line basis over their estimated useful lives. Useful life is determined with reference to estimated product life in the industry in which the expenditure has been incurred. Useful life of the Group's development expenditure is currently between 3 and 10 years. Amortisation of development expenditure commences when development has been completed to management satisfaction and the related project is ready for its intended use. Where no internally generated intangible asset can be recognised, development expenditure is recognised as an expense in the period in which it is incurred.

Patents, trademarks and know-how

Patents, trademarks and know-how purchased as part of an acquisition, where there are expected future economic benefits, are initially measured at fair value and amortised over their estimated useful lives of 3-10 years.

Software

Software costs are classified as intangible fixed assets and measured initially at purchase cost. Amortisation is charged on a straight line basis over their estimated useful lives of 3-5 years.

Impairment of property, plant and equipment and intangible assets

The Group reviews annually the carrying amounts of its property, plant and equipment and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash generating units).

Recoverable amount is the higher of fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted. If the recoverable amount of an asset or cash generating unit is estimated to be less than its carrying amount, the carrying amount of the asset or cash generating unit is reduced to its recoverable amount. An impairment loss is recognised as an expense immediately.

When an impairment loss subsequently reverses, the carrying amount of the asset or cash generating unit (other than goodwill) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset or cash generating unit in prior years. A reversal of an impairment loss is recognised in the income statement immediately.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost comprises direct materials and, where applicable, direct labour costs and those overheads that have been incurred in bringing the inventories to their present location and condition. Cost is calculated using the weighted average method. Net realisable value represents the estimated selling price less all estimated costs of completion and costs to be incurred in marketing, selling and distribution. Where necessary, provision is made for obsolete, slow moving and defective inventories.

Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are included in current assets, except for those with maturities greater than 12 months after the balance sheet date. These are classified as non-current assets. Loans are classified as "other receivables" in the balance sheet.

Trade receivables

Trade receivables are recognised initially at fair value and subsequently held at amortised cost. A provision for impairment of trade receivables is established when there is objective evidence that the Group will not be able to collect all amounts due according to the original terms of receivables. Significant financial difficulties of the debtor and default or delinquency in payments when credit control procedures have been applied are indicators an impairment may be required. The amount of the provision is the difference between the asset's carrying amount and the present value of the estimated future cash flows, discounted at the effective interest rate. The amount of the provision is recognised in the income statement within administrative expenses. When a trade receivable is uncollectible, it is written off to the provision for impairment. Subsequent recoveries of amounts previously written off are credited against administrative expenses in the income statement.

Notes to the consolidated financial statements continued

1 Summary of significant accounting policies continued

Cash and cash equivalents

In the consolidated cash flow statement, cash and cash equivalents includes cash in hand, deposits held at call with banks, other short-term highly liquid investments with original maturities of three months or less and bank overdrafts. In the consolidated balance sheet, bank overdrafts are shown within borrowings in current liabilities.

Bank borrowings

Interest bearing bank loans and overdrafts are recorded at the proceeds received, net of direct issue costs. Finance charges, including premiums payable on settlement or redemption and direct issue costs, are accounted for on an accruals basis in the income statement using the effective interest method and are added to the carrying amount of the instrument, to the extent that they are not settled in the period in which they arise.

Trade payables

Trade payables are not interest bearing and are initially recognised at fair value and subsequently held at amortised cost.

Equity instruments

Ordinary shares are classified as equity. Equity instruments issued by the Company are recorded at the proceeds received, net of direct issue costs.

Where any Group company purchases the Company's equity share capital ("treasury shares"), the consideration paid, including any directly attributable incremental costs (net of income taxes), is deducted from equity attributable to the Company's equity holders until the shares are cancelled or reissued. Where such ordinary shares are subsequently reissued, any consideration received, net of any directly attributable incremental transaction costs and the related income tax effects, is included in equity attributable to the Company's equity holders.

Derivative financial instruments and hedge accounting

The Group's activities expose it primarily to the financial risks of changes in foreign currency exchange rates and interest rates.

The Group uses foreign exchange forward contracts and interest rate swap agreements to hedge these exposures. The Group does not use derivative financial instruments for speculative purposes.

The use of financial derivatives is governed by the Group's policies approved by the Board of Directors, which provides written principles on the use of financial derivatives.

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently remeasured at their fair value. The method of recognising the resulting gain or loss depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged. The Group designates certain derivatives as cash flow hedges.

For cash flow hedges the Group documents at the inception of the transaction the relationship between hedging instruments and hedged items, as well as its risk management objectives and strategy for undertaking various hedging transactions. The Group also documents its assessment, both at hedge inception and on an ongoing basis, of whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in fair values or cash flows of hedged items.

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognised in equity. The gain or loss relating to the ineffective portion is recognised immediately in the income statement.

Amounts accumulated in equity are recycled in the income statement in the periods when the hedged item affects profit or loss (for example, when the forecast sale that is hedged takes place).

When a hedging instrument expires or is sold, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in equity at that time remains in equity and is recognised when the forecast transaction is ultimately recognised in the income statement. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is immediately transferred to the income statement.

Changes in the fair value of derivative financial instruments that do not qualify for hedge accounting are recognised in the income statement as they arise.

Derivatives embedded in other financial instruments or other host contracts are treated as separate derivatives when their risks and characteristics are not closely related to those of host contracts and the host contracts are not carried at fair value, with unrealised gains or losses reported in the income statement.

Provisions

Provisions have been made for future dilapidation costs on leased property and for warranties on shipped goods sales, but do not include warranties on long term contracts which are typically included in the overall assessment of costs to come for the purposes of the percentage completion basis calculation. These provisions are the Directors' best estimates as the actual costs and timing of future cash flows are dependent on future events. Any difference between expectations and the actual future liability will be accounted for in the period when such determination is made.

Where the impact of discounting is material, the Group discounts at its weighted average cost of capital, unless some other rate is more appropriate in the circumstances.

Share based payments

The Group issues equity settled, share based payments to certain employees. Equity settled, share based payments are measured at fair value at the date of grant. The fair value determined at the grant date of the equity settled, share based payments is expensed on a straight line basis over the vesting period, based on the Group's estimate of shares that will eventually vest. The charge is then credited back to reserves.

1 Summary of significant accounting policies continued

Non-market performance and service conditions are included in assumptions about the number of options that are expected to vest.

At each balance sheet date, the Group revises its estimates of the number of options that are expected to vest. It recognises the impact of the revision to original estimates, if any, in the income statement, with a corresponding adjustment to equity.

Fair value is measured by use of a Black-Scholes model. The expected life used in the model has been adjusted, based on management's best estimate, for the effects of non-transferability, exercise restrictions, and behavioural considerations.

Adjusting items

When items of income or expense are material and they are relevant to an understanding of the entity's financial performance, they are disclosed separately within the financial statements. Such adjusting items include material costs or reversals arising from acquisitions or disposals of businesses, including acquisition costs, creation or reversals of provisions related to changes in estimates for contingent consideration on acquisition, amortisation of acquired intangible assets, and other one-off items that may arise.

Segment reporting

An operating segment is a component of an entity that engages in business activities from which it may earn revenues and incur expenses (including revenues and expenses relating to transactions with other components of the same entity). An operating segment's operating results are regularly reviewed by the entity's chief operating decision maker to make decisions about resources to be allocated to the segment and assess its performance, and for which discrete financial information is available. Operating segments are aggregated into reporting segments where they share similar economic characteristics as a result of the nature of the products sold or the services provided, the production processes used to manufacture the products, the type of customer for the products and services, and the methods used to distribute the products or provide the services.

Dividend distribution

Final dividend distribution to the Company's shareholders is recognised as a liability in the Group's financial statements in the period in which the dividends are approved by the Company's shareholders.

Related party transactions

There are no related party transactions outside of the Group.

New standards, amendments and interpretations

(a) Standards, amendments and interpretations effective for the first time in the year ended 30 November 2018:

No new standards, amendments or interpretations, effective for the first time for the financial year beginning on or after 1 December 2017 have had a material impact on the Group.

(b) Standards, amendments and interpretations that are not yet effective and have not been early adopted:

At the date of authorisation of these financial statements, the Group has not applied the following new and revised IFRSs that have been issued but are not yet effective and in some cases had not yet been adopted by the EU:

• IFRS 9	Financial instruments
• IFRS 15	Revenue from Contracts with Customers
• IFRS 2 (amendments)	Classification and Measurement of Share-based Payment Transactions
• IFRS 16	Leases
• IFRS 10 and IAS 28 (amendments)	Sales or Contribution of Assets between an Investor and its Associate or Joint Venture

The Directors do not expect that the adoption of the Standards listed above will have a material impact on the financial statements of the Group in future periods, except as noted below:

IFRS 15 'Revenue from Contracts with Customers'

For the Group, transition to IFRS 15 is effective from 1 December 2018. The half year results for the period ended 31 May 2019 will be IFRS compliant with the first Annual Report published in accordance with IFRS 15 being the 30 November 2019 report. The Group plans to adopt the modified retrospective approach. Under this approach the comparatives for the year ended 30 November 2018 will not be restated. Instead, an adjustment in respect of the contracts open as at 1 December 2018 will be recognised in the opening retained earnings.

IFRS 15 replaces existing revenue guidance, including:

- IAS 18 'Revenue'
- IAS 11 'Construction contracts'

IFRS sets out the requirements for recognising revenue from contracts with customers. The standard requires entities to apportion revenue earned from contracts to individual promises, or performance obligations, on a stand-alone selling price basis, based on a five-step model.

The Group has successfully completed its transition exercise in quantifying the full impact of this standard. Having performed an impact assessment in the year, the Group has worked through a comprehensive transition exercise at each of its divisions. The autonomous nature of the Group means that each subsidiary sets its own terms and conditions and operating procedures and as such this was the appropriate level of the transition exercise. The transition exercise has involved scoping the Group's revenues to identify revenue streams with like commercial terms and performing sample contract reviews to determine the appropriate revenue recognition under IFRS 15. To ensure a consistent approach to the exercise and consistent judgements, the exercise has been supported by Group through setting the approach to transition, and providing appropriate tools and guidance.

Notes to the consolidated financial statements continued

1 Summary of significant accounting policies continued

The following areas of potential differences were identified from our initial assessment which have been investigated as part of our transition exercise:-

- Certain companies in the Group have long-term contracts, which are currently accounted in accordance with IAS 11, with revenue recognised as costs are incurred over the life of each project. Under IFRS 15, the revenue on project contracts will be recognised as each performance obligation is fulfilled, meaning that the revenue and profit profile of these contracts will be less even, with most of the revenue recognised as product is shipped, and warranty obligations being recognised on the balance sheet to a greater extent than under IAS 11.
- Certain companies across the Group arrange shipping and handling on behalf of the customers but, based on assessment of all terms and conditions, determine control of goods to pass on despatch. Accordingly, shipping and handling is a separate performance obligation under IFRS 15 and revenue is only recognised when the performance obligation is fulfilled. Having reviewed the terms of the arrangements there is not a material change in the timing or quantum of revenue recognition from this change.
- Many of the companies have warranty arrangements with their customers. Having reviewed the details of the warranty arrangements, which are both assurance and service, there is no material change in accounting required under IFRS 15.
- Certain companies provide installation services for their customers as part of their sale of goods contracts. Having reviewed these contracts, there is a change in accounting required under IFRS 15 to defer the installation related revenue; however, this timing change is immaterial to the individual companies and to the Group.

Based on our work, most of our companies are unaffected but have implemented process changes to comply with IFRS 15. A small number of our companies have individually material adjustments to their balance sheets through acceleration or deferral of revenue on the opening balance sheet. However, at Group level these do not represent a material change.

The net impact to the opening balance sheet at 1 December 2018 is an immaterial reduction of £125,000 to net assets, with the material opening balance sheet movements being the derecognition of deferred revenue (£7.7 million), and the recognition of warranty provisions (£8.2 million). As the modified retrospective approach has been taken, there is no change to the consolidated income statement for the year ended 30 November 2018.

IFRS 16 'Leases'

For the Group, transition to IFRS 16 will take effect from 1 December 2019. The half year results for the period ending 31 May 2020 will be IFRS 16 compliant with the first Annual Report published in accordance with IFRS 16 being for the year ending 30 November 2020.

IFRS 16 replaces existing lease guidance, including:

- IAS 17 'Leases'
- IFRIC 4 'Determining whether an arrangement contains a lease'
- SIC 15 'Operating leases – Incentives'
- SIC 27 'Evaluating the substance of transactions involving the legal form of a lease'

IFRS 16 provides a single on-balance sheet accounting model for lessees which recognises a right of use asset, representing its right to use the underlying asset, and a lease liability, representing its obligations to make payment in respect of the use of the underlying asset. The distinction between finance and operating leases for lessees is removed.

The Group will likely opt to apply the exemptions available in respect of leases which are less than 12 months long and those which have been classified as leases of low-value items. In addition, the Group will likely apply the practical expedient allowing for IFRS 16 to be applied to all contracts previously assessed as containing a lease under IAS 17 and IFRIC 4 without reassessing whether such contracts meet the definition of a lease under IFRS 16.

The Group is currently assessing the financial impact of the new standard. The most significant impact currently identified will be that the Group's land and buildings leases will be brought on to the balance sheet. Further assessment of other leases is currently ongoing. The actual impact of applying IFRS 16 is dependent on future economic conditions including:

- movements in the Group's borrowing rate at 30 November 2019;
- the composition of the Group's lease portfolio at transition date;
- the Group's view on whether renewal options will be exercised; and
- the Group's final decisions regarding the use of recognition exemptions and practical expedients for transition.

The Group's discounted future lease commitments for land and buildings at the balance sheet date, which provides an indicator of the value to be brought on to the balance sheet, will be material.

In addition, the profile of expenses related to leasing arrangements will change. Straight line operating lease expenses will be replaced by the recognition of depreciation of the right-of-use asset and interest charges on lease liabilities, which follow a reducing-balance profile. Because of this, there will be earlier recognition of cost under IFRS 16 compared to the current treatment under IAS 17; however, over the lifetime of each lease there will no change in the overall income statement impact or the cash paid out on it under the IFRS 16 or IAS 17 accounting treatment.

The Group has no leases currently classified as finance leases in the Group financial statements.

1 Summary of significant accounting policies continued**IFRS 9 'Financial Instruments'**

For the Group, transition to IFRS 9 is effective from 1 December 2018. The half year results for the period ended 31 May 2019 will be IFRS 9 compliant with the first Annual Report published in accordance with IFRS 9 being the 30 November 2019 report. The Group has elected not to restate comparatives on initial application of IFRS 9, the opening impact of adoption of IFRS 9 will be recognised in reserves.

IFRS 9 provides a new expected losses impairment model for financial assets, including trade receivables, and includes amendments to classification and measurement of financial instruments.

During this reporting period the Group has undertaken an impact assessment of this new standard on its financial statements. The Group's use of financial instruments is limited to short-term trading balances such as receivables and payables, borrowings and derivatives used for hedging foreign exchange risks. Therefore, the standard impacts the Group's classification of financial instruments and the measurement of impairment of short-term financial assets.

As part of the impact assessment, using the simplified approach allowed by the standard, we established an appropriate impairment model and accompanying processes to be applied to receivables by our companies and have asked them to recalculate their provision at 30 November 2018 using this new methodology. The impact is an immaterial release of provision of approximately £50,000 arising where certain companies have historically held larger provisions. For most companies the revised methodology results in a similar level of provision to that held under current accounting standards.

In accordance with IFRS 9, this adjustment will be reflected as an opening retained earnings adjustment in the Annual Report for the year ended 30 November 2019.

2 Alternative performance measures

Alternative performance measures are used by the Directors and management to monitor business performance internally and exclude certain cash and non-cash items which they believe are not reflective of the normal course of business of the Group. The Directors believe that disclosing such non-IFRS measures enables a reader to isolate and evaluate the impact of such items on results and allows for a fuller understanding of performance from year to year. Alternative performance measures may not be directly comparable with other similarly titled measures used by other companies.

Alternative revenue measures	2018 £'000	2017 £'000	Growth %
Aerospace & Industrial			
Underlying revenue	47,916	43,651	10
Divisional adjustment	–	(1,955)	
Acquisitions	1,671	–	
Revenue at constant currency	49,587	41,696	19
Exchange	949	1,553	
Revenue as reported	50,536	43,249	17
Laboratory			
Underlying revenue	25,970	26,075	–
Divisional adjustment	–	1,955	
Acquisitions	11,291	5,866	
Underlying revenue including acquisitions	37,261	33,896	10
Exchange	1,398	1,430	
Revenue as reported	38,659	35,326	9
Metal Melt Quality			
Underlying revenue	37,678	34,707	9
Exchange	1,950	3,141	
Revenue as reported	39,628	37,848	5
Group			
Underlying revenue	111,564	104,433	7
Acquisitions	12,962	5,866	
Revenue at constant currency	124,526	110,299	13
Exchange	4,297	6,124	
Revenue as reported	128,823	116,423	11

Revenue at constant currency is derived from translating overseas subsidiaries at budgeted fixed exchange rates in both years of US\$1.4:£1, €1.2:£1 and RMB10:£1.

Underlying revenue is revenue at constant currency adjusted for the impact of acquisitions made in the current and prior year and, in the case of 2017, the impact of accounts that were managed by the Laboratory division in 2017 but transferred to Aerospace & Industrial in 2018.

Notes to the consolidated financial statements continued

2 Alternative performance measures continued

Alternative profit measures

A reconciliation of the Group's adjusted performance measures to the reported IFRS measures is presented below:

	Adjusted £'000	2018 Adjustment £'000	Total £'000	Adjusted £'000	2017 Adjustment £'000	Total £'000
Operating profit	14,343	(1,475)	12,868	13,021	(682)	12,339
Finance income	6	–	6	4	–	4
Finance costs	(836)	–	(836)	(661)	–	(661)
Profit before income tax	13,513	(1,475)	12,038	12,364	(682)	11,682
Income tax expense	(3,113)	1,103	(2,010)	(3,011)	171	(2,840)
Profit for the year	10,400	(372)	10,028	9,353	(511)	8,842

An analysis of adjusting items is given below:

Affecting operating profit

– One-off pension cost – equalisation of guaranteed minimum pension	(773)	–
– Amortisation of intangible assets acquired through acquisitions	(564)	(244)
– Release of contingent consideration	–	20
– Acquisition costs	(138)	(458)
	(1,475)	(682)

Affecting tax

– Tax effect of adjusting items	325	171
– Deferred tax credit resulting from the US Tax Cuts and Jobs Act	778	–
	1,103	171
Total adjusting items	(372)	(511)

Adjusted operating profit and adjusted profit before tax exclude:

- the impact of acquiring businesses:
 - the amortisation of acquired intangible assets of £0.6 million (2017: £0.2 million); acquisition expenses; and
 - other adjustments to profit and loss related to acquiring businesses of £0.1 million (2017: £0.4 million),
- other items that are considered significant and where treatment as an adjusted item provides a more consistent assessment of the Group's trading:
 - an exceptional charge of £773,000 (2017: £nil), following recent legal precedent, to enhance the benefits provided by the Group's defined benefit pension plan to equalise its guaranteed minimum pensions for men and women on benefits earned between 17 May 1990 and 6 April 1997.

Adjusted profit for the year excludes the adjustments to profit before tax together with their tax effect and an exceptional one off tax credit of £778,000 (2017: £nil) reflecting a reduction in the Group's deferred tax liability from the change in US tax rates from December 2017 enacted in the US Tax Cuts and Jobs Act.

3 Segment information

The chief operating decision maker has been identified as the Board of Directors. The Board of Directors has instructed the Group's internal reporting to be based around differences in products and services, in order to assess performance and allocate resources. Management have determined the operating segments based on this reporting.

At 30 November 2018, the Group is organised on a worldwide basis into three operating segments:

- (1) Aerospace & Industrial – principally serving the aviation, and energy and industrial markets;
- (2) Laboratory – principally serving the bioscience and environmental laboratory instrument and consumables market; and
- (3) Metal Melt Quality – principally serving the global aluminium and super-alloy markets, and the North American iron foundry market.

Other Group operations' costs, assets and liabilities are included in "Central". These costs mainly comprise Group corporate costs, including new business development costs, some research and development costs and general financial costs, and assets and liabilities mainly comprise Group retirement benefit obligations, tax assets and liabilities, cash and borrowings.

The segment results for the year ended 30 November 2018 are as follows:

30 November 2018	Note	Aerospace & Industrial £'000	Laboratory £'000	Metal Melt Quality £'000	Central £'000	Group £'000
Total segment revenue		50,546	41,181	39,628	–	131,355
Inter-segment revenue		(10)	(2,522)	–	–	(2,532)
Revenue		50,536	38,659	39,628	–	128,823
Adjusted operating profit/(loss)		8,043	6,494	2,373	(2,567)	14,343
– Equalisation of GMP	2	–	–	–	(773)	(773)
– Amortisation of acquisition intangible assets	2	(302)	(255)	(7)	–	(564)
– Other adjustments	2	–	–	–	(138)	(138)
Operating profit/(loss)		7,741	6,239	2,366	(3,478)	12,868
Net finance costs	6	–	–	–	(830)	(830)
Profit/(loss) before income tax		7,741	6,239	2,366	(4,308)	12,038
Income tax expense		–	–	–	(2,010)	(2,010)
Profit/(loss) for the year		7,741	6,239	2,366	(6,318)	10,028

The segment results for the year ended 30 November 2017 are as follows:

30 November 2017	Note	Aerospace & Industrial £'000	Laboratory £'000	Metal Melt Quality £'000	Central £'000	Group £'000
Total segment revenue		43,407	36,774	37,848	–	118,029
Inter-segment revenue		(158)	(1,448)	–	–	(1,606)
Revenue		43,249	35,326	37,848	–	116,423
Adjusted operating profit/(loss)		6,825	6,255	1,745	(1,804)	13,021
– Amortisation of acquisition intangible assets	2	(42)	(189)	(13)	–	(244)
– Other adjustments	2	–	–	–	(438)	(438)
Operating profit/(loss)		6,783	6,066	1,732	(2,242)	12,339
Net finance costs	6	–	–	–	(657)	(657)
Profit/(loss) before income tax		6,783	6,066	1,732	(2,899)	11,682
Income tax expense		–	–	–	(2,840)	(2,840)
Profit/(loss) for the year		6,783	6,066	1,732	(5,739)	8,842

Notes to the consolidated financial statements continued

3 Segment information continued

Other segment items included in the income statement are as follows:

30 November 2018	Note	Aerospace & Industrial £'000	Laboratory £'000	Metal Melt Quality £'000	Central £'000	Group £'000
Depreciation, impairment and amortisation (property, plant and equipment and intangible assets)	10,11	1,630	832	1,145	–	3,607
30 November 2017	Note	Aerospace & Industrial £'000	Laboratory £'000	Metal Melt Quality £'000	Central £'000	Group £'000
Depreciation, impairment and amortisation (property, plant and equipment and intangible assets)	10,11	1,394	672	1,162	–	3,228

The segment assets and liabilities at 30 November 2018 are as follows:

30 November 2018	Note	Aerospace & Industrial £'000	Laboratory £'000	Metal Melt Quality £'000	Central £'000	Group £'000
Segmental assets		59,655	37,608	33,869	2,192	133,324
Cash and cash equivalents	15	–	–	–	11,492	11,492
Total assets		59,655	37,608	33,869	13,684	144,816
Segmental liabilities		(18,610)	(11,365)	(3,999)	(4,147)	(38,121)
Retirement benefit obligations	20	–	–	–	(12,356)	(12,356)
Borrowings	18	–	–	–	(4,867)	(4,867)
Total liabilities		(18,610)	(11,365)	(3,999)	(21,370)	(55,344)

The segment assets and liabilities at 30 November 2017 are as follows:

30 November 2017	Note	Aerospace & Industrial £'000	Laboratory £'000	Metal Melt Quality £'000	Central £'000	Group £'000
Segmental assets		46,985	30,250	35,222	2,993	115,450
Cash and cash equivalents	15	–	–	–	12,497	12,497
Total assets		46,985	30,250	35,222	15,490	127,947
Segmental liabilities		(15,979)	(7,690)	(3,917)	(7,091)	(34,677)
Retirement benefit obligations	20	–	–	–	(15,670)	(15,670)
Borrowings	18	–	–	–	(2,711)	(2,711)
Total liabilities		(15,979)	(7,690)	(3,917)	(25,472)	(53,058)

Geographical analysis

	2018		2017	
	By destination £'000	By origin £'000	By destination £'000	By origin £'000
Revenue				
United Kingdom	16,494	38,984	15,529	37,122
Continental Europe	19,322	10,949	15,156	10,120
United States of America	56,159	73,979	51,989	66,187
Other NAFTA	8,304	–	8,793	–
South America	2,206	–	1,658	–
Asia	24,914	4,911	22,004	2,994
Africa	1,424	–	1,294	–
	128,823	128,823	116,423	116,423

Total revenue comprises sales of goods revenue of £127,504,000 (2017: £115,308,000), service revenue of £1,213,000 (2017: £1,115,000) and royalties revenue of £106,000 (2017: £nil).

3 Segment information continued

Non-current assets	2018 £'000	2017 £'000
United Kingdom	20,905	20,472
Continental Europe	6,762	3,957
Americas	59,184	50,747
Asia	1,977	2,048
Unallocated deferred tax asset	2,304	2,933
	91,132	80,157

Capital expenditure (including intangibles)	2018 £'000	2017 £'000
United Kingdom	1,487	2,067
Continental Europe	43	255
Americas	2,659	2,906
Asia	263	197
	4,452	5,425

4 Profit before income tax

The following items have been included in arriving at profit before income tax:

	2018 £'000	2017 £'000
Staff costs (note 5)	43,051	38,989
Inventories – Cost of inventories recognised as an expense (included in cost of sales)	41,721	40,402
Net realised foreign exchange gains	(160)	(68)
Depreciation on property, plant and equipment – owned	2,840	2,802
Amortisation of intangible assets	767	426
Other operating lease rentals payable:		
– Plant and machinery	140	106
– Property	1,311	1,441
Repairs and maintenance on property, plant and equipment	2,178	2,029
Trade receivables impairment	224	121
Research and development expenditure	4,011	3,907

The total remuneration of the Group's auditor, Deloitte LLP, and its affiliates for services provided to the Group is analysed below:

	2018 £'000	2017 £'000
Fees payable to Company's auditor and its associates for audit of parent company and consolidated financial statements	90	74
Fees payable to Company's auditor and its associates for other services:		
– The audit of Company's subsidiaries	125	112
– Audit-related assurance services	23	23
	238	209

Notes to the consolidated financial statements continued

5 Employee benefit expense

The average monthly number of staff, including Executive Directors, employed during the year is detailed below:

	2018 Average number	2017 Average number
Number		
Aerospace & Industrial	361	347
Laboratory	268	260
Metal Melt Quality	209	205
Central	7	7
	845	819
North American employees included above	393	377

	2018 £'000	2017 £'000
Staff costs		
Wages and salaries	34,543	30,855
Social security costs	5,745	5,668
Other pension costs	2,153	1,958
Share based payments	610	508
	43,051	38,989

Detailed disclosures of Directors' emoluments and interests in share options are shown in the Remuneration Report on pages 50 to 65.

The key management comprise the Directors of Porvair plc and their remuneration is disclosed in note 29.

6 Finance income and costs

		2018 £'000	2017 £'000
Finance income			
Bank interest receivable		6	4
		6	4
	Note	2018 £'000	2017 £'000
Finance costs			
Interest payable on bank loans and overdrafts		327	210
Unwinding of discount on provisions		136	14
Pension scheme finance expense	20	373	437
		836	661
Net finance costs		830	657

7 Income tax expense

	Note	2018 £'000	2017 £'000
Current tax			
UK Corporation tax		860	678
Adjustment in respect of prior periods – UK		55	(475)
Overseas tax		1,971	1,848
Adjustment in respect of prior periods – US		(157)	–
		2,729	2,051
Deferred tax			
Origination and reversal of temporary differences – UK		(28)	172
Origination and reversal of temporary differences – Overseas		82	551
Adjustment in respect of prior periods – UK		(202)	66
Adjustment in respect of prior periods – US		207	–
Effect of change in deferred tax rates – US		(778)	–
	19	(719)	789
		2,010	2,840

The tax on the Group's profit before tax differs from the theoretical amount that would arise using the UK tax rate applicable to profits of the consolidated companies as follows:

	2018 £'000	2017 £'000
Profit before tax	12,038	11,682
Tax at the UK Corporation tax rate of 19% (2017: 19.33%)	2,287	2,259
Current tax adjustments in respect of prior periods	(102)	(475)
Deferred tax adjustments in respect of prior periods	5	66
Deferred tax on share based payments within the income statement	–	(97)
Tax effect of expenses not deductible in determining taxable profit	300	214
Effect of change in deferred tax rates	(778)	–
Effect of different tax rates of subsidiaries operating in other jurisdictions	298	873
Tax charge	2,010	2,840

In addition to the amount charged to the income statement, the following tax was charged/(credited) direct to equity/comprehensive income:

	2018 £'000	2017 £'000
Deferred tax on share based payments (direct to equity)	245	133
Deferred tax on actuarial losses on the pension fund (direct to comprehensive income)	614	(13)
Current tax on share based payments (direct to equity)	70	–
Current tax on exchange reserve movement (direct to comprehensive income)	(149)	–
	780	120

The standard rate of Corporation Tax in the UK was 19% during the year to 30 November 2018. Accordingly, the theoretical effective tax rate applied to the Group's profits for this accounting year is 19%.

Changes to the UK corporation tax rates were introduced by Finance (No.2) Act 2015, being the reduction of the main rate to 19% from 1 April 2017 and to 18% from 1 April 2020. The latter was superseded by Finance Act 2016, which was substantively enacted in September 2016 and reduced the rate to apply from 1 April 2020 to 17%. Deferred taxes at the balance sheet date have been measured using these enacted tax rates and reflected in these financial statements.

Notes to the consolidated financial statements continued**8 Earnings per share**

	£'000	2018 Weighted average number of shares	Per share amount (pence)	£'000	2017 Weighted average number of shares	Per share amount (pence)
Profit for the year – attributable to ordinary shareholders	10,045			8,861		
Number of ordinary shares in issue		45,705,419			45,429,715	
Number of ordinary shares owned by the Employee Benefit Trust		(156,552)			(63,618)	
Basic EPS	10,045	45,548,867	22.1	8,861	45,366,097	19.5
Dilutive impact of share options outstanding	–	102,380	(0.1)	–	262,585	(0.1)
Diluted EPS	10,045	45,651,247	22.0	8,861	45,628,682	19.4

In addition to the above, the Group also calculates an earnings per share based on underlying profit as the Board believes this to be a better measure to judge the progress of the Group. Underlying profit is defined as profit before the impact of acquiring businesses and other items that are considered significant and where treatment as an adjusted item provides a more consistent assessment of the Group's trading.

The following table reconciles the Group's profit to underlying profit used in the numerator in calculating underlying earnings per share:

	£'000	2018 Weighted average number of shares	Per share amount (pence)	£'000	2017 Weighted average number of shares	Per share amount (pence)
Profit for the year – attributable to ordinary shareholders	10,045			8,861		
Adjusting items – see note 2	372			511		
Underlying profit – attributable to equity holders of the parent	10,417			9,372		
Basic EPS	10,417	45,548,867	22.9	9,372	45,366,097	20.7
Diluted EPS	10,417	45,651,247	22.8	9,372	45,628,682	20.5

9 Dividends per share

	2018		2017	
	Per share (pence)	£'000	Per share (pence)	£'000
Final dividend paid – in respect of prior year	2.70	1,229	2.40	1,088
Interim dividend paid – in respect of current year	1.60	728	1.50	681
	4.30	1,957	3.90	1,769

The Directors recommend a final dividend of 3.0 pence for the financial year ended 30 November 2018 to be paid on 7 June 2019.

10 Property, plant and equipment

	Land and buildings £'000	Assets in course of construction £'000	Plant, machinery and equipment £'000	Total £'000
Cost				
At 1 December 2016	8,435	819	33,963	43,217
Reclassification	–	(851)	851	–
Additions	1,945	1,347	1,956	5,248
Acquisitions	–	–	324	324
Disposals	–	–	(39)	(39)
Exchange differences	(441)	(35)	(1,516)	(1,992)
At 30 November 2017	9,939	1,280	35,539	46,758
Accumulated depreciation				
At 1 December 2016	(2,803)	–	(22,312)	(25,115)
Charge for year	(325)	–	(2,477)	(2,802)
Disposals	–	–	39	39
Exchange differences	164	–	953	1,117
At 30 November 2017	(2,964)	–	(23,797)	(26,761)
Net book value at 30 November 2017	6,975	1,280	11,742	19,997
	Land and buildings £'000	Assets in course of construction £'000	Plant, machinery and equipment £'000	Total £'000
Cost				
At 1 December 2017	9,939	1,280	35,539	46,758
Reclassification	173	(975)	802	–
Additions	704	1,827	1,265	3,796
Acquisitions	–	–	192	192
Disposals	(4)	–	(156)	(160)
Exchange differences	394	46	1,165	1,605
At 30 November 2018	11,206	2,178	38,807	52,191
Accumulated depreciation				
At 1 December 2017	(2,964)	–	(23,797)	(26,761)
Charge for year	(318)	–	(2,522)	(2,840)
Disposals	4	–	156	160
Exchange differences	(127)	–	(796)	(923)
At 30 November 2018	(3,405)	–	(26,959)	(30,364)
Net book value at 30 November 2018	7,801	2,178	11,848	21,827

Notes to the consolidated financial statements continued

11 Goodwill and other intangible assets

	Goodwill £'000	Development expenditure capitalised £'000	Software capitalised £'000	Trademarks, know-how and other intangibles £'000	Total £'000
At 1 December 2016					
Cost	70,526	841	1,166	1,483	74,016
Accumulated amortisation and impairment	(18,683)	(572)	(1,100)	(1,083)	(21,438)
Net book amount	51,843	269	66	400	52,578
Year ended 30 November 2017					
Opening net book amount	51,843	269	66	400	52,578
Additions	–	–	148	29	177
Acquisitions	7,376	–	–	486	7,862
Amortisation charges	–	(93)	(15)	(318)	(426)
Exchange differences	(2,910)	(18)	33	(69)	(2,964)
Closing net book amount	56,309	158	232	528	57,227
At 30 November 2017					
Cost	74,936	774	1,325	1,854	78,889
Accumulated amortisation and impairment	(18,627)	(616)	(1,093)	(1,326)	(21,662)
Net book amount	56,309	158	232	528	57,227
Year ended 30 November 2018					
Opening net book amount	56,309	158	232	528	57,227
Additions	–	115	541	–	656
Acquisitions	4,036	–	2	3,218	7,256
Amortisation charges	–	(76)	(54)	(637)	(767)
Exchange differences	2,416	11	18	184	2,629
Closing net book amount	62,761	208	739	3,293	67,001
At 30 November 2018					
Cost	81,429	890	1,882	5,324	89,525
Accumulated amortisation and impairment	(18,668)	(682)	(1,143)	(2,031)	(22,524)
Net book amount	62,761	208	739	3,293	67,001

Internally generated intangible assets arising from the Group's product development are recognised only if all conditions are met as described in the Summary of significant accounting policies.

Amortisation of £767,000 (2017: £426,000) is included in 'cost of sales' in the income statement.

Intangible assets are comprised of development expenditure, software, trademarks, know-how and other intangibles. Within these balances an individually material balance relates to:

- Customer list – £2,016,000 (2017: £nil) – with a remaining amortisation period of 9 years.

11 Goodwill and other intangible assets continued**Impairment tests for goodwill**

Goodwill is allocated to the Group's cash generating units (CGUs) identified according to its operating segment.

A segment level summary of the goodwill allocation is presented below.

2018				2017			
Aerospace & Industrial £'000	Laboratory £'000	Metal Melt Quality £'000	Total £'000	Aerospace & Industrial £'000	Laboratory £'000	Metal Melt Quality £'000	Total £'000
25,667	19,453	17,641	62,761	22,806	16,824	16,679	56,309

The recoverable amount of the goodwill is based on value-in-use calculations. The calculations use cash flow projections based on financial budgets approved by management covering a three-year period. Pre-tax cash flows beyond the three-year period are extrapolated using the estimated growth rates stated below.

Key assumptions used for value-in-use calculations:	Aerospace & Industrial		Laboratory			Metal Melt Quality
	US	UK	US	UK	Continental Europe	US
Budgeted gross margin	30%	30%	32%	30%	35%	23%
Growth rate used to extrapolate cash flows beyond the budget period	2%	2%	2%	2%	2%	2%
Weighted average cost of capital (pre-tax)	9.2%	10.6%	9.2%	10.6%	9.3%	9.2%

These assumptions have been used for the analysis of each operation within the operating segment. Management determined budgeted gross margins based on past performance and its expectations for the development in its markets. The average growth rates used are consistent with past experience and market expectations. The discount rates used are pre-tax and reflect specific risks relating to the relevant segments.

The key assumptions for the value in use calculations are those regarding the discount rates, growth rates and expected changes to selling prices and direct costs during the year.

The Group has conducted a sensitivity analysis on the impairment test of each CGU. The Directors believe that any reasonably possible change in the key assumptions on which the recoverable amount of goodwill is based would not cause the aggregate carrying amount to exceed the aggregate recoverable amount of the CGU.

Based on the results of the current year impairment review, no impairment charges have been recognised by the Group in the year ended 30 November 2018. Having assessed the anticipated future cash flows, the Directors do not currently foresee any reasonable changes in assumptions that would have led to such an impairment charge in the year ended 30 November 2018.

12 Derivative financial instruments

	2018		2017	
	Assets £'000	Liabilities £'000	Assets £'000	Liabilities £'000
Forward foreign exchange contracts – current	–	–	40	–
	–	–	40	–

The loss recognised in the income statement in the year for non-hedged derivatives amounted to £40,000 (2017: gain of £1,461,000).

Under IFRS the fair value of all forward foreign exchange contracts and currency options are recognised on the balance sheet with the corresponding entry included within other comprehensive income where designated as a cash flow hedge and administrative expenses where hedge accounting has not been applied. The Group recognises all forward foreign exchange contracts and currency options on the balance sheet at fair value using external market data.

Derivatives relating to trading activities are classified as a current asset or liability. The full fair value of a hedging derivative is classified as a non-current asset or liability if the remaining maturity of the hedged item is more than 12 months and, as a current asset or liability, if the maturity of the hedged item is less than 12 months from the balance sheet date.

The notional principal amount of the outstanding US dollar forward foreign exchange contracts at 30 November 2018 is £nil (2017: £2.0 million).

Notes to the consolidated financial statements continued**13 Inventories**

	2018 £'000	2017 £'000
Raw materials	6,527	5,353
Work in progress	7,074	5,387
Finished goods	6,255	5,327
	19,856	16,067

The Group has recognised a charge in the income statement of £438,000 (2017: £516,000) for the write-down of its inventories during the year ended 30 November 2018. The Group has utilised provisions of £207,000 (2017: £177,000) during the year ended 30 November 2018.

14 Trade and other receivables

	2018 £'000	2017 £'000
Trade receivables	20,986	17,661
Less: provision for impairment	(227)	(220)
Trade receivables – net	20,759	17,441
Other debtors	460	426
Prepayments	1,117	1,319
	22,336	19,186

There is no difference between the fair value of trade and other receivables and their carrying value.

Credit risk in relation to trade receivables

The Group has a diverse customer base both geographically and in the number of industries in which it operates. There is credit risk associated with a decline in a particular industry or geographic region. To offset this risk, the Group has implemented policies that require appropriate credit checks to be performed on significant potential customers before sales are made. Customer orders are checked against pre-set criteria before acceptance and credit control procedures are applied. Letters of credit and payments in advance are obtained from customers as appropriate.

The Group does not hold security over its receivables, so was exposed to credit risk in respect of the net trade receivables balance of £20,759,000 (2017: £17,441,000). Management believe the credit quality of trade receivables which are within the Group's typical payment terms of between 30 and 90 days (and which are less than 3 months overdue) is good; £4,138,000 (2017: £4,672,000) is less than 3 months past due but not impaired at the year end, of which £2,633,000 (2017: £3,378,000) is less than 30 days overdue.

	2018			2017		
	Not yet due £'000	Past due not impaired £'000	Impaired £'000	Not yet due £'000	Past due not impaired £'000	Impaired £'000
Trade receivables:						
Not yet due	16,060	–	–	11,609	–	–
0–3 months overdue	–	4,138	138	–	4,672	26
3–6 months overdue	–	390	68	–	296	164
>6 months overdue	–	171	21	–	864	30
Total	16,060	4,699	227	11,609	5,832	220

Movements on the Group provision for impairment of trade receivables are as follows:

	2018 £'000	2017 £'000
At 1 December	220	228
Provision for receivables impairment	224	121
Receivables written off during the year as uncollectable	(228)	(117)
Exchange differences	11	(12)
At 30 November	227	220

Foreign exchange risk in relation to trade receivables is disclosed in note 26.

15 Cash and cash equivalents

	2018 £'000	2017 £'000
Cash at bank and in hand	11,492	12,497
Cash and cash equivalents	11,492	12,497

The credit risk associated with cash and cash equivalents is mitigated by holding funds with banks with high credit ratings from AA- to A (2017: AA- to A) as assigned by international credit rating agencies.

The Group's cash balances are denominated in the following currencies:

	2018 £'000	2017 £'000
Pound Sterling	2,352	3,773
US dollar	4,673	4,063
Euro	3,886	3,423
Other	581	1,238
	11,492	12,497

16 Trade and other payables

	2018 £'000	2017 £'000
Amounts falling due within one year:		
Trade payables	12,046	9,503
Taxation and social security	628	814
Other payables	2,884	2,318
Accruals and deferred income	17,268	15,101
	32,826	27,736

17 Construction contracts

	2018 £'000	2017 £'000
Amounts due from contract customers included in trade receivables	329	834
Contracts in progress at the balance sheet date:		
Amounts due from contract customers included in other receivables	460	211
Amounts due to contract customers included in accruals and deferred income	(7,728)	(8,210)
Net amounts due to contract customers	(7,268)	(7,999)
Contract costs incurred plus recognised profits less recognised losses to date	32,805	45,165
Less: progress billings	(40,073)	(53,164)
Contracts in progress at the balance sheet date	(7,268)	(7,999)

At 30 November 2018, retentions held by customers for contract work amounted to £nil (2017: £nil). Advances received from customers for contract work amounted to £nil (2017: £nil).

The Directors consider that the carrying amounts due from/to contract customers are a reasonable approximation to fair value.

The amount of construction contract revenue recognised in the year is £2,640,000 (2017: £910,000).

Notes to the consolidated financial statements continued

18 Borrowings

	2018 £'000	2017 £'000
Secured multi-currency revolving credit facility of €23 million (2017: €23 million) maturing in May 2022 with interest at 1.5% (2017: 1.5%) above LIBOR	4,867	2,711
	4,867	2,711
	2018 £'000	2017 £'000
Bank loans of the Group are repayable as follows:		
Two to five years	4,867	2,711
	4,867	2,711

The Group has a five year banking facilities agreement (started on 24 May 2017), sufficient for its foreseeable needs, which comprises of a €23 million revolving credit facility and a £2.5 million multi-currency overdraft facility. The multi-currency revolving credit facility expires in May 2022.

The loans are shown net of issue costs of £220,000 (2017: £244,000) which are being amortised over the life of the loan arrangements.

At 30 November 2018, the Group had €17.3 million/£15.3 million (2017: €19.6 million/£17.3 million) of unused credit facility and an unutilised £2.5 million (2017: £2.5 million) overdraft facility.

The multi-currency facility is secured by fixed and floating charges against certain of the Group's assets in Europe.

19 Deferred tax

The movement of deferred tax assets and (liabilities) during the year is as follows:

	Accelerated capital allowances £'000	Other short term timing differences £'000	Intangibles £'000	Share based payments £'000	Retirement obligations £'000	Total £'000
At 1 December 2016	(2,204)	232	177	525	2,822	1,552
(Charged)/credited to income statement	(1,032)	287	(62)	97	(79)	(789)
Charged to equity in respect of share options	–	–	–	(133)	–	(133)
Credited to comprehensive income in respect of pension liabilities	–	–	–	–	13	13
Exchange differences	178	(45)	(9)	–	–	124
At 30 November 2017	(3,058)	474	106	489	2,756	767
Acquisitions	–	–	(229)	–	–	(229)
Credited to income statement	558	82	38	–	41	719
Charged to equity in respect of share options	–	–	–	(245)	–	(245)
Charged to comprehensive income in respect of pension liabilities	–	–	–	–	(614)	(614)
Exchange differences	(163)	31	6	–	–	(126)
At 30 November 2018	(2,663)	587	(79)	244	2,183	272

Included within the net deferred tax asset balance of £272,000 (2017: £767,000) are deferred tax liabilities of £1,826,000 (2017: £2,166,000), which relate to Group entities based in the USA and of £206,000 (2017: £nil), which relate to entities based in Continental Europe.

At the balance sheet date, the Group has unused tax losses of £4,321,000 (2017: £2,208,000) available for offset against future profits. A tax asset has been recognised in respect of £429,000 (2017: £nil) of such losses. No tax asset has been recognised in respect of the remaining losses of £3,892,000 (2017: £2,208,000), as it is not considered probable that there will be taxable profits available to offset in the reasonably foreseeable future.

20 Retirement benefit obligations

	2018 £'000	2017 £'000
Defined benefit scheme deficit	12,242	15,549
Additional pension commitments	114	121
	12,356	15,670

The additional pension commitments arise out of contractual commitments to certain employees outside the scope of the defined benefit plan. These liabilities will crystallise between one and ten years.

a) Defined contribution schemes

For its US employees, the Group operates a defined contribution pension plan ("the Pension Plan") covering all eligible full-time employees. The Group contributes 3% of each participant's base salary each year to the Pension Plan. In 2018, this amounted to £438,000 (2017: £389,000). In 2018, the Group also made payments of £494,000 (2017: £477,000) to designated US 401k schemes on behalf of its employees. In the UK, after the closure of the defined benefit plan to new members, the Group introduced a stakeholder plan to be offered to all new employees. Total employer contributions in the UK paid to defined contribution schemes were £719,000 (2017: £645,000).

b) Defined benefit plan

The Group operates a defined benefit pension scheme, The Porvair plc Pension and Death Benefit Plan (the 'Plan'), covering a number of employees in the UK. The pension scheme is a final salary scheme and is financed through a separate trust fund administered by Trustees with an independent Chairman. The Plan was closed to new entrants in October 2001. The defined benefit scheme exposes the Group to actuarial risks, such as longevity risk, inflation risk, interest rate risk and market (investment) risk. The Group is not exposed to any unusual, entity specific or scheme specific risks.

Formal valuations of the Plan by a professionally qualified actuary are carried out at least every three years using the projected unit method. Under this method the current service cost will increase in relation to the salaries of the members in future years as those members approach retirement. The latest available full actuarial valuation was at 31 March 2015.

The principal actuarial assumptions adopted in the 2015 valuation were:

2015 valuation
assumptions %

Past service investment return:	
Pre-retirement discount rate	4.55
Post-retirement discount rate	2.35
Salary increases	3.25

A full triennial actuarial valuation of the assets and liabilities of the defined benefit scheme was completed in 2016, based on data at 31 March 2015. The actuarial value of the assets on the funding basis was sufficient to cover 64% of the benefits that had accrued to members after allowing for expected increases in pensionable remuneration, and the current funding deficiency amounted to £15.4 million. As a result of the review, the Group and the Trustees agreed to alter the employer's contributions from 13.3% of salary to 18.9% of salary. A £214,600 annual cash contribution towards the running costs of the scheme started in April 2016, increasing by 3.5% per annum. The Group also committed to make additional annual contributions to cover the past service deficit of £1,000,000 per annum commencing in December 2016. The funding shortfall is expected to be eliminated by December 2028. The next full actuarial valuation of the scheme will be based on the pension scheme's position at 31 March 2018 and is expected to be completed before June 2019.

During 2018, as a precursor to the triennial valuation, the Group reviewed the demographic assumptions used by the scheme. To assess the most appropriate mortality assumption for the scheme, the Group commissioned a Medically Underwritten Mortality Study and a postcode mortality analysis of the scheme from its actuarial advisers, KPMG LLP. The Company wrote to 204 members of the scheme aged between 55 and 80 representing approximately 95% of the value of liabilities in that age range and 61% of the liabilities in total. Respondents were asked to co-operate with an experienced firm of medical underwriters by completing a medical questionnaire and accept a follow up phone call. 134 members completed the survey representing 63% of the liabilities in the 55 to 80 age range and 40% of the liabilities in total. The Medical underwriter's results were analysed by KPMG and combined with the findings of a postcode mortality analysis to arrive at an overall blended mortality assumption for the scheme.

This resulted in a multiplier applied to the SAPS series 2 tables base tables of 122% (2017: 106%) for the IAS 19 accounting valuation. The allowance for future improvements used the 2017 CMI Core Projection (2017: 2016 CMI Core Projections) with a long term trend of 1.25% per annum. This resulted in a reduction in life expectancy of 1.2 years for men and 1.1 years for women compared with the mortality assumptions adopted in the previous year. The change in demographic assumptions reduced the Group's defined pension scheme liabilities by £1.8 million.

Notes to the consolidated financial statements continued

20 Retirement benefit obligations continued

The pension charge for the year was £1,491,000 (2017: £634,000), including the £773,000 GMP equalisation charge (2017: £nil), and the funding via employer contributions was £1,620,000 (2017: £1,602,000). The Group expects to make contributions of £1,620,000 to the Plan in the next financial year. The liabilities increased by £773,000 to amend the benefits provided by the Group's defined benefit pension plan to equalise its guaranteed minimum pensions for men and women on benefits earned between 17 May 1990 and 6 April 1997.

The valuation of the deficit in the balance sheet is based on the most recent actuarial valuation of the Plan as updated by a qualified actuary to take account of the market value of the assets and the present value of the liabilities of the Plan at 30 November 2018.

Balance sheet

The financial assumptions used to calculate Plan liabilities under IAS 19:

	2018	2017
	Projected Unit	Projected Unit
Valuation method		
Discount rate	3.1%	2.5%
RPI inflation rate	3.4%	3.2%
CPI inflation rate	2.4%	2.2%
General salary increases	3.0%	3.0%
Rate of increase of pensions in payment	2.4%	2.2%
Rate of increase for deferred pensioners	1.9%	1.8%

Assumptions regarding future mortality are set based on actuarial advice in accordance with published statistics and experience in the industry. The SAPS base mortality tables have been used, with a 122% multiplier allowing for future improvements of 1.25% per annum (2017: 1.25% per annum). These assumptions translate into an average life expectancy in years for a pensioner retiring at age 65:

	2018 Years	2017 Years
Retiring at the end of the reporting period:		
– Male	20.4	21.6
– Female	22.4	23.5
Retiring 15 years after the end of the reporting period:		
– Male	21.4	22.6
– Female	23.5	24.6

The Plan's membership numbers as at the year end are:

	2018 Number of members	2017 Number of members
Active	41	43
Deferred	248	254
Pensioner	248	247
	537	544

Sensitivities have been calculated by valuing the Plan's defined benefit obligation at 30 November 2018 using the same methodology, with relevant changes to the assumptions. The sensitivity of the defined benefit obligation to changes in the weighted principal assumptions is:

	Impact on defined benefit obligation		
	Change in assumption	Increase in assumption	Decrease in assumption
Discount rate	0.1%	Decrease of 1.8%	Increase of 1.9%
Inflation rate	0.1%	Increase of 1.4%	Decrease of 1.3%
Life expectancy	1 year	Increase of 3.6%	Decrease of 4.0%

20 Retirement benefit obligations continued

The assets in the Plan, all of which are quoted, are:

	Value at 30 November 2018 £'000	Value at 30 November 2017 £'000
Equities	14,616	15,213
Bonds	1,905	1,999
Gilts	7,763	8,082
Liability driven investment	2,560	2,873
Other	109	108
Fair value of Plan assets	26,953	28,275
Present value of unfunded obligations	(39,195)	(43,824)
Deficit in the Plan (excluding deferred tax)	(12,242)	(15,549)

The analysis of movement in the deficit in the Plan for the year is as follows:

	2018 £'000	2017 £'000
Deficit at 1 December	(15,549)	(16,001)
Contributions paid	1,617	1,602
Current service cost	(404)	(351)
Administration expense	(314)	(283)
Past service cost	(773)	–
Other finance expense	(373)	(437)
Actuarial gain/(loss)	3,554	(79)
Deficit at 30 November	(12,242)	(15,549)

The change in the present value of the Plan assets during the year is as follows:

	2018 £'000	2017 £'000
Plan assets at the start of the year	28,275	26,064
Benefit payments	(1,993)	(1,854)
Company contributions	1,617	1,602
Administration expense	(314)	(283)
Member contributions	96	101
Interest income on plan assets	699	737
Return on Plan assets (excluding interest income)	(1,427)	1,908
Plan assets at 30 November	26,953	28,275

The actual return on Plan assets was minus £728,000 (2017: £2,645,000).

The change in the present value of the Plan liabilities during the year is as follows:

	2018 £'000	2017 £'000
Plan liabilities at the start of the year	(43,824)	(42,065)
Current service cost	(404)	(351)
Interest cost	(1,072)	(1,174)
Member contributions	(96)	(101)
Past service cost	(773)	–
Benefits paid	1,993	1,854
Gain/(loss) on change in financial and demographic assumptions	4,981	(2,407)
Experience gains on the defined benefit obligation	–	420
Plan liabilities at 30 November	(39,195)	(43,824)

Notes to the consolidated financial statements continued

20 Retirement benefit obligations continued

The Plan liabilities by participant member status are as follows:

	2018 £'000	2017 £'000
Active	(8,219)	(8,839)
Deferred	(16,016)	(18,029)
Pensioner	(14,960)	(16,956)
Plan liabilities at 30 November	(39,195)	(43,824)

The weighted average duration of the Plan scheme liabilities at the end of the reporting period is 20 years (2017: 20 years).

The movements in the Plan during the year are as follows:

Income statement	2018 £'000	2017 £'000
Analysis of amounts chargeable to operating profit:		
Current service cost	(404)	(351)
Administration expense	(314)	(283)
Past service cost	(773)	–
Amount chargeable to operating profit	(1,491)	(634)
Analysis of amounts (charged)/credited to other finance income and costs:		
Interest on Plan liabilities	(1,072)	(1,174)
Expected return on assets in the Plan	699	737
Net amount charged to other finance income and costs	(373)	(437)
Total chargeable to the income statement before deduction of tax	(1,864)	(1,071)
Other items		
Analysis of amounts recognised in the consolidated statement of comprehensive income:		
Actual return on assets in excess of expected return	(1,427)	1,908
Gain/(loss) on change in financial and demographic assumptions	4,981	(2,407)
Experience gains on the defined benefit obligation	–	420
Total actuarial gain/(loss) recognised in the consolidated statement of comprehensive income	3,554	(79)
Cumulative actuarial loss recognised in the consolidated statement of comprehensive income	(6,072)	(9,626)

21 Provisions for other liabilities and charges

	Dilapidations £'000	Warranty £'000	Total £'000
At 1 December 2017	178	1,217	1,395
Utilised during year	–	(711)	(711)
Charged to the consolidated income statement:			
– Unwinding of discount	41	–	41
At 30 November 2018	219	506	725

The provisions arise from a discounted dilapidations provision for leased property, which is expected to reverse in 2023, and sale warranties, which expire by 2020.

Analysis of total provisions	2018 £'000	2017 £'000
Current	506	1,217
Non-current	219	178
	725	1,395

22 Share capital and share premium account

	Number of shares	Share capital £'000	Share premium account £'000	Total £'000
At 1 December 2016	45,307,680	906	35,513	36,419
Issue of shares on exercise of share options	333,495	7	318	325
At 30 November 2017	45,641,175	913	35,831	36,744
At 1 December 2017	45,641,175	913	35,831	36,744
Issue of shares on exercise of share options	202,424	4	127	131
At 30 November 2018	45,843,599	917	35,958	36,875

The Company has one class of ordinary shares which carry no right to fixed income. All of the Company's shares in issue are fully paid and each share carries the right to vote at general meetings.

In June 2017, 178,030 ordinary shares of 2 pence each were issued on the exercise of Long Term Share Plan share options for cash consideration of £4,000. In February, March and October 2017, 155,465 ordinary shares of 2 pence each were issued on the exercise of Save As You Earn share options for cash consideration of £321,000.

In February, March, April, June, July and September 2018, 51,049 ordinary shares of 2 pence each were issued on the exercise of Save As You Earn share options for cash consideration of £128,000. In September 2018, 151,375 ordinary shares of 2 pence each were issued on the exercise of Long Term Share Plan share options for cash consideration of £3,000.

The Group uses an Employee Benefit Trust (EBT) to purchase shares in the Company to satisfy entitlements, granted since the Company's AGM in 2015, under the Group's Long Term Incentive Plan. During the year the Group purchased 84,000 ordinary shares of 2 pence each (2017: 92,000) for a total consideration of £416,000 (2017: £475,000). The cost of the shares held by the EBT is deducted from retained earnings. The EBT is financed by a repayable-on-demand loan from the Group of £968,000 (2017: £552,000). As at 30 November 2018 the EBT held a total of 196,000 ordinary shares of 2 pence each (2017: 112,000) at a cost of £968,000 (2017: £552,000) and a market value of £833,000 (2017: £521,000).

23 Share options and share based payments

Share options are granted to Executive Directors and to selected employees. Details of the share options awarded to the Executive Directors, including exercise price and performance conditions, are disclosed in the Remuneration report on pages 50 to 65.

These equity settled, share based payments are measured at fair value at the date of grant. The fair value determined at the grant date of the equity settled, share based payments is expensed to the income statement on a straight line basis over the vesting period, based on the Group's estimate of shares that will eventually vest. The charge is then credited back to reserves.

Fair value is measured by use of a Black-Scholes model. The expected life used in the model has been adjusted, based on management's best estimate, for the effects of non-transferability, exercise restrictions, and behavioural considerations.

Details of the share options are:

Scheme	Year of grant	Exercise period	Subscription price pence	2018 Number of shares	2017 Number of shares
2014 3yr Save As You Earn Scheme	2014	2017 – 2018	240.00	–	42,600
2014 5yr Save As You Earn Scheme	2014	2019 – 2020	240.00	89,505	89,505
2008 Long Term Share Plan	2015	2018 – 2025	2.00	–	151,375
2008 Long Term Share Plan	2016	2019 – 2026	2.00	164,600	164,600
2016 3yr Save As You Earn Scheme	2016	2019 – 2020	300.00	128,100	151,620
2016 5yr Save As You Earn Scheme	2016	2021 – 2022	300.00	43,000	53,200
2008 Long Term Share Plan	2017	2020 – 2027	2.00	129,700	129,700
2017 3yr Save As You Earn Scheme	2017	2020 – 2021	398.00	105,032	120,494
2017 5yr Save As You Earn Scheme	2017	2022 – 2023	398.00	58,182	67,227
2008 Long Term Share Plan	2018	2021 – 2028	2.00	109,500	–
At 30 November				827,619	970,321

Notes to the consolidated financial statements continued

23 Share options and share based payments continued

Movements in share options during the year were:

	2018 Weighted average exercise price pence	2017 Weighted average exercise price pence	2018 Number of shares	2017 Number of shares
At 1 December	173.92	126.47	970,321	1,014,376
Options granted	2.00	236.19	109,500	317,421
Options forfeited	347.21	75.15	(49,778)	(27,981)
Options exercised	64.78	97.16	(202,424)	(333,495)
At 30 November	167.44	173.92	827,619	970,321
Options exercisable at 30 November	–	240.00	–	36,900
Options not exercisable at 30 November	167.44	171.30	827,619	933,421
Total	167.44	173.92	827,619	970,321

	Year of grant	Scheme	Exercise price pence	2018 Number of shares	2017 Number of shares
Options granted during the year were:					
	2017	2008	2.00	–	129,700
	2017	2017	398.00	–	120,494
	2017	2017	398.00	–	67,227
	2018	2018	2.00	109,500	–
Total				109,500	317,421

	Year of grant	Scheme	Exercise price pence	2018 Number of shares	2017 Number of shares
Options forfeited during the year were:					
	2014	3yr SAYE	240.00	–	(5,700)
	2014	5yr SAYE	240.00	–	3,156
	2015	2008	2.00	–	21,625
	2016	3yr SAYE	300.00	18,597	8,400
	2016	5yr SAYE	300.00	7,200	500
	2017	3yr SAYE	398.00	14,936	–
	2017	5yr SAYE	398.00	9,045	–
Total				49,778	27,981

	Year of grant	Scheme	Exercise price pence	2018 Number of shares	2017 Number of shares
Options exercised during the year were:					
	2011	5yr SAYE	93.00	–	35,825
	2014	2008	2.00	–	178,030
	2014	3yr SAYE	240.00	42,600	119,640
	2015	2008	2.00	151,375	–
	2016	3yr SAYE	300.00	4,923	–
	2016	5yr SAYE	300.00	3,000	–
	2017	3yr SAYE	398.00	526	–
Total				202,424	333,495

23 Share options and share based payments continued

For options exercised in the year, the weighted average share price at the date of exercise was 496 pence (2017: 519 pence).

A summary of the outstanding share option fair value assumptions is given below:

Grant date	01/10/14 SAYE 2014 5 year	27/01/16 Porvair LTSP	01/10/16 SAYE 2016 3 year	01/10/16 SAYE 2016 5 year	31/01/17 Porvair LTSP	01/10/17 SAYE 2017 3 year	01/10/17 SAYE 2017 5 year	01/02/18 Porvair LTSP
Scheme								
Share price at grant date	300.00p	302.00p	373.00p	373.00p	453.00p	498.75p	498.75p	530.00p
Exercise price	240.00p	2.00p	300.00p	300.00p	2.00p	398.00p	398.00p	2.00p
Shares under option	121,696	164,600	161,820	53,700	129,700	120,494	67,227	109,500
Vesting period (years)	5	3	3	5	3	3	5	3
Expected volatility	30%	30%	30%	30%	30%	30%	30%	30%
Expected life (years)	5	3	3	5	3	3	5	3
Risk free rate	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
Dividend yield	0.97%	1.16%	0.97%	0.97%	0.84%	0.78%	0.78%	0.79%
Fair value per option (£)	0.97057	2.89710	1.05545	1.19660	4.39772	1.44287	1.64167	5.15637

The expected volatility is based on historic share price movements. The Directors anticipate it is possible the performance criteria in relation to certain share options may not be met.

Share based payments

	2018 £'000	2017 £'000
Charge for the year	610	508

24 Cash generated from operations

	2018 £'000	2017 £'000
Operating profit	12,868	12,339
Adjustments for:		
– Post-employment benefits	(136)	(963)
– Fair value movement of derivatives through profit and loss	40	(1,461)
– Share based payments	610	508
– Depreciation, amortisation and impairment	3,607	3,228
Operating cash flows before movement in working capital	16,989	13,651
Changes in working capital (excluding the effects of exchange differences on consolidation):		
– Increase in inventories	(2,494)	(523)
– Increase in trade and other receivables	(1,570)	(287)
– Increase in trade and other payables	3,216	545
– Decrease in provisions	(806)	(1,129)
Increase in working capital	(1,654)	(1,394)
Cash generated from operations	15,335	12,257

Notes to the consolidated financial statements continued

25 Acquisitions

Acquisition of Rohasys B.V.

On 7 December 2017 the Group, through its subsidiary Seal Analytical Limited, purchased 100% of the share capital of Rohasys B.V. ("Rohasys") in order to increase the Group's offering in the laboratory market. The trade is the manufacture of robotic sample handling systems and is based in the Netherlands. The total maximum consideration is €3,548,000 (£3,118,000); €896,000 (£787,000) of this was paid in cash on the acquisition date, together with €502,000 (£441,000) to settle the outstanding loan. The balance is contingent on financial performance and payable in instalments until 2021; the first €250,000 instalment of contingent consideration was paid in March 2018. The contingent consideration is dependent on Rohasys meeting sales and profit targets, and will be settled in cash. Management has forecast that payment of 99% of the maximum contingent consideration, €2,136,000 (£1,877,000), is the most probable outcome. This was discounted to €1,878,000 (£1,650,000) using the discount rate of 14.5%, calculated for Rohasys. A reduction in the annual sales by €200,000 (£177,000), which is considered a reasonable possible alternative, would reduce the future contingent liability by €30,000 (£27,000). In the period since acquisition, the business has contributed €2,378,000 (£2,101,000) sales and €83,000 (£73,000) operating profit to the Group results. The direct costs of acquisition charged to the income statement were £35,000. If Rohasys had been consolidated from 1 December 2017, the consolidated income statement would show pro-forma revenue of £128,823,000 and underlying operating profit of £12,868,000.

£'000

Purchase consideration:	
Cash paid	787
Loan repaid	441
Contingent consideration estimate at acquisition	1,650
Total purchase consideration	2,878
Fair value of net assets acquired (see below)	(1,070)
Goodwill	1,808

The goodwill is attributable to the non-contractual relationships and the synergies between the business acquired and the existing operations of the Group and the potential to develop the business further. The goodwill recognised is attributable to the Laboratory division and is not expected to be deductible for income tax purposes. The purchase is accounted for as an acquisition. The recognised amounts of identifiable assets acquired and liabilities assumed are:

Fair value
£'000

Property, plant and equipment	22
Software	2
Tradenname	72
Knowhow	318
Customer list	528
Inventory	393
Trade receivables	369
Trade payables	(425)
Deferred tax liability	(229)
Other operating working capital (net)	20
Net assets acquired	1,070
Purchase consideration settled in cash	787
Cash outflow on acquisition	787

Acquisition of trade and assets of Keystone Filter

On 28 February 2018 the Group, through its subsidiary Porvair Filtration Group, Inc., purchased the net assets of Keystone Filter ("Keystone"), a division of CECO Environmental Corp. The trade is the design and manufacture of a range of filter cartridges and housings for the food and beverage, drinking water, and chemical process markets and is based in the USA. The total consideration is US\$7,190,000 (£5,219,000). US\$5,290,000 (£3,840,000) of this was paid on 28 February 2018, with the balance deferred and paid in August 2018. In the period since acquisition, the business has contributed US\$2,342,000 (£1,747,000) sales and US\$133,000 (£99,000) of underlying operating profit to the Group results. The direct costs of acquisition charged to the income statement were US\$77,000 (£56,000). If Keystone had been consolidated from 1 December 2017, the consolidated income statement would show pro-forma revenue of £129,463,000 and underlying operating profit of £12,999,000.

25 Acquisitions continued

	£'000
Purchase consideration:	
Cash paid	3,840
Deferred consideration estimate at acquisition	1,379
Total purchase consideration	5,219
Fair value of net assets acquired (see below)	(2,991)
Goodwill	2,228

The goodwill is attributable to the non-contractual relationships, the synergies between the business acquired and the existing operations of the Group and the potential to develop the technologies acquired. The goodwill recognised is attributable to the Aerospace & Industrial division and is expected to be deductible for income tax purposes. The purchase has been accounted for as an acquisition.

	Fair Value £'000
Property, plant and equipment	170
Tradename	208
Order backlog	73
Customer list	2,019
Inventory	372
Trade receivables	325
Trade payables	(171)
Other operating working capital (net)	(5)
Net assets acquired	2,991
Purchase consideration settled in cash	3,840
Cash outflow on acquisition	3,840

Summary of deferred and contingent consideration on acquisitions

	JG Finneran Associates, Inc. £'000	Rohasys B.V. £'000	Keystone Filter £'000	Total £'000
At 1 December 2017	4,432	–	–	4,432
Purchase consideration addition in year	–	2,878	5,219	8,097
Cash paid in year	(2,251)	(1,454)	(5,302)	(9,007)
Charge in the income statement	–	95	–	95
Exchange movement	170	22	83	275
At 30 November 2018	2,351	1,541	–	3,892
			2018 Total £'000	2017 Total £'000
Included within other payables:				
– Contingent consideration – current			2,884	2,216
– Contingent consideration – non-current			1,008	2,216
At 30 November			3,892	4,432

Notes to the consolidated financial statements continued

26 Financial risk management

The Group's activities expose it to a variety of financial risks: market risk (including foreign exchange risk and interest rate cash flow risk), credit risk and liquidity risk. The Group's overall risk management programme is disclosed on pages 27 to 32 of the Strategic report and page 43 of the Directors' report. The Group uses derivative financial instruments to hedge certain risk exposures.

Foreign exchange risk

The Group operates internationally and is exposed to foreign exchange risk arising from various currency exposures, primarily in respect of the US dollar and the Euro. Foreign exchange risk arises from future commercial transactions, recognised assets and liabilities and net investments in foreign operations.

(i) US dollar

The Group has investments in its US based subsidiaries denominated in US dollars. Currency exposure arising from the net assets of the Group's US operations is managed through borrowings denominated in US dollars.

The UK operations generate significant US dollar revenue and forward contracts are used to reduce the impact of movements in the US dollar exchange rate.

The Group has the following outstanding US dollar forward contracts:

	2018 £'000	2017 £'000
Outstanding forward contracts	–	2,000

The Group has the following current assets and liabilities denominated in US dollars:

	2018 £'000	2017 £'000
Trade receivables	18,230	14,866
Cash balances	5,962	5,500
Other current assets	11,557	9,561
Trade payables	(7,011)	(6,476)
Other current liabilities	(22,700)	(22,076)
	6,038	1,375

For illustrative purposes, if the US dollar exchange rate were to move by 10% (management's estimate of average annual market currency fluctuation) against Sterling, the Group would make the following gains/(losses):

	2018 £'000	2017 £'000
US dollar strengthens	526	113
US dollar weakens	(431)	(92)

(ii) Euro

The Group has investments in its European based subsidiaries denominated in Euros. Currency exposure arising from the net assets of the Group's European operations is managed through net purchases from suppliers as a partial natural hedge.

The Group has the following current assets and liabilities denominated in Euros:

	2018 £'000	2017 £'000
Trade receivables	2,475	1,957
Cash balances	4,379	3,886
Other current assets	4,664	1,569
Trade payables	(3,062)	(1,603)
Other current liabilities	(2,535)	(721)
	5,921	5,088

For illustrative purposes, if the Euro exchange rate were to move by 10% (management's estimate of average annual market currency fluctuation) against Sterling, the Group would make the following gains/(losses):

	2018 £'000	2017 £'000
Euro strengthens	585	497
Euro weakens	(476)	(408)

26 Financial risk management continued**Cash flow interest rate risk**

The Group is exposed to cash flow risk. For illustrative purposes, if interest rates had been 0.5% higher/lower on borrowings throughout the year with all other variables held constant, the post tax profit for the year would have been £38,000 (2017: £27,000) lower/higher, respectively.

Credit risk

Credit risk is disclosed in notes 14 and 15.

Liquidity risk

Banking facilities, including a maturity profile, are disclosed in note 18. Interest is payable based on the length of the revolving facilities, typically between 1 and 3 months and on a quarterly basis for the term loan. The Group is required to meet banking covenants on a quarterly basis. Whilst the Group has sufficient cash reserves and expects future trading to enable it to meet its cash flow obligations, should trading performance prevent it from doing so then the lender has recourse over the Group's assets. Cash and cash equivalents held in the UK is subject to a Composite Account System, which is a banking offset arrangement that allows the set-off of overdraft balances with retained cash.

The table below analyses the Group's non-derivative financial liabilities and net-settled derivative financial liabilities into relevant maturity groupings based on the remaining period at the balance sheet date to the contractual maturity date. Derivative financial liabilities are included in the analysis to the extent that their contractual maturities are essential for an understanding of the timing of cash flows. The amounts disclosed are the contractual undiscounted cash flows.

	Less than 1 year £'000	Between 1 and 2 years £'000	Between 2 and 5 years £'000
Borrowings	215	215	5,340
Trade and other payables	21,725	1,008	–
At 30 November 2018	21,940	1,223	5,340
	Less than 1 year £'000	Between 1 and 2 years £'000	Between 2 and 5 years £'000
Borrowings	89	89	3,057
Trade and other payables	18,402	2,216	–
At 30 November 2017	18,491	2,305	3,057

The table below analyses financial instruments carried at fair value, by valuation method. The different levels have been defined below:

- Quoted prices in active markets for identical assets or liabilities (level 1).
- Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices) (level 2).
- Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs) (level 3).

	Level 1 £'000	Level 2 £'000	Level 3 £'000	Total £'000
Financial assets/(liabilities) at fair value through profit or loss:				
Contingent consideration	–	–	(3,892)	(3,892)
At 30 November 2018	–	–	(3,892)	(3,892)
	Level 1 £'000	Level 2 £'000	Level 3 £'000	Level 4 £'000
Financial assets/(liabilities) at fair value through profit or loss:				
– Trading derivatives	–	40	–	40
Contingent consideration	–	–	(4,432)	(4,432)
At 30 November 2017	–	40	(4,432)	(4,392)

The fair value of financial instruments that are not traded in an active market (for example, over-the-counter derivatives) is determined by using valuation techniques. These valuation techniques maximise the use of observable market data where it is available and rely as little as possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in level 2. There have been no movements between levels in the year. See note 25 for movement in level 3 liabilities.

Notes to the consolidated financial statements continued

26 Financial risk management continued

The tables below analyse financial instruments by category:

	2018				2017			
	Loans and receivables £'000	Assets at fair value through profit and loss £'000	Derivatives used for hedging £'000	Total £'000	Loans and receivables £'000	Assets at fair value through profit and loss £'000	Derivatives used for hedging £'000	Total £'000
Assets as per the balance sheet								
Foreign exchange contracts	–	–	–	–	–	40	–	40
Trade and other receivables excluding prepayments	21,219	–	–	21,219	17,867	–	–	17,867
Cash and cash equivalents	11,492	–	–	11,492	12,497	–	–	12,497
At 30 November	32,711	–	–	32,711	30,364	40	–	30,404
Liabilities as per the balance sheet								
Borrowings	(4,867)	–	–	(4,867)	(2,711)	–	–	(2,711)
Trade and other payables excluding non-financial liabilities	(21,725)	–	–	(21,725)	(18,402)	–	–	(18,402)
At 30 November	(26,592)	–	–	(26,592)	(21,113)	–	–	(21,113)

Capital risk management

The Group manages its capital to ensure that entities in the Group will be able to continue as going concerns while maximising the return to shareholders through the optimisation of the debt and equity balance. The Group's overall strategy remains unchanged from the prior year.

The Group's objectives when managing capital are to safeguard the Group's ability to operate as a going concern in order to provide returns to shareholders, benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital. In order to adjust the capital structure, the Group may adjust the amount of dividends paid to shareholders, return capital to shareholders, issue new shares, or sell assets to reduce debt.

The Group monitors capital on the basis of the gearing ratio. This ratio is calculated as net cash or net debt divided by total capital. Net cash or net debt is calculated as total borrowings as shown in the consolidated balance sheet less cash and cash equivalents. Total capital is calculated as 'equity' as shown in the consolidated balance sheet. The gearing ratio at 30 November 2018 was not applicable because the Group had a net cash position (2017: not applicable).

The Group's borrowings are subject to certain covenant restrictions imposed by the banks. These covenants have been fully complied with during the year ended 30 November 2018. The multi-currency facility is secured by fixed and floating charges against certain of the Group's assets in Europe.

27 Contingent liabilities

At 30 November 2018, the Group has advanced payment bonds totalling \$2,360,000 (2017: \$nil) relating to monies received in advance on contracts. The advanced payment bonds are released no later than November 2019. The Group has performance bonds totalling \$7,476,000 (2017: \$6,198,000). The bonds are released after a warranty period and in any event no later than April 2022.

28 Commitments**Capital and other financial commitments**

Contracts placed for future capital expenditure on property, plant and equipment not provided in the financial statements at 30 November 2018 were £489,000 (2017: £653,000).

Operating lease commitments – minimum lease payments

	2018		2017	
	Land and buildings £'000	Other £'000	Land and buildings £'000	Other £'000
Future aggregate minimum lease payments in respect of leases expiring in:				
No later than one year	1,417	162	1,354	90
Later than one year and no later than five years	4,035	137	3,853	90
Later than five years	2,382	–	2,353	–
At 30 November	7,834	299	7,560	180

29 Key management compensation

The Board of Directors, including the Non-Executive Directors, are classified as key management. Their remuneration is shown in the Remuneration report. Their aggregate emoluments are disclosed in the table below.

	2018 £'000	2017 £'000
Salaries and other short term employee benefits	1,070	1,050
Post employment benefits	142	120
Share based payments	486	413
	1,698	1,583

30 Subsidiary undertakings

Details of the Group's undertakings at 30 November 2018 are as follows:

Subsidiary name	Subsidiary registered office address	Activity	Country of incorporation and operation	% holding in ordinary shares
<i>Held directly:</i>				
Porvair Corporation	700 Shepherd Street, Hendersonville, NC 28792, USA	Holding	USA	100%
Porvair Filtration India Private Limited	Thane West 400607, Maharashtra, India	Trading	India	65%
Porvair Filtration Limited	7 Regis Place, Bergen Way, King's Lynn, PE30 2JN, UK	Holding	England	100%
Porvair Selee Filtration Technology (Hubei) Company Limited	Square Industrial Park, Xiaogan 432000, China	Trading	China	100%
Seal Analytical Limited	7 Regis Place, Bergen Way, King's Lynn, PE30 2JN, UK	Trading	England	100%
Seal Analytical Shanghai Company Limited	128 Xiangyin Road, Shanghai 200433, China	Trading	China	100%
<i>Held indirectly:</i>				
J G Finneran Associates, Inc.	3600 Reilly Court, Vineland, NJ 08360, USA	Trading	USA	100%
Microfiltrex Limited	7 Regis Place, Bergen Way, King's Lynn, PE30 2JN, UK	Dormant	England	100%
Porvair Filtration Group, Inc.	301 Business Lane, Ashland, VA 23005, USA	Trading	USA	100%
Porvair Filtration Group Limited	7 Regis Place, Bergen Way, King's Lynn, PE30 2JN, UK	Trading	England	100%
Porvair Sciences Limited	7 Regis Place, Bergen Way, King's Lynn, PE30 2JN, UK	Trading	England	100%
Pulse Instrumentation GmbH	Werkstrasse 5, 22844 Norderstedt, Germany	Trading	Germany	100%
Rohasys B.V.	Provinciënbaan 4, 5121 DL Rijen, Netherlands	Trading	Netherlands	100%
Seal Analytical GmbH	Werkstrasse 5, 22844 Norderstedt, Germany	Trading	Germany	100%
Seal Analytical Inc.	6501 W. Donges Bay Road, Mequon, WI 53092, USA	Trading	USA	100%
Selee Corporation	700 Shepherd Street, Hendersonville, NC 28792, USA	Trading	USA	100%

Porvair plc Parent Company – Balance Sheet (under FRS 101)

Company registered number 01661935

As at 30 November	Note	2018 £'000	2017 £'000
Non-current assets			
Property, plant and equipment	4	4	5
Investments	5	50,725	50,609
Deferred tax	11	2,916	3,394
		53,645	54,008
Current assets			
Amounts receivable from Group undertakings	6	26,261	21,024
Other receivables	7	223	368
Derivative financial instruments	12	–	40
Cash and cash equivalents	8	415	971
		26,899	22,403
Current liabilities			
Trade and other payables	9	(1,554)	(1,440)
Borrowings	10	(5,394)	(7,226)
		(6,948)	(8,666)
Net current assets		19,951	13,737
Non-current liabilities			
Borrowings	10	(4,867)	(2,711)
Retirement benefit obligations	13	(12,356)	(15,670)
		(17,223)	(18,381)
Net assets		56,373	49,364
Capital and reserves			
Share capital	14	917	913
Share premium account		35,958	35,831
Retained earnings		19,498	12,620
Total equity		56,373	49,364

The financial statements on pages 110 to 117 were approved by the Board of Directors on 25 January 2019 and were signed on its behalf by:

B D W Stocks**C P Tyler**

Parent Company – Profit for the financial year

As permitted by Section 408 of the Companies Act 2006, no income statement is presented for the parent company. The profit for the financial year is £5,693,000 (2017: £4,370,000).

Parent Company – Statement of changes in equity

	Note	Share capital £'000	Share premium account £'000	Retained earnings £'000	Total equity £'000
Balance at 1 December 2016		906	35,513	9,895	46,314
Profit for the year		–	–	4,370	4,370
Other comprehensive income/(expense):					
Changes in fair value of foreign exchange contracts held as a cash flow hedge		–	–	157	157
Actuarial loss in defined benefit pension plans net of tax		–	–	(66)	(66)
Total comprehensive income for the year		–	–	4,461	4,461
Transactions with owners:					
Employee share options scheme					
– Value of employee services net of tax		–	–	508	508
Purchase of own shares held in trust		–	–	(475)	(475)
Proceeds from shares issued	14	7	318	–	325
Dividends paid		–	–	(1,769)	(1,769)
Total transactions with owners recognised directly in equity		7	318	(1,736)	(1,411)
Balance at 30 November 2017		913	35,831	12,620	49,364
Profit for the year		–	–	5,693	5,693
Other comprehensive income/(expense):					
Actuarial gain in defined benefit pension plans net of tax		–	–	2,948	2,948
Total comprehensive income for the year		–	–	8,641	8,641
Transactions with owners:					
Employee share options scheme					
– Value of employee services net of tax		–	–	610	610
Purchase of own shares held in trust		–	–	(416)	(416)
Proceeds from shares issued	14	4	127	–	131
Dividends paid		–	–	(1,957)	(1,957)
Total transactions with owners recognised directly in equity		4	127	(1,763)	(1,632)
Balance at 30 November 2018		917	35,958	19,498	56,373

Parent Company – Notes to the financial statements

1 Summary of significant accounting policies

Basis of accounting

The Company financial statements are presented as required by the Companies Act 2006. The Company meets the definition of a qualifying entity under Financial Reporting Standard (“FRS”) 100 issued by the Financial Reporting Council. Accordingly, the financial statements have been prepared in accordance with FRS 101 “Reduced Disclosure Framework” as issued by the Financial Reporting Council.

The financial statements have been prepared on a going concern basis and under the historical cost convention as modified by the recognition of certain financial assets and financial liabilities (including derivative financial instruments) at fair value through profit or loss.

The following exemptions from the requirements of IFRS have been applied in the preparation of these financial statements, in accordance with FRS101:

- Paragraphs 45(b) and 46 to 52 of IFRS 2, ‘Share-based payment’ (details of the number and weighted-average exercise prices of share options, and how the fair value of goods or services received was determined).
- IFRS 7, ‘Financial Instruments: Disclosures’.
- Paragraphs 91 to 99 of IFRS 13, ‘Fair value measurement’ (disclosure of valuation techniques and inputs used for fair value measurement of assets and liabilities).
- Paragraph 38 of IAS 1, ‘Presentation of financial statements’ comparative information requirements in respect of:
 - (i) paragraph 79(a)(iv) of IAS 1;
 - (ii) paragraph 73(e) of IAS 16 ‘Property, plant and equipment’;
 - (iii) paragraph 118(e) of IAS 38 ‘Intangible assets’ (reconciliations between the carrying amount at the beginning and end of the period).

The following paragraphs of IAS 1, ‘Presentation of financial statements’:

- 10(d), (statement of cash flows),
- 6 (statement of compliance with all IFRS),
- 38A (requirement for minimum of two primary statements, including cash flow statements),
- 38B-D (additional comparative information),
- 111 (cash flow statement information), and
- 134-136 (capital management disclosures).
- IAS 7, ‘Statement of cash flows’.
- Paragraph 30 and 31 of IAS 8 ‘Accounting policies, changes in accounting estimates and errors’ (requirement for the disclosure of information when an entity has not applied a new IFRS that has been issued but is not yet effective).
- Paragraph 17 of IAS 24, ‘Related party disclosures’ (key management compensation).
- The requirements in IAS 24, ‘Related party disclosures’ to disclose related party transactions entered into between two or more members of a group.

Critical accounting judgements and key sources of estimation uncertainty

The preparation of financial statements in conformity with FRS101 requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Company’s accounting policies.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the periods of the revision and future periods if the revision affects both current and future periods.

(a) Critical judgements in applying the Company’s accounting policies

In the course of preparing the financial statements, no judgements have been made in the process of applying the Company’s accounting policies, other than those involving estimations, that have had a significant effect on the amounts recognised in the financial statements.

(b) Key sources of estimation uncertainty

Material estimates and assumptions are made in particular with regard to: establishing uniform depreciation periods for the Company, assumptions used in the calculation of share based payments, parameters for measuring pension and other provisions and the likelihood that tax assets can be realised. The key assumptions concerning the future, and other key sources of estimation uncertainty at the reporting period that may have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are discussed below:

- Pension obligation

The Company operates a defined benefit pension scheme, The Porvair plc Pension and Death Benefit Plan (the ‘Plan’), covering a number of employees in the UK. The pension scheme is financed through a separate trust fund and is closed to new entrants. The present value of the obligations of this scheme is subject to financial assumptions and management contracts external actuarial guidance on this. Sensitivities in the principal assumptions on valuing the Plan’s defined benefit obligation at 30 November 2018 have been calculated and are given in note 20 of the Group financial statements.

Parent Company – Notes to the financial statements continued

1 Summary of significant accounting policies continued

Property, plant and equipment

Plant, machinery and equipment is capitalised at cost and is depreciated by equal annual amounts over their estimated useful lives. Annual depreciation rates are between 10% and 33.33% straight line.

Fixed asset investments

Investments held as fixed assets are stated at cost less provision for impairment in value.

Interest income

Interest income is accrued on a straight line basis, by reference to the principal outstanding and the effective interest rate applicable, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount.

Dividends

Dividends received from subsidiaries are recognised when receipted. Dividends paid to the Company's shareholders are recognised as a liability in the Group's financial statements in the period in which the dividends are approved by the Company's shareholders.

Impairment of assets

Assets are regularly reviewed to confirm their carrying values. Where the expected realisable value is lower than the book value, the excess of book value is charged to the income statement during the year.

Patents and trademarks

All expenditure on the registration, renewal and maintenance of patents and trademarks is expensed as incurred.

Foreign exchange

Monetary assets and liabilities denominated in foreign currencies are translated into Sterling at the rates of exchange ruling at the end of the financial year.

Exchange differences arising on retranslation of non-monetary assets and liabilities are recognised directly to the exchange reserve. All other foreign exchange differences are taken to the income statement in the year in which they arise.

Taxation

Current tax is based on taxable profit for the period. Taxable profit differs from net profit as reported in the income statement because it excludes items of income or expense that are taxable or deductible in other periods and it further excludes items that are never taxable or deductible. The Company's liability for current tax is calculated using tax rates that are relevant to the period.

Deferred tax is the tax expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit, and is accounted for using the balance sheet liability method. Deferred tax liabilities are generally recognised for all taxable temporary differences and deferred tax assets are recognised to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilised. Such assets and liabilities are not recognised if the temporary difference arises from goodwill or from the initial recognition (other than a business combination) of other assets and liabilities in a transaction that affects neither the tax profit nor the accounting profit.

Deferred tax is calculated at the tax rates which have been enacted or substantively enacted by the balance sheet date and are expected to apply in the period when the liability is settled or the asset is realised. Deferred tax is recognised in the income statement, except when it relates to items recognised directly to other comprehensive income or directly to equity. In this case, the deferred tax is also recognised in other comprehensive income or directly in equity, respectively.

Pensions

Payments to defined contribution retirement benefit schemes are charged as an expense as they fall due.

For defined benefit retirement schemes, the cost of providing benefits is determined using the Projected Unit Credit Method, with actuarial valuations being carried out at each balance sheet date. Actuarial gains and losses are recognised in full in the period in which they occur. They are recognised in the consolidated statement of comprehensive income.

The retirement benefit obligation in the balance sheet represents the present value of the defined benefit obligation as adjusted for unrecognised past service cost and as reduced by the fair value of scheme assets.

Derivative financial instruments and hedge accounting

The Company's activities expose it primarily to the financial risks of changes in foreign currency exchange rates and interest rates. The Company uses foreign exchange forward contracts and interest rate swap agreements to hedge these exposures. The Company does not use derivative financial instruments for speculative purposes.

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently remeasured at their fair value. The method of recognising the resulting gain or loss depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged. The Company designates certain derivatives as cash flow hedges.

For cash flow hedges, the Company documents at the inception of the transaction the relationship between hedging instruments and hedged items, as well as its risk management objectives and strategy for undertaking various hedging transactions. The Company also documents its assessment, both at hedge inception and on an ongoing basis, of whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in fair values or cash flows of hedged items.

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognised in equity. The gain or loss relating to the ineffective portion is recognised immediately in the income statement.

Amounts accumulated in equity are recycled in the income statement in the periods when the hedged item affects profit or loss (for example, when the forecast sale that is hedged takes place).

Parent Company – Notes to the financial statements continued**1 Summary of significant accounting policies continued**

When a hedging instrument expires or is sold, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in equity at that time remains in equity and is recognised when the forecast transaction is ultimately recognised in the income statement. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is immediately transferred to the income statement.

Changes in the fair value of derivative financial instruments that do not qualify for hedge accounting are recognised in the income statement as they arise.

Share based payments

Where the Company has granted rights over its equity instruments to the employees of subsidiary companies, there is a corresponding increase recognised in the investment in subsidiary undertakings in those years.

The Company issues equity settled, share based payments to certain employees. Equity settled, share based payments are measured at fair value at the date of grant. The fair value determined at the grant date of the equity settled, share based payments is expensed on a straight line basis over the vesting period, based on the Company's estimate of shares that will eventually vest. The charge is then credited back to reserves.

At each balance sheet date, the Company revises its estimates of the number of share options that are expected to vest. It recognises the impact of the revisions to original estimates, if any, in the income statement or, if relating to a subsidiary undertaking in investment in subsidiary undertakings, with a corresponding adjustment to equity.

Fair value is measured by use of a Black-Scholes model. The expected life used in the model has been adjusted, based on management's best estimate, for the effects of non-transferability, exercise restrictions and behavioural considerations.

Operating leases

Rentals payable under operating leases are charged to the income statement on a straight line basis over the term of the relevant lease.

Borrowing costs

All borrowing costs are typically recognised in the income statement in the year in which they are incurred. Borrowing costs incurred in the arrangement of new facilities are capitalised and subsequently recognised in the income statement over the period of the borrowings.

Equity instruments

Ordinary shares are classified as equity. Equity instruments issued by the Company are recorded at the proceeds received, net of direct issue costs.

Where the Company purchases its equity share capital ("treasury shares"), the consideration paid, including any directly attributable incremental costs (net of income taxes), is deducted from equity attributable to the Company's equity holders until the shares are cancelled or reissued. Where such ordinary shares are subsequently reissued, any consideration received, net of any directly attributable incremental transaction costs and the related income tax effects, is included in equity attributable to the Company's equity holders.

2 Profit before income tax

During the year the Company obtained the following services from the Company's auditor, Deloitte LLP, at costs as detailed below:

	2018 £'000	2017 £'000
Fees payable to Company's auditor for audit of parent company financial statements	25	19
	25	19

3 Employees and Directors

The average monthly number of staff, including Executive Directors, employed during the year is as below:

	2018 number	2017 number
Administration	7	7
	7	7

Detailed disclosures of Directors' individual remuneration and share options are given in the Remuneration report on pages 50 to 65, and in note 29 of the Group financial statements.

4 Property, plant and equipment

	Plant, machinery and equipment £'000
Cost	
At 1 December 2017	163
Additions	3
At 30 November 2018	166
Accumulated depreciation	
At 1 December 2017	(158)
Charge for year	(4)
At 30 November 2018	(162)
Net book value	
At 30 November 2018	4
At 30 November 2017	5

5 Fixed asset investments

Investments in subsidiary undertakings

	2018 £'000	2017 £'000
Cost		
At 1 December	50,609	49,435
Additions in the year	–	1,081
Capital contributions arising from share based payments charge	116	93
At 30 November	50,725	50,609
Net book value		
At 30 November	50,725	50,609
At 1 December	50,609	49,435

The capital contributions arising from the share based payment charge represent the Company granting rights over its equity instruments to the employees of subsidiary undertakings. This results in a corresponding increase in investments in subsidiary undertakings.

The Directors believe that the carrying value of the investments is supported by their underlying net assets.

Details of the Company's subsidiary undertakings are given in note 30 of the Group financial statements.

6 Amounts receivable from Group undertakings

	2018 £'000	2017 £'000
Loans to subsidiary undertakings	26,261	21,024
	26,261	21,024

Amounts owed by Group undertakings are interest bearing and unsecured with no fixed terms for repayment.

7 Other receivables

	2018 £'000	2017 £'000
Amounts falling due within one year:		
Corporation tax recoverable	144	313
Prepayments	79	55
	223	368

Parent Company – Notes to the financial statements continued**8 Cash and cash equivalents**

	2018 £'000	2017 £'000
Cash at bank and in hand	415	971

9 Trade and other payables

	2018 £'000	2017 £'000
Amounts falling due within one year:		
Trade creditors	352	117
Taxation and social security	114	71
Accruals and deferred income	1,088	1,252
	1,554	1,440

10 Borrowings

	2018 £'000	2017 £'000
Bank overdraft offset against cash balances in other Group companies under a Group banking offset arrangement	5,394	7,226
Secured multi-currency revolving credit facility of €23 million (2017: €23 million) maturing in May 2022 with interest at 1.5% (2017: 1.5%) above LIBOR	4,867	2,711
	10,261	9,937

Bank and other loans of the Company are repayable as follows:

	2018 £'000	2017 £'000
Within one year	5,394	7,226
Two to five years	4,867	2,711
	10,261	9,937

On 24 May 2017, the Company entered into a five year banking facilities agreement, sufficient for its foreseeable needs, comprising a €23 million revolving credit facility and a £2.5 million multi-currency overdraft facility.

The loans are shown net of issue costs of £220,000 (2017: £244,000) which are being amortised over the life of the loan arrangements. The multi-currency revolving credit facility expires in May 2022.

At 30 November 2018, the Group had €17.3 million/£15.3 million (2017: €19.6 million/£17.3 million) of unused credit facility and an unutilised £2.5 million (2017: £2.5 million) overdraft facility.

The multi-currency facility is secured by fixed and floating charges against the assets of the Company and its subsidiaries.

11 Deferred tax asset

The movement of deferred tax assets and (liabilities) during the year is as follows:

	Accelerated capital allowances £'000	Other short term timing differences £'000	Share based payments £'000	Retirement obligations £'000	Total £'000
At 1 December 2016	8	(245)	553	2,822	3,138
Credited/(charged) to the income statement	–	262	–	(90)	172
Credited to equity in respect of share options	–	–	71	–	71
Credited to comprehensive income in respect of pension liabilities	–	–	–	13	13
At 30 November 2017	8	17	824	2,745	3,394
Credited to income statement	–	–	–	41	41
Credited to equity in respect of share options	–	–	84	–	84
Charged to comprehensive income in respect of pension liabilities	–	–	–	(603)	(603)
At 30 November 2018	8	17	708	2,183	2,916

There were no unrecognised deferred tax amounts at 30 November 2018 (2017: £nil).

12 Derivative financial instruments

	2018 £'000	2017 £'000
Forward foreign exchange contract assets		
Forward foreign exchange contracts – current	–	40
	–	40

The loss recognised in the income statement in the year for non-hedged derivatives amounted to £40,000 (2017: gain of £1,461,000).

13 Retirement benefit obligations

	2018 £'000	2017 £'000
Defined benefit scheme deficit	12,242	15,549
Additional pension commitments	114	121
	12,356	15,670

The Group operates a defined benefit pension scheme, The Porvair plc Pension and Death Benefit Plan (the 'Plan'), covering a number of employees in the UK. The pension scheme is financed through a separate trust fund administered by Trustees with an independent Chairman. The Plan was closed to new entrants in October 2001. Further details of the retirement benefit obligations are disclosed in note 20 of the Group financial statements.

The Group operates a money purchase pension scheme for a certain number of its employees. As at 30 November 2018, £1,000 (2017: £1,000) in relation to this pension scheme was outstanding to be paid.

14 Called up share capital

	2018 £'000	2017 £'000
Allotted and fully paid:		
45,843,599 ordinary shares of 2 pence each (2017: 45,641,175)	917	913

Details of shares issued and share options are disclosed in notes 22 and 23 of the Group financial statements, respectively.

15 Share based payments

Details of share options of the Company and the share based payments charge during the year are given in note 23 of the Group financial statements.

16 Dividends

Details of dividends paid in the year and final dividends recommended to be paid after the year end are disclosed in note 9 of the Group financial statements.

17 Contingent liabilities

The Company has no contingent liabilities at 30 November 2018 (2017: none).

18 Financial Commitments

At 30 November 2018 the Company has future aggregate minimum lease payments under non-cancellable operating leases expiring as follows:

	2018		2017	
	Land and buildings £'000	Other £'000	Land and buildings £'000	Other £'000
Within one year	12	1	48	2
Later than one year and less than five years	–	–	12	1
	12	1	60	3

Shareholder information

Registrar services

Our shareholder register is managed and administered by Link Asset Services. Link Asset Services should be able to help you with most questions you have in relation to your holding in Porvair plc shares.

Link can be contacted at:

Link Asset Services

The Registry
34 Beckenham Road
Beckenham
Kent BR3 4TU



www.linkassetservices.com

Telephone: 0871 664 0300 (calls cost 12p a minute plus network extras, lines are open 8.30am-5.30pm Mon-Fri)
(from outside the UK: +44 (0) 371 664 0300). E-mail: enquiries@linkgroup.co.uk.

In addition, Link offers a range of other services to shareholders including a share dealing service and a share portal to manage your holdings.

Share dealing service

A share dealing service is available to existing shareholders to buy or sell the Company's shares via Link Share Dealing Services. Online and telephone dealing facilities provide an easy to access and simple to use service.

For further information on this service, or to buy or sell shares, please contact:



www.linksharedeal.com – online dealing

0371 664 0445 – telephone dealing (from outside the UK: +44 (0) 371 664 0445).

Email: info@linksharedeal.com

Please note that the Directors of the Company are not seeking to encourage shareholders to either buy or sell their shares. Shareholders in any doubt as to what action to take are recommended to seek financial advice from an independent financial adviser authorised by the Financial Services and Markets Act 2000.

Financial calendar 2019

30 November 2018

Financial year end 2018

28 January 2019

Full year 2018 results

11 April 2019

AGM

2 May 2019

Ex-dividend date

3 May 2019

Record date for dividend

31 May 2019

Half year 2019 period end

7 June 2019

Payment date for dividend

24 June 2019

Half year 2019 results announcement

25 July 2019

Ex-dividend date

26 July 2019

Record date for dividend

30 August 2019

Payment date for dividend

30 November 2019

Financial year end 2019

3 February 2020

Full year 2019 results

Contact details and advisers

Company Secretary and registered office

Chris Tyler
Porvair plc
7 Regis Place
Bergen Way
King's Lynn
Norfolk PE30 2JN

Telephone: +44 (0)1553 765500
Fax: +44 (0)1553 765599

www.porvair.com

Company registration number

01661935

Independent auditor

Deloitte LLP
Statutory Auditor
1 Station Square,
Cambridge CB1 2GA

Principal bankers

Barclays Bank plc
Barclays Commercial Bank
PO Box 885
Mortlock House
Station Road
Histon
Cambridge CB24 9DE

Handelsbanken plc
First Floor
Futura House
Commerce Road
Lynchwood
Peterborough PE2 6LR

Registrars and transfer office

Link Asset Services
The Registry
34 Beckenham Road
Beckenham
Kent BR3 4TU

Solicitors

Travers Smith LLP
10 Snow Hill
London EC1A 2AL

Stockbrokers

Peel Hunt LLP
Moor House
120 London Wall
London EC2Y 5ET

Stay informed



Find out more about Porvair and the latest financial information, results, presentations, reports and shareholder services or to view and download a pdf version of the 2018 Annual Report:

www.porvair.com



Designed & produced by Bexon Woodhouse
Main photography by Bexon Woodhouse
www.bexonwoodhouse.com

Printed by CPI Colour, a Carbon Neutral Company

This Annual Report is printed on material which is made from 50% FSC® recycled certified post-consumer waste pulp and 50% FSC® certified and traceable pulp sources and is manufactured in accordance with ISO certified standards for environmental, quality and energy management.



porvair

Porvair plc
7 Regis Place
Bergen Way
King's Lynn
Norfolk PE30 2JN

Telephone: +44 (0)1553 765500
Fax: +44 (0)1553 765599

www.porvair.com