ZOTEFOAMS

Zotefoams plc
("Zotefoams" or "the Company")

Preliminary Results (unaudited) for the Year Ended 31 December 2016

14 March 2017 – Zotefoams plc ("Zotefoams", or "the Group" or "the Company"), a world leader in cellular material technology, today announces its unaudited preliminary results for the twelve months ended 31 December 2016.

Highlights 2016

Favourable foreign exchange rates deliver sales and profit growth

- 7% increase in Group revenue to £57.38m (2015: £53.87m)
- 35.8% gross margin (2015 restated: 32.1%)
- 20% increase in reported profit before tax and exceptional items to £7.23m (2015: £6.01m)
- 16% increase in reported profit before tax after exceptional items to £6.99m (2015: £6.01m)
- Soft mid-year conditions in Europe lead to a 5% full-year volume decline in polyolefin foams
- 19% increase in basic earnings per share to 13.3p (2015: 11.1p)
- 3% increase in proposed final dividend payment to 3.9p (2015: 3.8p)

Solid progress in delivering strategy

- Currency benefit used to continue investment in people and systems to support future opportunities and global footprint
- HPP segment profit for the year increase to £2.48m (2015: £0.82m)
- First significant sales of ZOTEK® PEBA energy-management foams into sports and leisure market
- £12.6m capex programme, including £6.9m investment in our Kentucky, USA, expansion project
- Zotefoams Midwest LLC, operational and 100% ownership of Chinese JV, operational since January 2017

Commenting on the results, Steve Good, Chairman said:

"I am pleased to report another year of progress with good profit growth and, as a consequence of significant investments in organisational capability during the year, the Group is increasingly well resourced to support its ambitious plans for growth.

We start the year with polyolefin sales volumes broadly similar to the previous year as we operate close to capacity and a double digit increase in sales value, with the benefit of weaker sterling and good growth in our HPP business, improving the sales mix.

Zotefoams' strategy of organic development, based around unique technology, offers the opportunity for sustained high levels of organic growth in markets where underlying growth is responsive to trends in demographics, regulation, environmental issues and sustainability. We see these opportunities driving organic sales growth across all business units in 2017.

We are mindful of the less stable political and macroeconomic environment, and in particular the potential risks and complications which may be caused by Brexit. Despite this the Board anticipates 2017 being another year of progress and remains confident about the long-term prospects for our business."

The preliminary results presentation for the year ended 31 December 2016 will be available on the investors section of the Company's website from 8am today.

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About Zotefoams plc
Zotefoams plc (LSE – ZTF) is a world leader in cellular materials technology. Using a unique manufacturing process with environmentally friendly nitrogen expansion, Zotefoams produces and sells lightweight AZOTE® polyolefin and ZOTEK® high-performance foams for diverse markets worldwide. Zotefoams uses its own cellular materials to manufacture T-FIT® advanced insulation for demanding industrial markets. In addition, Zotefoams owns and licenses patented MuCell® microcellular foam technology, developed specifically for extrusion applications, from a base in Massachusetts, USA to customers worldwide.

Zotefoams is headquartered in Croydon, UK, with additional manufacturing sites in Kentucky and Oklahoma, USA (foam products manufacture and conversion), Massachusetts, USA (MuCell Extrusion) and Jiangsu Province, China (T-FIT® insulation products).

www.zotefoams.com

Chairman's Statement

Results

I am pleased to report another year of progress with good profit growth and, as a consequence of significant investments in organisational capability during the year, the Group is increasingly well resourced to support its ambitious plans for growth.

Group revenue increased by 7% to £57.38m (2015: £53.87m) and profit before tax and exceptional items increased by 20% to £7.23m (2015: £6.01m). After exceptional items, profit before tax increased by 16% to £6.99m (2015: £6.01m) and earnings per share was up 19% to 13.25p (2015: 11.10p).

It was a somewhat challenging year for our Polyolefin foams business. We operated close to full capacity in the earlier and latter parts of the year, but suffered from much softer mid-year demand in the UK and Europe. The rate of growth in our HPP business was adversely affected by a key aviation customer managing inventory lower in the downstream supply chain, although the remainder of that business continued to grow strongly. While overall sales volumes were lower as a consequence, the adverse impact was offset by the weakening of sterling against the euro and the US dollar, which materially benefitted our reported results and enabled the Group to continue to make significant investments in its operating cost base to support future growth whilst still growing earnings.

Strategy

Zotefoams intends to be the world leader in cellular materials technology in our chosen markets. We deliver stakeholder value by using unique technology to create a portfolio of differentiated products. We focus resources primarily on markets where we are, or have the potential to be, a market leader. We intend to develop our business through sustained high levels of organic growth and, where appropriate, through partnerships or acquisitions.

During the year we made solid progress in initiatives to support the delivery of our strategy. Our major investment in Kentucky will give sufficient capacity to allow us to meet our growth ambitions in our Polyolefin foams business while offering future flexibility for HPP production. We have continued to invest in opportunities to expand our technology platform, such as the foaming of 3D-complex shapes. The HPP business unit has also developed an exciting portfolio of market opportunities and made good progress in establishing business in sports, leisure, insulation and automotive applications. MuCell Extrusion LLC has improved its product and service offering and, albeit slower than anticipated, is beginning to show the real potential of its technology, focused on the consumer packaging market.

Investment

During 2016 Zotefoams, set-up two new sites, in Oklahoma, USA and Kunshan, China, to service the construction end-markets for AZOTE® polyolefin products and T-FIT® technical insulation respectively. Our major investment in Kentucky, USA, to increase global block-foam capacity by 20%, is scheduled to come on stream around the middle of 2017.

We continue to invest at our Croydon site, with two additional, smaller, foaming autoclaves specifically designed for HPP products being commissioned in the first quarter of 2017. We also plan further investment in extrusion assets, alongside continued infrastructure to improve health and safety, efficiency and output from existing assets.

People and Talent

Zotefoams' business relies on the skills, effort and dedication of our people and, on behalf of the Board, I would like to extend my thanks to each and every one of them who have worked hard to deliver further progress for the Group. We recognise that talent management is key to the delivery of opportunities created by our product portfolio and have therefore increased the number and, we believe, the quality of staff in senior, managerial and technical positions throughout the Zotefoams Group. This increase in people, training and development is essential if we are to meet our ambitious goals.

Dividend
The Board is proposing a final dividend of 3.9p per ordinary share (2015: 3.8p) which, if approved by shareholders, would make a total of 5.75p per ordinary share for the year (2015: 5.60p), an increase of 3%. If approved, the final dividend will be paid on 25 May 2017 to shareholders on the register on 21 April 2017.

Current trading and outlook
We start the year with polyolefin sales volumes broadly similar to the previous year as we operate close to capacity and a double digit increase in sales value, with the benefit of weaker sterling and good growth in our HPP business, improving the sales mix.

Zotefoams' strategy of organic development, based around unique technology, offers the opportunity for sustained high levels of organic growth in markets where underlying growth is responsive to trends in demographics, regulation, environmental issues and sustainability. We see these opportunities driving organic sales growth across all business units in 2017.

We are mindful of the less stable political and macroeconomic environment, and in particular the potential risks and complications which may be caused by Brexit. Despite this the Board anticipates 2017 being another year of progress and remains confident about the long-term prospects for our business.

Steve Good
Chairman

ZOTEFOAMS

Strategic Report

Business overview

Zotefoams is a UK-headquartered manufacturing business operating globally, with subsidiary entities operating from three sites in the USA and one each in China and in Thailand. 56% of our fixed asset base and 76% of employees are UK-based while 83% of Group revenue is generated outside the UK.

The main business of Zotefoams is the manufacture of polymer foam using bespoke autoclave technology to produce foams with unique attributes. These foams are value-added input materials used in a wide variety of industries globally and compete primarily through the superior properties created by our technology: improved resource usage, reduced environmental impact and better safety and technical performance.

This business has significant barriers to entry, including capital cost, know-how, user specifications and, in our HPP business, patents. Zotefoams' block foams are sold, and often specified, under the AZOTE® and ZOTEK® brand names, which are well known in the industries we serve: automotive, aerospace, packaging, industrial parts, marine, building and construction, military, medical and sports and leisure.

In certain cases Zotefoams participates further down the value chain by cutting and shaping these foams for specific markets and customers. In 2016 we established entities in Kunshan, China to manufacture T-FIT® technical insulation products for pharmaceutical, semiconductor and biotech facilities globally and in Tulsa, Oklahoma, USA to cut our foams for a niche segment within the North American construction industry.

Through our USA-based subsidiary MuCell Extrusion LLC ('MEL'), the Group licenses technology to manufacturers of plastic products, mainly in the consumer packaging industry. MEL licenses a patented process that creates 'micro-bubbles' in the core of plastic parts or products by injecting gas into them as they are manufactured. This produces a foamed core, bound by a solid skin into one integral material that seems indistinguishable from a solid product. Products using MEL technology can be designed to perform like solid plastic, but will typically use 15-20% less material, realising both cost and environmental benefits, by using inert carbon dioxide or nitrogen gas and reducing plastic content at source. MEL shares in the customers' benefits by receiving a licence fee for IP and/or a royalty payment on parts made.

2016	**United Kingdom & Eire**	**Continental Europe**	**North America**	**Rest of the world**	**Total**
Change %	**(12%)**	**1%**	**25%**	**12%**	**7%**
Group revenue (000's)	**£10,008**	**£21,864**	**£19,940**	**£5,564**	**£57,376**
% of Group revenue	**17%**	**38%**	**35%**	**10%**	**100%**
2015					
Group revenue (000's)	£11,372	£21,568	£15,975	£4,954	£53,869
% of Group revenue	21%	39%	30%	10%	100%

Results

Zotefoams manages and reports its business in three main business units defined by product type: Polyolefin foams, HPP foams and MEL. The implementation of our global organic growth strategy requires increasing resources to develop and support the changing size and nature of our business. During the year management capitalised on the significant benefit of favourable currency rates to invest in these resources and still deliver a strong increase in profit despite the impact of lower sales volumes in our Polyolefin foams business and a key customer in our HPP aviation business managing inventory lower in the downstream supply chain.

Group revenue increased 7% to £57.38m (2015: £53.87m), with growth in all three business units due to more favourable currency rates and improved mix despite a 5% decline in polyolefin foams volumes. Gross profit increased by 19% to £20.54m (2015 restated: £17.27m) and our gross margin improved to 35.8% (2015 restated: 32.1%), with HPP margins very strong in the second half of the year. The large increase in gross profit funded increased resources in distribution and administrative expenses, including technical costs, underpinning our capability to support future growth expectations and the further globalisation of our Group, whilst still delivering growth of 20.9% in operating profit before exceptional items to £7.65m (2015: £6.33m). Overall more favourable foreign exchange rates, before the impact of any hedging, increased operating profit by £2.78m, with a Group revenue benefit of £5.35m offset by an estimated increase in operating and raw material costs of £2.57m. In 2016 there was an exceptional charge of £0.24m relating to an efficiency programme in our Croydon UK facility. Including this, operating profit increased by 17% to £7.40m (2015: £6.33m) and profit before tax by 16% to £6.99m (2015: £6.01m).

Polyolefin foams

	2016[2] **£m**	2015 £m	% Change
Group revenue	**44.73**	43.04	4%
Segment profit pre amortisation[1]	**8.00**	7.60	5%
Segment profit post amortisation	**7.96**	7.55	5%
Segment profit margin[1]	**18%**	18%	

1 Excludes amortisation of acquired intangible items
2 Excludes exceptional items

AZOTE® polyolefin foams are manufactured using our unique, high-pressure, nitrogen gas process. This physical expansion process differentiates Zotefoams from competitors manufacturing similar foams from low-density polyethylene ('LDPE') which is our main raw material. Zotefoams produces foams that are more consistent, lighter-weight and possess higher purity compared to foams manufactured using chemical technology. These superior attributes are valued globally in many uses with examples as diverse as aerospace, sports equipment and medical packaging. The underlying growth of many of these segments is driven by global trends in demographics, regulation and environmental benefits including resource efficiency. The main geographical markets for our AZOTE® foams are UK, continental Europe and North America as, beyond this, distribution costs limit the market opportunity. However, we do generate approximately 10% of sales outside these areas, mainly in Japan and China, where more niche markets value the technical properties of our foams. We target overall growth in polyolefin foams in excess of twice global GDP and see opportunities in all markets to contribute to this goal.

Revenue from polyolefin foams increased by 4% to £44.73m (2015: £43.04m), with gains largely driven by favourable foreign exchange rates and the value added from the Zotefoams Midwest foam cutting operation more than offsetting a 5% decline in sales volume. In constant currency, sales declined by 5%. Market demand was variable during the year with a relatively strong overall start and finish to the year, where we operated close to capacity, dragged down by sluggish demand in UK and continental Europe from around mid-year until late October. Inventory management through the supply chain accounted for some of these swings, with the pick up later in the year continuing into 2017. However, German market sales were adversely impacted by actions of our largest customer and we have now begun selling direct and through additional channels to improve visibility and control in this important market.

Polyolefin foams segment profit was up 5% at £7.96m (2015: £7.55m), after the amortisation of acquired intangible items. In constant currency, segment profit was £6.06m. The average price of LDPE, our main raw material which is sold in euros, declined slightly in 2016 compared with the prior year, although our purchase cost increased by approximately 9% due to weaker sterling. Overall reported margins in this segment remained around 18%, with higher selling prices offset by increased raw materials cost and the less favourable operational gearing of lower sales volumes.

HPP

	2016 £m	2015 £m	% Change
Group revenue	**9.99**	8.27	21%
Segment profit pre amortisation	**2.48**	0.82	204%
Segment profit post amortisation	**2.48**	0.82	204%
Segment profit margin	**25%**	10%	

The High-Performance Products ('HPP') business unit is comprised of ZOTEK® block foams and T-FIT® technical insulation. ZOTEK® products use Zotefoams unique autoclave technology applied to high-end polymers such as PVDF fluoropolymer, nylon or PEBA. Combining the original polymer properties with our foaming process creates truly unique materials. ZOTEK® F fluoropolymer foams, which account for 72% of HPP sales, are inherently fire and chemical resistant and are mainly used in aerospace applications. During the year sales volumes of ZOTEK® F foams for use in aviation, which is our main market, declined slightly as a key customer managed inventory lower in the downstream supply chain. ZOTEK® N nylon foams are designed to operate at very high temperatures and find uses in a wide variety of mainly industrial applications. Sales approximately doubled to 5% of HPP segment revenue. ZOTEK® PEBA foams, which were the fastest growing product in HPP during the year, have excellent kinetic-energy management properties and are being sold primarily into sports and leisure applications. T-FIT® technical insulation is manufactured from ZOTEK® F foams, and is sold primarily for use in clean rooms. In 2015 we set up a joint-venture company Kunshan ZOTEK King Lai Ltd ('KZKL') to manufacture T-FIT® products in Kunshan, China and expected this to be operational in 2016. Numerous operational and administrative issues delayed this project and, late in December 2016, we bought out our joint-venture partner. I am pleased to report that early in 2017, after absorbing more cost and management time than expected, KZKL is now operational and we can focus on the growth of our T-FIT® business.

We believe our portfolio of HPP growth opportunities is very strong, all of which have higher margin potential than our polyolefin foams products. Many of the applications on which we are working are pioneering and, therefore, the timing of revenue generation is difficult to predict. Nevertheless, the progress we made during 2016, particularly in PEBA and Nylon foams, is very encouraging for 2017 and beyond.

HPP sales increased by 21% in the year to £9.99m (2015: £8.27m), equivalent to 7% at constant exchange rates, and now represent 17% of Group revenue. The majority of HPP sales and raw materials costs are US dollar denominated, while most other costs are incurred in sterling. The favourable foreign exchange rates and positive operational gearing therefore benefitted gross margins, which improved to 51% (2015: 40%). The HPP segment reported a profit of £2.48m (2015: £0.82m), which was a significant driver of Group profits, particularly in the second half of the year. Constant currency adjusted, segment profit increased 89% to £1.53m.

MEL

	2016 £m	2015 £m	% Change
Group revenue	**2.73**	2.62	4%
Segment loss pre amortisation	**(0.40)**	(0.50)	20%
Amortisation of acquired intangibles	(0.42)	(0.30)	
Segment loss post amortisation	**(0.82)**	(0.80)	(3%)

MuCell Extrusion LLC (“MEL”) licenses microcellular foam technology and sells related machinery. MEL’s business model is to develop and license IP and share in the savings or benefits of the licensee through a royalty and/or licence fee. MEL technology offers the potential to reduce the plastic content of an article by around 15% by injecting inert gas to displace plastic with microcellular bubbles. MEL technology can be used with most common plastics and reduces material consumption with no negative impact on recycling. The primary target market for MEL is consumer packaging, where production volumes are large and developments are scalable across geographic and product markets. Polymer sheet, which is moulded into containers, pots and cups, as well as films for bags and blow moulded articles such as bottles, can all benefit from MuCell® technology.

2016 was a year in which the focus in MEL was on standardisation and incorporation of the latest technology in our equipment, deeper understanding of the challenges of customers moving into volume production with specific products, resins and machinery configurations, and on a small number of major projects which will generate large equipment revenues in 2017. As a result, MEL capabilities have been expanded and it is now able to act as a partner in product development in addition to being an expert in foaming technology.

As a result of this change in focus during 2016, the conversion rate of our equipment slowed to an additional 22 lines, bringing the total installed base to 111 lines. During the year MEL also refined its equipment offering by developing the technology for customers to run multiple extrusion lines from a single MuCell SCF, which is the critical equipment that controls gas injection at extremely high pressure. The lower capital cost of these “satellite units”, which were used to convert 11 of the 22 lines in 2016, further enhances the potential returns to customers, making MEL technology even more appealing.

Sales increased by 4% to £2.73m (2015: £2.62m), although the US dollar sales value of equipment reduced since fewer SCF lines were sold than in 2015 as a result of customers utilising the lower-priced satellite units. Overall licence and royalty income declined slightly as increases from most customers were offset by the timing of licensing income recognition for a large customer, who adopted an alternative agreement which resulted in certain revenue obligations falling into 2017. Overall order intake in 2016 was at record levels buoyed by two orders with a combined value in excess of $2m, $1.6m of which will not be recorded as sales until Q1:2017, where licensees are investing in complete, new, extrusion lines to utilise our technology. The MEL operating loss, pre amortisation, reduced to £0.40m (2015: £0.50m), with no constant currency adjustment, and machinery margins improved due to standardisation and high-margin licence and royalty income remaining stable at approximately one-third of revenues.

MEL growth will come from signing additional licensees and managing a client portfolio of 25 licensees as at 31 December 2016, 12 of which are not yet in commercial production. We have high levels of interest in our technology and expect to continue to increase the number of licensees each year at a rate broadly consistent with that achieved over the past four to five years. Existing licensees are at different stages of their lifecycle, and those in production are focused on increasing utilisation of our technology. Over the past few years we have gained an additional depth of knowledge in our key markets of film, sheet and blow-moulded containers and this is highly beneficial to helping existing licensees into commercial production for their first products.

2016	Film	Blow Moulding	Sheet	Speciality	Total
Total units	22	43	32	14	111

2015	Film	Blow Moulding	Sheet	Speciality	Total
Total units	19	35	22	12	88

Investment
Zotefoams' core autoclave technology is used in both our AZOTE® and ZOTEK® block foam manufacture. This manufacturing process comprises three main, separable, steps: extrusion of polymer into a solid sheet, high-pressure nitrogen gas impregnation and low-pressure foaming. Currently our UK site operates all three processes and, since 2001, has supplied our site in Walton, Kentucky, USA with nitrogen-impregnated sheet for foaming. In Kentucky, we are investing approximately $31 million in infrastructure, two extruders and a high-pressure autoclave to increase global capacity by approx. 20%. This capacity will begin to come on-stream around the middle of 2017, while a second high-pressure autoclave body, included as part of the investment, will allow us to double capacity on this site as needed.

Our Croydon site added additional laboratory space and equipment during 2016 and completed the majority of work on two smaller low-pressure autoclaves and an additional extrusion line, both specifically designed for ZOTEK® foams, which are currently in the process of being fully commissioned.

In Asia, Zotefoams invested for the first time in foam thermoforming machinery. Normally associated with our customers and downstream processing, these machines, installed at KZKL, will be used to manufacture T-FIT® products for global cleanroom insulation, where the largest market opportunities are China and India. In the USA we established Zotefoams Midwest in Tulsa, Oklahoma, USA which cuts our foams for the construction market, thereby adding value in a typically higher-volume, lower-margin segment of our business. These two "downstream" investments increase our ability to influence and control defined segments of our business with high volume, value-added potential.

Main Trends and Factors
Zotefoams' manufacturing processes are unique and capital intensive and to optimise profitability we operate at high levels of capacity utilisation 24/7. During 2017 we plan to commission our additional investment in Kentucky, USA which will bring additional capacity and increased overhead costs and depreciation. Manufacturing for North American customers from our Kentucky facility will reduce internal freight and duty costs from the UK, but this will take time to fully realise. Therefore, in 2017, one of the key factors for our business is to commission our new Kentucky capacity effectively, manage the transition of production from the UK in a timely manner to mitigate the impact of the additional costs during transition and, thereafter, to operate at high levels of Group capacity utilisation in order to absorb the additional overhead and fixed costs.

Over time we expect our higher margin HPP business and the potentially high margin but currently sub-scale MEL business to account for a larger percentage of sales. While we continue to identify new opportunities in our ZOTEK ® F business, as well as leverage those already identified in the aviation market, we see positive developments in our Nylon and PEBA-based foams which will help diversify the HPP portfolio as they find traction in their respective markets. The rate of growth of these two segments will be a significant determinant of the development of Group profitability.

We manage our portfolio of business to ensure AZOTE® foams can deliver the required high levels of asset utilisation, while focusing the majority of development expenditure on HPP and MEL to support higher growth rates. As our global profile and market balance changes we need to ensure the administrative and support structures are in place to manage the risk and opportunities we create. This includes reacting to external changes, such as Brexit, which is likely to place barriers between our UK facility and continental Europe, which is both our largest market and the source of most raw materials. While it is too early to take any concrete action, we are considering potential outcomes from Brexit negotiations and their possible impact on our business, including the approximately 50 non-UK European Union nationals currently working in mainly management, technical and administrative roles at our Croydon facility.

Overall we consider the main trends driving demand to be positive, augmented by our use of technology to develop innovative, higher growth products.

ZOTEFOAMS

Financial Results

Overview
The Group continued to make progress in 2016. While sales were below our established growth targets, the benefits of weaker sterling allowed significant investments to continue in operating infrastructure, enabling the development of Group growth opportunities and its continued transformation into a global organisation. During the year we expanded our international footprint with the formation of Zotefoams Midwest, based in Tulsa, Oklahoma, USA and the start-up of our Kunshan ZOTEK King Lai Ltd (KZKL) venture in Kunshan, China.

Trading results
Group revenue for the year increased 7% to £57.38m (2015: £53.87m). The Group generates 82% of its revenues from non-sterling currencies, primarily US dollar and euro, and benefited from the sterling devaluation during the year. In constant currency, Group revenues fell 4%.

Gross margin increased to 35.8% (2015 restated: 32.1%), with sales mix, foreign currency benefits and operations efficiencies offsetting increases in input costs. Raw materials and US production costs increased in line with foreign currency rate movements, while energy costs rose 8%. The restatement of 2015 gross margin arose following a reassessment of cost classifications, where £2.26m of costs, previously recognised as cost of sales, have been reclassified to distribution and administrative costs.

Supporting the Group's future growth expectations has required an increase in investment in sales, technical and governance structures. In 2016, the full year impact of its 2015 actions, together with continuation of disciplined investment in core functional areas and new ventures in Kunshan, China and Oklahoma, USA, resulted in an increase in distribution and administrative costs of £1.95m to £12.89m (2015 restated: £10.94m). These expenses include a net gain from foreign exchange hedging contracts and foreign exchange translation of £0.03m (2015 net gain: £0.21m).

The Business Unit results are shown in the Strategic Report. They do not include central plc costs, which are not considered to be segment specific. In 2016 central plc costs were £1.94m (2015: £1.46m), reflecting investment in Group leadership and higher incentive-based payments.

Profit before tax and exceptional items increased 20% to £7.23m (2015: £6.01m). Approximately £2.42m of the increase was due to the net benefit of changes in foreign currency rates. Profit before tax and after exceptional items increased 16% to £6.99m (2015: £6.01m).

Exceptional Item
In June, the Group completed an efficiency improvement programme at our Croydon, UK factory, with the objective to increase effective capacity and reduce operating costs in the future. This resulted in a pre-tax exceptional cost of £0.24m during the year.

Currency review
Zotefoams is a predominantly UK-based exporter. In 2016 approximately 80% of sales were denominated in US dollars and euros. Most costs are incurred in sterling, other than our main raw materials for polyolefin foams, which are euro-denominated, and subsidiaries staff, operational costs and HPP raw materials, which are US dollar-denominated. Movements in foreign exchange rates can therefore have a significant impact on our results. As a result, the Group reduces its foreign exposure for transactional items by using forward exchange contracts. The Group does not hedge for the translation of its foreign subsidiaries assets or liabilities.

During the year the Group generated a loss on forward contracts of £2.01m (2015 gain: £0.23m.) This was offset by a translation gain, primarily on the Company's US dollar receivables, of £1.98m (2015 gain: £0.01m). The receivable position was temporarily high during 2016 as the Group retained cash generated from its US dollar sales to fund its capital investment. This exposure will reduce during 2017 as the investment completes.

The currency impact on business segments was as follows.

Group revenue £m	2016 Reported	2016 Adjusted*	2015 Reported	Net change % Reported	Net change % Adjusted*
Polyolefin foams	44.73	40.91	43.04	4%	(5%)
HPP	9.99	8.81	8.27	21%	7%
MuCell	2.73	2.38	2.62	4%	(9%)
Eliminations	(0.07)	(0.07)	(0.07)		
Group	57.38	52.02	53.87	7%	(3%)

*Constant currency

Exchange rates
Zotefoams transacts significantly in euros and US dollars. The exchange rates used to translate the key flows and balances were:

	2016	2015
GBP to Euro – average	**0.82**	0.72
GBP to Euro – year-end spot	**0.85**	0.74
GBP to USD – average	**0.75**	0.65
GBP to USD – year-end spot	**0.82**	0.68

Interest, tax and earnings per share
The total net interest charge for year was £0.39m (2015: £0.31m) and includes £0.19m (£0.21m) of interest on the Company's defined benefit pension obligation.

The effective tax rate for the year is 18.5% (2015: 20.2%), which is marginally below the corporate tax rate for the year of 20.0%. This is due to an adjustment to the prior year tax charge, without which the tax rate would have been 20.4%. Taxation paid during the year was £1.00m (2015: £0.78m).

Group basic earnings per share were 13.25p (2015: 11.10p), an increase of 19.4%.

Dividend
The Directors are proposing a final dividend of 3.9p (2015: 3.8p), which would be payable on 25 May 2017 to shareholders on the Company register at the close of business on 21 April 2017. Taken with the interim dividend of 1.85p (2015 1.80p) this would bring the total dividend for the year to 5.75p per ordinary share (2015: 5.60p), an increase of 3%, in line with the Group's targeted policy of paying a progressive dividend subject to profit growth, investment and other business requirements. It would also represent a dividend cover of 2.2 times (2015: 1.9 times).

Cash flow and funding
Net cash inflow from operations for the year reduced to £6.36m (2015: £8.41m) as a result of higher working capital outflows in the year of £4.22m (2015: £0.95m), some of which is timing-related with record sales in the final quarter, while some reflects the Group's inventory investment in anticipation of demand for its high-margin HPP business.

Zotefoams continued its significant investment activity to support future growth, amounting to a net cash outflow of £12.78m in 2016 (2015: £9.10m). The Group's largest project is extending its existing facility in Kentucky, USA, to deliver approximately 20% additional capacity for block foams. During 2016 the Group invested £6.90m in the US expansion project, bringing the total investment at 31 December to

£16.60m. It also continued to invest in its Croydon, UK facility, increasing capacity and capability, as well as invest in new facilities in China and the US. Dividends paid in the year amounted to £2.47m (2015: £2.40m).

Closing net debt was £12.56m (2015: £1.59m), linked primarily to the Group's US expansion plan as well as timing differences on working capital outflows.

In December 2015 the Group signed a 10-year fixed rate secured US dollar loan for $8m. In March 2016 it refinanced its £4.9m overdraft facility with a four-year, multi-currency revolving credit facility (RCF) of £8m, together with a £2m overdraft. As at 31 December 2016 it also had a £0.7m secured mortgage facility. The Group retains a strong balance sheet, with funding and flexibility for future growth. Key ratios at year end were an interest cover of 33, compared with the RCF covenant of a minimum of 4 and net borrowings to EBITDA of 1.2, the RCF covenant being a maximum of 2.5. Since the balance sheet date the Group has increased its RCF by £2m, to £10m.

Pensions

The gross IAS19 deficit on the Company's Defined Benefit Pension Scheme (the "Scheme") increased by £2.20m to £7.44m as at December 2016 (2015: £5.24m). This is primarily due to a reduced discount rate of 2.70% (2015: 3.80%) following falls in corporate bond yields during the year.

The Company has agreed, under the last triennial actuarial valuation of the Scheme as at 5 April 2014, to make annual payments of £0.50m over the period to 5 April 2020 to eliminate a funding shortfall identified at that valuation point of £2.50m. It has also agreed to pay £0.16m per annum to cover administrative expenses. The position will be reviewed following the next full actuarial valuation in April 2017.

The Company closed the Scheme to new members in October 2001 and ceased the future accrual of benefit for existing members at the end of 2005.

David Stirling
Group CEO

ZOTEFOAMS

CONSOLIDATED INCOME STATEMENT
FOR THE YEAR ENDED 31 DECEMBER 2016

	Note	Unaudited 2016 £'000	Audited 2015* £'000
Group revenue	2	**57,376**	53,869
Cost of sales		**(36,838)**	(36,602)
Gross profit		**20,538**	17,267
Distribution costs		**(5,551)**	(5,228)
Administrative expenses pre-exceptional item		**(7,341)**	(5,714)
Exceptional item		**(242)**	-
Total administrative expenses		**(7,583)**	(5,714)
Operating profit		**7,404**	6,325
Operating profit pre exceptional item		**7,646**	6,325
Finance income	4	**-**	2
Finance costs	4	**(393)**	(306)
Net finance costs		**(393)**	(304)
Share of loss from joint venture		**(21)**	(11)
Profit before income tax		**6,990**	6,010
Profit before income tax pre exceptional item		**7,232**	6,010
Income tax expense	5	**(1,294)**	(1,213)
Profit for the year		**5,696**	4,797
Profit for the year pre exceptional item		**5,890**	4,797
Attributable to:			
Equity holders of the Parent		**5,795**	4,824
Non-controlling Interest		**(99)**	(27)
		5,696	4,797
Earnings per share:			
Basic (p)	6	**13.25**	11.10
Diluted (p)	6	**13.07**	10.90

*In preparing the unaudited preliminary results the Directors have considered the classification of certain costs within the Consolidated Income Statement and, based upon this review, have reallocated certain balances between cost of sales and distribution and administrative expenses, further details of which can be found in Note 2.

ZOTEFOAMS

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME
FOR THE YEAR ENDED 31 DECEMBER 2016

	Note	**Unaudited 2016 £`000**	Audited 2015 £`000
Profit for the year		**5,696**	4,797
Other comprehensive income/(expense)			
Items that will not be reclassified to profit or loss			
Foreign exchange translation gains on investment in foreign subsidiaries		**4,319**	814
Actuarial (losses)/gains on defined benefit schemes	7	**(2,707)**	443
Tax relating to items that will not be reclassified		**514**	(84)
Total items that will not be reclassified to profit or loss		**2,126**	1,173
Items that may be re-classified subsequently to profit or loss			
Effective portion of changes in fair value of cash flow hedges		**(159)**	(46)
Tax relating to items that may be reclassified		**29**	6
Total items that may be reclassified subsequently to profit or loss		**(130)**	(40)
Other comprehensive income for the year, net of tax		**1,996**	1,133
Total comprehensive income for the year		**7,692**	5,930
Attributable to:			
Equity holders of the Parent		**7,783**	5,952
Non-controlling Interest		**(91)**	(22)
Total comprehensive income for the year		**7,692**	5,930

ZOTEFOAMS

CONSOLIDATED STATEMENT OF FINANCIAL POSITION
AS AT 31 DECEMBER 2016

	Note	Unaudited 2016 £'000	Audited 2015 £'000
Non-current assets			
Property, plant and equipment		**47,500**	35,372
Intangible assets		**7,547**	6,868
Investments in joint ventures		**142**	163
Deferred tax assets		**709**	574
Total non-current assets		**55,898**	42,977
Current assets			
Inventories		**12,307**	9,862
Trade and other receivables		**20,404**	17,219
Cash and cash equivalents		**2,868**	6,148
Total current assets		**35,579**	33,229
Total assets		**91,477**	76,206
Current liabilities			
Trade and other payables		**(10,587)**	(10,445)
Current tax liability		**(1,035)**	(726)
Interest-bearing loans and borrowings		**(9,156)**	(1,102)
Bank overdraft		**(805)**	(879)
Total current liabilities		**(21,583)**	(13,152)
Non-current liabilities			
Interest-bearing loans and borrowings		**(5,464)**	(5,758)
Deferred tax liabilities		**(608)**	(938)
Post-employment benefits	7	**(7,439)**	(5,238)
Total non-current liabilities		**(13,511)**	(11,934)
Total liabilities		**(35,094)**	(25,086)
Total net assets		**56,383**	51,120
Equity			
Issued share capital		**2,221**	2,221
Share premium		**24,340**	24,340
Own shares held		**(31)**	(38)
Capital redemption reserve		**15**	15
Translation reserve		**5,947**	1,636
Hedging reserve		**(319)**	(189)
Retained earnings		**24,210**	22,997
Total equity attributable to the equity holders of the Parent		**56,383**	50,982
Non-controlling Interest		**-**	138
Total equity		**56,383**	51,120

ZOTEFOAMS

CONSOLIDATED STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED 31 DECEMBER 2016

	Unaudited 2016 £'000	Audited 2015 £'000
Cash flows from operating activities		
Profit for the year	**5,696**	4,797
Adjustments for:		
Depreciation, amortisation and impairment	**3,595**	3,476
Finance income	**-**	(2)
Finance costs	**393**	306
Share of loss from joint venture	**21**	11
Equity-settled share-based payments	**269**	223
Taxation	**1,294**	1,213
Operating profit before changes in working capital and provisions	**11,268**	10,024
Increase in trade and other receivables	**(1,686)**	(3,546)
Increase in inventories	**(2,121)**	(471)
(Decrease)/increase in trade and other payables	**(412)**	3,065
Employee benefit contributions	**(692)**	(660)
Cash generated from operations	**6,357**	8,412
Interest paid	**(187)**	(97)
Income tax paid	**(1,000)**	(782)
Net cash generated from operating activities	**5,170**	7,533
Cash flows from investing activities		
Interest received	**-**	2
Investment in non-controlling interest	**(195)**	-
Purchases of intangibles	**(443)**	(422)
Purchases of property, plant and equipment	**(12,140)**	(8,683)
Net cash used in investing activities	**(12,778)**	(9,103)
Cash flows from financing activities		
Proceeds from options exercised and issue of share capital	**30**	126
Repurchase of own shares	**-**	(127)
Repayment of borrowings	**(1,319)**	(741)
Proceeds from borrowings	**7,894**	5,356
Investment in subsidiary by non-controlling interest	**-**	160
Dividends paid	**(2,474)**	(2,400)
Net cash generated from financing activities	**4,131**	2,374
Net (decrease)/increase in cash and cash equivalents	**(3,477)**	804
Cash and cash equivalents at 1 January	**5,269**	4,628
Exchange gains/(losses) on cash and cash equivalents	**271**	(163)
Cash and cash equivalents at 31 December	**2,063**	5,269

ZOTEFOAMS

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (UNAUDITED)
FOR THE YEAR ENDED 31 DECEMBER 2016

	Note	Share capital £`000	Own shares held £`000	Share premium £`000	Capital redemption reserve £`000	Translation reserve £`000	Hedging reserve £`000	Retained earnings £`000	Non-controlling interest £`000	Total equity £`000
Balance as at 1 January 2015		2,191	(17)	24,340	15	827	(149)	20,027	–	47,234
Foreign exchange translation gains on investment in subsidiaries		–	–	–	–	809	–	–	5	814
Effective portion of changes in fair value of cash flow hedges net of recycling		–	–	–	–	–	(46)	–	–	(46)
Tax relating to effective portion of changes in fair value of cash flow hedges net of recycling		–	–	–	–	–	6	–	–	6
Actuarial gain on defined benefit pension scheme		–	–	–	–	–	–	443	–	443
Tax relating to actuarial gain on defined benefit scheme		–	–	–	–	–	–	(84)	–	(84)
Profit for the year		–	–	–	–	–	–	4,824	(27)	4,797
Total comprehensive income/(expenditure) for the year		–	–	–	–	809	(40)	5,183	(22)	5,930
Transactions with owners of the Parent: Shares issued and options exercised		30	10	–	–	–	–	86	–	126
Shares acquired		–	(31)	–	–	–	–	(96)	–	(127)
Equity-settled share-based payments net of tax		–	–	–	–	–	–	197	–	197
Dividends paid	6	–	–	–	–	–	–	(2,400)	–	(2,400)
Total transactions with owners of the Parent		30	(21)	–	–	–	–	(2,213)	–	(2,204)
Non-controlling interest on acquisition		–	–	–	–	–	–	–	160	160
Balance as at 31 December 2015 and 1 January 2016		2,221	(38)	24,340	15	1,636	(189)	22,997	138	51,120
Foreign exchange translation gains on investment in subsidiaries		–	–	–	–	4,311	–	–	8	4,319
Effective portion of changes in fair value of cash flow hedges net of recycling		–	–	–	–	–	(159)	–	–	(159)
Tax relating to effective portion of changes in fair value of cash flow hedges net of recycling		–	–	–	–	–	29	–	–	29
Actuarial loss on		–	–	–	–	–	–	(2,707)	–	(2,707)

defined benefit pension scheme										
Tax relating to actuarial loss on defined benefit pension scheme		–	–	–	–	–	–	514	–	514
Profit/(loss) for the year		–	–	–	–	–	–	5,795	(99)	5,696
Total comprehensive income/(expenditure) for the year		–	–	–	–	4,311	(130)	3,602	(91)	7,692
Transactions with owners of the Parent:										
Options exercised		–	7	–	–	–	–	23	–	30
Purchase of non-controlling interest		–	–	–	–	–	–	(148)	(47)	(195)
Equity-settled share-based payments net of tax		–	–	–	–	–	–	210	–	210
Dividends paid	6	–	–	–	–	–	–	(2,474)	–	(2,474)
Total transactions with owners of the Parent		–	7	–	–	–	–	(2,389)	(47)	(2,429)
Balance as at 31 December 2016		**2,221**	**(31)**	**24,340**	**15**	**5,947**	**(319)**	**24,210**	**-**	**56,383**

1. Accounting policies

Zotefoams plc (the ‘Company’) is a company incorporated in Great Britain. The registered office of the Company is 675 Mitcham Road, Croydon CR9 3AL.

The Group unaudited preliminary results consolidate those of the Company and its subsidiaries (together referred to as the ‘Group’). The unaudited consolidated financial results of Zotefoams plc have been prepared in accordance with International Financial Reporting Standards (‘IFRS’) as adopted by the European Union and IFRS Interpretations Committee (‘IFRS IC’) interpretations applicable to companies reporting under IFRS, in accordance with the Companies Act 2006.

The information for the year ended 31 December 2016 does not constitute statutory accounts for the purposes of section 435 of the Companies Act 2006. A copy of the accounts for the year ended 31 December 2015 has been delivered to the Registrar of Companies. The auditor's report on those accounts was not qualified and did not contain statements under section 498(2) or 498(3) of the Companies Act 2006. The audit of the statutory accounts for the year ended 31 December 2016 is not yet complete. These accounts will be finalised on the basis of the financial information presented by the Directors in this preliminary announcement and will be delivered to the Registrar of Companies following the Company's annual general meeting.

The unaudited preliminary results have been prepared under the historical cost convention, except for the revaluation of certain financial instruments except as explained below, the same accounting policies, presentation and methods of computation are followed in these financial statements as were applied in the Group's 2015 annual audited financial statements.

2. Segment reporting

The Group’s operating segments are reported in a manner consistent with the internal reporting provided to and regularly reviewed by the Group Chief Executive Officer, David Stirling, who is considered to be the ‘chief operating decision maker’ for the purpose of evaluating segment performance and allocating resources.

The Group manufactures and sells high-performance foams and licenses related technology for specialist markets worldwide. Zotefoams’ activities are categorised as follows:

- Polyolefins: these foams are made from olefinic homopolymer and copolymer resin. The most common resin used is polyethylene.
- High-Performance Products (‘HPP’): these foams exhibit high-performance on certain key properties, such as improved chemical, flammability, temperature or energy management performance. Turnover in the segment is currently mainly derived from products manufactured from three main polymer types: PVDF fluoropolymer, polyamide (nylon) and polyether block amide (PEBA). Foams are sold under the brand names ZOTEK® while technical insulation products manufactured from certain materials are branded as T-FIT®.
- MuCell Extrusion LLC (‘MEL’): licenses microcellular foam technology and sells related machinery.

	Polyolefins		HPP		MEL		Eliminations		Consolidated	
	2016	2015	**2016**	2015	**2016**	2015	**2016**	2015	**2016**	2015
	£`000	£`000	**£`000**	£`000	**£`000**	£`000	**£`000**	£`000	**£`000**	£`000
Group revenue	**44,729**	43,040	**9,988**	8,274	**2,733**	2,621	**(74)**	(66)	**57,376**	53,869
Segment profit/(loss) pre-amortisation	**8,003**	7,601	**2,483**	816	**(396)**	(497)	**-**	-	**10,090**	7,920
Amortisation of acquired intangible assets	**(48)**	(47)	**-**	**-**	**(419)**	(304)	**-**	-	**(467)**	(351)
Segment profit/(loss)	**7,955**	7,553	**2,483**	816	**(815)**	(801)	**-**	-	**9,623**	7,568
Foreign exchange (losses)/gains	-	-	-	-	-	-	**-**	-	**(33)**	213
Unallocated central costs	-	-	-	-	-	-	**-**	-	**(1,944)**	(1,456)
Operating profit	**-**	-	-	-	-	-	**-**	-	**7,646**	6,325
Net financing costs	**-**	-	-	-	-	-	**-**	-	**(393)**	(304)
Share of loss from joint venture	**(21)**	-	-	-	-	-	**-**	-	**(21)**	(11)
Taxation (pre-exceptional items)	**-**	-	-	-	-	-	**-**	-	**(1,342)**	(1,213)
Profit for the year (pre-exceptional items)									**5,890**	4,797
Segment assets	**68,610**	59,423	**11,607**	8,989	**10,409**	7,057	**-**	-	**90,626**	75,469
Unallocated assets	-	-	-	-	-	-	**-**	-	**851**	737
Total assets									**91,477**	76,206
Segment liabilities	**(30,643)**	(20,318)	**(980)**	(2,420)	**(1,828)**	(684)	**-**	-	**(33,451)**	(23,422)
Unallocated liabilities	-	-	-	-	-	-	**-**	-	**(1,643)**	(1,664)
Total liabilities									**(35,094)**	(25,086)
Depreciation	**2,626**	2,606	**122**	178	**37**	43	**-**	-	**2,785**	2,827
Amortisation	**391**	345	**-**	-	**419**	304	**-**	-	**810**	649
Capital expenditure:										
Tangible fixed assets	**10,996**	8,800	**1,162**	456	**-**	12	**-**	-	**12,158**	9,268
Intangible fixed assets	**245**	413	**198**	-	**-**	9	**-**	-	**443**	422

Unallocated assets and liabilities are made up of corporation tax and deferred tax assets and liabilities and, in 2015, investments in joint ventures.

Following a reassessment of cost classifications, certain costs at the Group's subsidiaries, previously recognised as cost of sales, have been reclassified to distribution and administration costs of £1,342,000 and £919,000 respectively, impacting the Group's gross margin percentage.

Geographical segments

Polyolefins, HPP and MEL are managed on a worldwide basis but operate from UK and US locations. In presenting information on the basis of geographical segments, segmental revenue is based on the geographical location of customers. Segment assets are based on the geographical location of assets.

	United Kingdom & Eire	Continental Europe	North America	Rest of the world	Total
	£`000	£`000	£`000	£`000	£`000
For the year ended 31 December 2016					
Group revenue from external customers	**10,008**	**21,864**	**19,940**	**5,564**	**57,376**
Non-current assets	**29,399**	**-**	**25,648**	**-**	**55,047**
Capital expenditure	**3,731**	**-**	**7,593**	**865**	**12,158**
For the year ended 31 December 2015					
Group revenue from external customers	11,372	21,568	15,975	4,954	53,869
Non-current assets	27,157	-	14,882	201	42,240
Capital expenditure	2,725	-	6,342	201	9,268

Non-current assets do not include financial instruments, deferred tax assets or investments in joint ventures.

Major customer
Revenues from one customer of the Group represent approximately £4.61m (2015: £4.90m) of the Group's revenue.

3. Exceptional item

On 24 June 2016 the Group and the Company incurred redundancy costs totalling £242,000, as a result of an efficiency improvement programme, which have been included in the Income Statement as an operating exceptional item.

	2016	2015
	£`000	£`000
Restructuring costs	**242**	-

4. Finance income and costs

Finance income

	2016	2015
	£`000	£`000
Interest on bank deposits	**-**	2

Finance costs

	2016	2015
	£`000	£`000
On bank loans and overdrafts	**207**	97
Interest on defined benefit pension obligation	**186**	209
	393	306

5. Taxation

	2016 **£`000**	2015 £`000
UK corporation tax	**1,422**	989
Overseas taxation	**43**	124
Adjustment in respect of prior years	**(132)**	10
Current taxation	**1,333**	1,123
Deferred taxation	**(39)**	90
Total tax charge	**1,294**	**1,213**

Factors affecting the tax charge

The tax on the Group's profit before tax differs from the theoretical amount that would arise using the weighted average tax rate applicable to profits of the consolidated entities as follows:

	2016 **£`000**	2015 £`000
Tax reconciliation		
Profit before tax	**6,990**	6,010
Tax at 20.00% (2015: 20.25%)	**1,398**	1,217
Effects of:		
Expenses that are not deductible in determining taxable profit	**641**	573
Research and development tax credits and other allowances	**(855)**	(911)
Overseas earnings and effect of US tax losses	**(33)**	135
Effect of different tax rates of subsidiaries operating in other jurisdictions	**275**	224
Re-measurement of deferred tax	**-**	(35)
Adjustments to prior year UK corporation tax charge	**(132)**	10
Total tax charge	**1,294**	1,213

The weighted average applicable tax rate for the Group is similar to the standard rate of corporation tax in the UK of 20.00%
(2015: 20.25%).

Changes to the UK corporation tax rates were substantively enacted as part of the Finance Bill 2015 (on 26 October 2015) and Finance Bill 2016 (on 7 September 2016). These include reductions to the main rate to reduce the rate to 19% from 1 April 2017 and to 17% from 1 April 2020. Deferred taxes at the Statement of Financial Position date have been measured using these enacted tax rates and reflected in these consolidated financial statements.

6. Dividends and earnings per share

	2016 **£`000**	2015 £`000
Final dividend prior year of 3.80p (2014: 3.70p) per 5.0p ordinary share	**1,664**	1,615
Interim dividend of 1.85p (2015: 1.80p) per 5.0p ordinary share	**810**	785
Dividends paid during the year	**2,474**	2,400

The proposed final dividend for the year ended 31 December 2016 of 3.90p per share (2015: 3.80p) is subject to approval by shareholders at the AGM and has not been recognised as a liability in these consolidated financial statements. The proposed dividend would amount to £1,732,163 if paid to all the shares in issue.

Earnings per ordinary share
Earnings per ordinary share is calculated by dividing consolidated profit after tax attributable to equity holders of the Parent Company of £5.80m (2015: £4.82m) by the weighted average number of shares in issue during the year, excluding own shares held by employee trusts which are administered by independent trustees. The number of shares held in the trust at 31 December 2016 was 628,979 (2015: 768,911). Distribution of shares from the trust is at the discretion of the trustees. Diluted earnings per ordinary share adjusts for the potential dilutive effect of share option schemes in accordance with IAS 33

Earnings

	2016	2015
Weighted average number of ordinary shares in issue	**43,750,811**	43,595,921
Deemed issued for no consideration	**590,974**	599,401
Diluted number of ordinary shares issued	**44,341,785**	44,195,323

7. Post-employment benefits

Defined benefit pension plans
The Company operates a UK registered trust-based pension scheme that provides defined benefits. Pension benefits are linked to the members' final pensionable salaries and service at their retirement (or date of leaving if earlier). The Trustees are responsible for running the Scheme in accordance with the Scheme's Trust Deed and Rules, which set out their powers. The Trustees of the Scheme are required to act in the best interests of the beneficiaries of the Scheme. There is a requirement that one-third of the Trustees are nominated by the members of the Scheme.

There are two categories of pension scheme members:

- Deferred members: former and current employees of the Company; and
- Pensioner members: in receipt of pension.

The defined benefit obligation is valued by projecting the best estimate of future benefit outgoings (allowing for revaluation to retirement for deferred members and annual pension increases for all members) and then discounting to the Statement of Financial Position date. The majority of benefits received increases in line with inflation (subject to a cap of no more than 5% per annum). The valuation method is known as the Projected Unit Method. The approximate overall duration of the Scheme's defined benefit obligation as at 31 December 2016 was 19 years.

Since 1 October 2001 the Scheme has been closed to new members and, from 31 December 2005, the future accrual of benefits for existing members of the Scheme ceased.

Future funding obligation
The Trustees are required to carry out an actuarial valuation every three years. The last actuarial valuation of the Scheme was performed by the Scheme Actuary for the Trustees as at 5 April 2014, and the next valuation is expected to be performed in 2017. This valuation revealed a funding shortfall of £2,500,000. In respect of the deficit in the Scheme as at 5 April 2014, the Company has agreed to pay £492,000 per annum until 5 April 2020. In addition, the Company will pay £127,200 per annum to cover administration expenses. The Company therefore expects to pay £619,200 to the Scheme during the accounting year beginning 1 January 2017, until an updated valuation is performed.

Risks
Through the Scheme, the Company is exposed to a number of risks:

- Asset volatility: the Scheme's defined benefit obligation is calculated using a discount rate set with reference to corporate bond yields, however the Scheme invests significantly in equities and other growth assets. These assets are expected to outperform corporate bonds in the long term, but provide volatility and risk in the short term.

- Changes in bond yields: a decrease in corporate bond yields would increase the Scheme's defined benefit obligation, however this would be partially offset by an increase in the value of the Scheme's bond holdings.
- Inflation risk: a significant proportion of the Scheme's defined benefit obligation is linked to inflation, therefore higher inflation will result in a higher defined benefit obligation (subject to the appropriate caps in place). The majority of the Scheme's assets are either unaffected by inflation, or only loosely correlated with inflation, therefore an increase in inflation would also increase the deficit.
- Life expectancy: if Scheme members live longer than expected, the Scheme's benefits will need to be paid for longer, increasing the Scheme's defined benefit obligation.

The Trustees and Company manage risks in the Scheme through the following strategies:

- Diversification: investments are well diversified, such that the failure of any single investment would not have a material impact on the overall level of assets.
- Investment strategy: the Trustees are required to review their investment strategy on a regular basis.
- Annuities: the Scheme holds insurance contracts to pay some members' AVC benefits and spouses' pensions. This removes investment, inflation and longevity risk for those members.

The Company has recognised all actuarial gains and losses immediately in Other Comprehensive Income. The initial results calculated as part of the formal actuarial valuation as at 5 April 2014 have been updated to 31 December 2016 by a qualified independent actuary. The major assumptions used by the actuary were (in nominal terms) as follows:

	As at 31 December 2016	As at 31 December 2015
Discount rate	**2.70%**	3.80%
RPI inflation (before retirement)	**3.30%**	2.70%
CPI inflation (before retirement)	**2.30%**	1.70%

Assumptions regarding future mortality are set based on actuarial advice in accordance with published statistics and experience in each territory. These assumptions translate into an average life expectancy in years for a pensioner retiring at age 65:

	2016	2015
For an individual aged 65 in 2016		
– Male	**22.4**	22.4
– Female	**24.5**	24.4
At age 65 for an individual aged 45 in 2016		
– Male	**24.1**	24.1
– Female	**26.4**	26.3

The table below outlines where the Group's post-employment amounts and activity are included in the consolidated financial statements.

	2016 £`000	2015 £`000
Statement of Financial Position obligations for:		
– Defined pension benefits	**(7,439)**	(5,238)
Income statement charge included in operating profit for:		
– Defined pension benefits	**(186)**	(209)
Actuarial (losses)/gains recognised in Other Comprehensive Income:		
– Defined pension benefits	**(2,707)**	443

The amounts recognised in the Statement of Financial Position are determined as follows:

	2016 £`000	2015 £`000
Market value of assets	**25,617**	22,989
Present value of defined benefit obligation	**(33,056)**	(28,227)
Funded status	**(7,439)**	(5,238)
Liability in the balance sheet	**(7,439)**	(5,238)

The movement in the defined benefit obligation over the year is as follows:

	2016 £`000	2015 £`000
Value of defined benefit obligation at start of year	**28,227**	28,951
Interest cost	**1,044**	1,023
Benefits paid	**(1,502)**	(1,078)
Actuarial gains: experience differing from that assumed	**(399)**	(186)
Actuarial losses/(gains): changes in financial assumptions	**5,686**	(483)
Value of defined benefit obligation at end of year	**33,056**	28,227

The movement in the value of the Scheme's assets over the year is as follows:

	2016 £`000	2015 £`000
Market value of assets at start of year	**22,989**	22,819
Interest income	**858**	814
Actual gain/(loss)	**2,580**	(226)
Employer contributions	**692**	660
Benefits paid	**(1,502)**	(1,078)
Market value of assets at end of year	**25,617**	22,989

The sensitivity of the defined benefit obligation to changes in the weighted principal assumptions is:

	Change in assumption	Change in defined benefit obligation
Discount rate	+0.5%/-0.5% pa	–8%/+9%
RPI inflation	+0.5% pa/–0.5% pa	+ 7%/–7%
Assumed life expectancy	+1 year	+3%

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the other assumptions may be correlated. When calculating the sensitivity of the defined benefit obligation to significant actuarial assumptions the same method (present value of the defined benefit obligation calculated with the projected unit credit method at the end of the reporting period) has been applied as when calculating the pension liability recognised within the statement of financial position. The assets of the Scheme are invested as follows:

	Year ended 31 December 2016		Year ended 31 December 2015	
Asset class	**Market value £'000**	**% of total Scheme assets**	Market value £'000	% of total Scheme assets
Equities	**16,187**	**63%**	15,120	66%
Corporate Bonds	**4,849**	**19%**	3,967	17%
Gilts	**2,958**	**12%**	2,597	11%
Cash	**1,034**	**4%**	873	4%
Insured pensioners	**589**	**2%**	432	2%
Total	**25,617**	**100%**	22,989	100%
Actual return on assets over the year:	**3,438**		588	

Other pension schemes
On 1 January 2006 a separate stakeholder scheme was set up for those employees who were originally in the closed defined benefit pension scheme. The contributions paid by the Company in 2016 were £404,000 (2015: £390,000).

In addition to this scheme, the Company operates a stakeholder scheme which is open to employees who joined after 1 October 2001. The contributions paid by the Company in 2016 were £204,000 (2015: £228,000).

The Company also operates another stakeholder scheme which is open to employees who joined after 1 March 2014. The contributions paid by the Company in 2016 were £141,000 (2015: £76,000).

For certain non UK based employees of the Company, the Company makes contributions into individual schemes. The contributions paid by the Company in 2016 were nil (2015: £2,000).

For USA based employees, Zotefoams Inc. operates a 401(k) plan. The contributions paid by Zotefoams Inc. in 2016 were £65,000; (2015: £52,000).