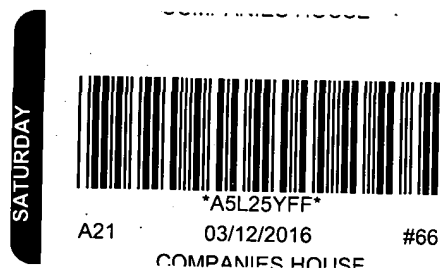


## Lloyd's Register Foundation

Annual report and financial statements 30 June 2016

Company number: 07905861 (England and Wales)  
Charity registration number: 1145988 (England and Wales)



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Connecting science, safety and society

## Life matters

The Lloyd's Register Foundation is a charity that helps to protect life and property and support education, engineering-related research and public engagement.

Our vision is to be known worldwide as a leading supporter of research, training and education - relevant to the field of engineering and which makes a real difference in improving the safety of the critical infrastructure that is vital to modern society. In support of this, we promote scientific excellence and act as a catalyst working with others to achieve maximum impact.

**We do this because life matters**

## At a glance

Value of grants awarded by the Lloyd's Register Foundation (the Foundation) 2015/16 £34.6m.

New awards in 2015/16, by strategic theme:

- Supporting excellent scientific research – 6 awarded in year, value £10.6m
- Accelerating the application of research – 3 awarded in year, value £10.6m
- Advancement of skills & education – 18 awarded in year, value £1.7m
- Promoting safety and public understanding of risk – 8 awarded in year, value £11.7m

Total value\* of our active grants portfolio including past grants paid where recipients are still under obligations to report on their use of funds, by strategic theme, at June 2016: total £80.0m

- Supporting excellent scientific research – 26 grants, value £52.2m
- Accelerating the application of research – 3 grants, value £10.6m
- Advancement of skills & education – 36 grants, value £5.5m
- Promoting safety and public understanding of risk – 8 grants, value £11.7m

Total value\* of our future grant commitments, by strategic theme, at June 2016: total £60.6m

- Supporting excellent scientific research – 21 grants, value £36.7m
- Accelerating the application of research – 2 grants, value £10.5m
- Advancement of skills & education – 28 grants, value £2.3m
- Promoting safety and public understanding of risk – 5 grants, value £11.1m

Our grants reach 23 countries\*\*

140 approaches for funding received (outline proposals and full applications)

- 95% of new awards were led by the Foundation: 'directive' and 5% as a result unsolicited approaches: 'responsive'. 35 grants awarded in year. Articles written for The Conversation by the Foundation-funded science editor have been read over 6 million times
- Our grant of £19,000 to the National Coastwatch Institution trained 710 member watchkeepers at 52 stations nationwide in use of an internationally recognised radio operator's certificate
- 2,029 copies of our two recent foresight reviews downloaded or provided in hard copy
- Our funding trained 283 RNLI lifeboat volunteer crew members from 35 lifeboat stations which launched 4,695 times and saved 4,271 lives
- 10 new PhD students selected by open competitive call through the International Consortium on Nanotechnology (ICON)
- Our research grants currently support 127 PhD students
- Social media Impressions on Facebook and Twitter 1,100,227
- 350% increase in traffic to our web pages in the last year

\* Value of total future cash payments, before discounting for accounting purposes

\*\* This includes countries of partners in consortia, but does not reflect additional international relationships developed by grant holders.

## Chairman's Statement

Our purpose is more relevant than ever. A shift change in technological development in the fields of nanotechnology, data centric engineering, robotics and autonomous systems is creating unprecedented opportunities and challenges for science and engineering. The Foundation is committed to meeting these opportunities and challenges head on to make a real difference in improving the safety of the critical infrastructure on which modern society relies.

Now in our third full year of operation we are seeing the Foundation continue to increase the scale of its grant funding strategy, with grants awarded in the year more than doubling year on year.

The 2014-2020 funding strategy that we set out two years ago has given us focus to deliver a balanced portfolio of support to meet society's needs.

Fundamental excellent scientific research into the safety of these emerging disruptive technologies is vital to ensure that they are safely deployed to meet society's needs. Importantly, accelerating the application of that research into major infrastructure projects is needed to demonstrate impact.

We are also passionate about encouraging and supporting the next generation of engineers and scientists to advance our understanding of new technologies.

And finally, we play an important role in supporting safety and the public understanding of risk to ensure that there is a balanced and informed debate.

This strategy has guided our approach to grant-giving and I am pleased to report that 95% of new awards were directive, with the Foundation actively seeking out long-term collaborations to meet its charitable objectives.

In 2015 we saw a renewed call on charities to demonstrate efficiency to maximise their contribution to society. The Foundation has demonstrated its efficiency, with 96% of charitable expenditure during the year ended 30 June 2016 committed to direct charitable activities. The call also served as a timely reminder for the sector to communicate effectively with all its stakeholders and society at large. Our efforts in promoting safety and the public understanding of risk serve to increase the public visibility of the great work that the Foundation carries out and the importance of continued research into societal challenges.

The work of the Foundation relies on income generated from our investments and the profits of our trading group, Lloyd's Register Group Ltd (LR). This year our funding from LR has risen to £20.2 million, and I would like to thank Alastair Marsh, who stepped into the role of LR's CEO in Oct 2015, his executive team and all the employees of LR for their enormous contribution.

Moreover, the LRF also discharges its charitable purpose through the safety related activities of LR – such as safety inspections on 8,500 ships each year, the on-going development of rules for the safe construction and maintenance of ships, and verifying the safe design and operation of oil rigs – for the benefit of the public and the environment. This unique relationship makes LR a truly special place to work and as a result, our colleagues feel a true sense of pride in their contribution to society.

I once again thank our Trustees who continue to give their time and valuable expertise to guide the Foundation with strong governance and oversight. It is a credit to them all that they give their time freely and with undaunted passion for the Foundation's purpose. I should also like to thank Michelle Davies who took over as Secretary of the Foundation in July 2015. Her experience has been invaluable in guiding us.

Finally I would like to thank Prof Richard Clegg, Managing Director Officer of the Foundation plus all of the Foundation staff for their dedication, vision and enthusiasm in driving the Foundation from strength to strength.

**Thomas Thune Andersen**  
Chairman, Lloyd's Register Foundation

## Managing Director's statement

2015/16 has been an exciting year for the Foundation. Our charitable expenditure in terms of grants awarded plus direct charitable activities has risen to around £34.6 million. The major grants made were a £10 million commitment to the National University of Singapore (NUS) to establish a world institute with an Asian focus on the public understanding of risk; a grant of £10 million to Ove Arup and Partners International Ltd for a joint programme with the Foundation to build resilience in critical infrastructure; and a £10 million grant as a founding partner of the Alan Turing Institute to develop research and education in the area of data-centric engineering. Including these we have made a total of 35 grants this year, all in line with our five year strategy that we published in 2014.

As a Foundation we aim to make the world a safer place for the benefit of society, but we appreciate that safety and risk are emotive subjects. Sometimes the general public can have anxieties and preconceptions that are opposite to reality. Our grant to NUS is important in this context in helping to establish an institute for the public understanding of risk, the first of its kind in Asia. In addition to undertaking multi-disciplinary research and providing education and training, it will also serve as a trusted, truly independent source of information and commentary on risk matters important in the eyes of the wider public.

Although we are a relatively young Foundation, having just completed our third full year of operation, we are making big strides in pursuit of our charitable purpose. Each year we are committing to large grants of the sort of size I have mentioned above with long durations, in some cases extending over 10 years. Our strategic aim is to build long-term collaborations in handpicked subject areas with the best minds in the world, working on practical solutions to real world challenges that will truly make a difference. Consequently, our portfolio of live grants is expanding year on year. It is currently valued at around £60 million<sup>1</sup> but expected to increase to about £150 million in the coming years. Reflecting this, we recognise that the focus and priorities of the Foundation will have to evolve and mature as the Foundation changes from primarily awarding large grants to managing the resultant portfolio and working with our grants community to maximise their impact and benefit to society.

In 2016 we also updated our five year plan. Our five year strategy still holds its value and remains unchanged, but the plan of how to get there has been updated to factor in experience and new opportunities. We will soon be publishing an update to our five year plan to share publicly the goals and outcomes we have set ourselves. It contains seven new goals: ensuring society has a trusted global evidence base for the safety of life and property; identifying and addressing Grand Challenges on global health, safety and the environment; further increasing the size of our live grants portfolio; strengthening our focus on education and skills plus public understanding of risk; establishing the future of our heritage collection; becoming a high performing charity benchmarked against others in the sector; and working together with our trading arm, LR, for a safer world.

My mantra running the Foundation is that the two principles that drive us are impact and excellence. Excellence means working with the best minds in the world on relevant problems that have a clear pathway to application from the beginning. Impact is all about successfully delivering the vision and maximising benefit to society. In pursuit of this we have started two initiatives in 2016/17. The first is an independent review of our impact looking at evidence of our track record plus the metrics and processes we use. This is a bold step that will give us confidence as well as provide a benchmark against which we can measure ourselves going forward. The second relates to the total footprint of our impact. As a Foundation we are cognisant that that we can make an impact in many ways, not only by giving grants. We look forward to exploring these further in 2016/17 as we seek to optimise the impact of our charitable activities and operations for the benefit of society.

Our relationship with LR is a distinguishing feature of the Foundation in working together for a safer society. In addition to providing our income it also provides us with an invaluable real-world perspective on the challenges facing the sectors we serve. Our unique relationship also helps us accelerate the uptake and application of technology and ideas arising from Foundation-funded work. We look forward to strengthening and leveraging this relationship in pursuit of working together for a safer world.

An Advisory Council was set up at the end of 2015 to assist the Foundation on delivering its charitable aims by providing independent expert advice, support and constructive challenge in areas including developing general strategy and plans, identifying new funding opportunities and emerging priorities, maximising impact plus suggesting other bodies to work with.

Of course, the Foundation's staff and Trustees are fortunate to work with some inspiring and talented people, not least our grants community, Advisory Council members, and others from LR that support us in so many ways. On behalf of the Foundation I would like to thank them all as well as extend my deep appreciation to the staff of the Foundation for all their hard work and professionalism. The success of the Foundation belongs to all of them.

**Professor Richard Clegg**

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<sup>1</sup> Value of total future cash payments, before discounting for accounting purposes

# MISSION, VISION, STRATEGY

Our strategy sets out how we will achieve our vision

## Our mission

To secure for the benefit of the community high technical standards of design, manufacture, construction, maintenance, operation and performance for the purpose of enhancing the safety of life and property at sea, on land and in the air.

The advancement of public education including within the transportation industries and any other engineering and technological disciplines.

## Our vision

Our vision is to be known worldwide as a leading supporter of engineering-related research, training and education that makes a real difference in improving the safety of the critical infrastructure on which modern society relies. In support of this, we promote scientific excellence and act as a catalyst working with others to achieve maximum impact.

## Strategic themes

### 1 Supporting excellent scientific research



### 2 Accelerating the application of research



### 3 Promoting safety and public understanding of risk



### 4 Promoting advancement of skills and education



## Objectives

- Striving for excellence and impact
- Promoting technology foresight
- Building world-class research teams

- Accelerating technology uptake
- Informing standards and policy
- Facilitating the mobility of researchers

- Promoting the safety of life, property and the environment
- Enhancing public understanding of risk
- Maintaining and promoting a memory bank of safety and risk management developments

- Inspiring the next generation
- Enhancing the knowledge and skills of the workforce
- Widening access to disadvantaged and under-represented communities

## Funding priorities

- Structural integrity and systems performance
- Resilience engineering
- Human and social factors
- Emergent technologies

- Supporting safety organisations
- Communication and public debate of scientific research
- Developing the Foundation's *Heritage and Education Centre* library and archive

- Pre-university education
- University education
- Vocational training and professional development

## Sectors we serve

- |                     |                          |                          |                        |
|---------------------|--------------------------|--------------------------|------------------------|
| • Aerospace         | • Food                   | • Manufacturing          | • Oil and gas upstream |
| • Automotive        | • Healthcare and medical | • Marine                 | • Power and utilities  |
| • Built environment | • IT and communications  | • Oil and gas downstream | • Rail and metro       |

## Strategic Theme 1: Supporting Excellent Scientific Research

### Plans for 2015/16

Last year's Foundation Review set out some of our indicative plans for 2015/16. These included publishing foresight reviews in resilience engineering and structural integrity and systems performance and opening calls in these subjects; implementing a global programme on data-centric engineering with the UK's Alan Turing Institute; reviewing where we can have the biggest impact with our research priority of human and social factors; initiating more foresight reviews in our emerging technologies research priority area and planning for our next global research colloquium for 2016. The following review describes the progress we have made in these and other areas to support excellent scientific research to deliver our charitable goals.

### Activities and impact during 2015/16

#### Promoting scientific foresight

We have continued to seek independent expert opinion from the world of academia, industry and society to identify research challenges and where our funding can bring about the greatest impact.

In October 2015 we published two new foresight reviews:

- Foresight review in resilience engineering: Designing for the expected and unexpected: The foresight review explores how resilience engineering could enhance the safety of life and property through the improved resilience of engineered structures, systems, organisations and communities around the world. In 2016/17 the Foundation is looking to build on the findings of this review. The review was led by Professor Michael Bruno, Vice Chancellor for Research, University of Hawaii.
- Foresight review in structural integrity and systems performance: Ensuring safety from the component to the system: Modern society depends on complex products and engineering systems whose failure can lead to catastrophic consequences. The performance and safety of these systems is an area where the Foundation can make a significant difference by targeting its research funding. This foresight review guides the Foundation's grant giving priorities in order to fund high quality research which has a real impact on the safety of life and property.

The review identifies key safety challenges in structural integrity and systems performance and recommends five priorities for future research and development: ensuring the safe uptake of 3D and 4D printed parts; and advancing the state of the art in engineering science challenges; developing an economic whole system approach to demonstrate safety; advancement of data-centric engineering; minimising the risks associated with maintenance and inspection.

The review will be implemented by developing calls with delivery partners, and through technology road mapping. A steering board for our structural integrity and systems performance priority area was established this year which will oversee implementation. The review was led by Professor Michael Fitzpatrick, LRF Chair in Materials Fabrication and Engineering at Coventry University.

In 2015/16 the Foundation has commissioned foresight reviews in two further subjects:

- Foresight review in robotics and autonomous systems. Professor David Lane from Herriott- Watt University is leading this work. A workshop was held in March 2016 which focused on the opportunities, risks and gaps related to safety from the emerging technologies of robotics and autonomous systems. As well as the panel of experts from the workshop, a wider consultation was opened. The review will be published later in 2016.
- Foresight review in energy storage. Professor Nigel Brandon from Imperial College London is leading this work which will be published in early 2017. This review will explore the role energy storage can play in making systems safer and more resilient but also identifying obstacles to implementation.

Last year we planned to conduct a review in human and social factors. This work has been deferred to 2016/17 in order to focus on the priorities above.



## • Highlights from our grant holders

- The National Structural Integrity Research Centre (NSIRC) ran its first open research call attracting 49 proposals: of these 12 were selected for funding from three countries. NSIRC also ran its second conference during the year including keynote speeches from Sir Harry Bhadeshia from the University of Cambridge and Dr Dolores Byrne from the Institute of Engineering and Technology.
- The International Consortium on Nanotechnology (ICON) opened its first research call resulting in the funding of its first 10 PhDs (see the case study overleaf).
- Nobel laureate Prof Sir Andre Geim published a paper entitled “Designer nanomaterials assembled from individual atomic planes” in the prestigious *Science* journal citing Foundation-funded work using graphene as a membrane to separate isotopes of hydrogen, opening the possibility of exciting applications such as nuclear clean up and desalination.
- Prof Harilaos Psaraftis from the Centre of Excellence in Ship Total Energy-Emissions-Economy at the National Technical University of Athens had a paper classified as highly cited by Thomson Reuters with enough citations to place it in the top 1% of its academic field.
- Our funding to the Korean Ship and Offshore Research Institute at Pusan National University has leveraged \$100 million from the Korean government to establish world class testing facilities on a new 23.1 hectare site.

This year the Foundation started work with some new research partners. These include:

**The Alan Turing Institute:** In 2015/16 the Foundation awarded a major £10 million programme to the Alan Turing Institute. This will focus on data-centric engineering, delivering many of the recommendations from the Foundation’s Foresight review of big data: towards data-centric engineering. The Institute has employed a programme manager and secured its first cohort of fellows. Open calls for collaboration and for a Programme Director are anticipated in early 16/17.

**The Royal College of Arts (RCA):** The RCA will work in partnership with the Royal National Lifeboat Institution (RNLI - another of our grant recipients) setting its students the challenge of rethinking and redesigning the problems surrounding the transfer of people between ships at sea. This is an area where there are numerous accidents and fatalities each year.

**Royal Academy of Engineering Fellowships:** The Foundation supported the first of its RAEng/LRF postdoctoral research fellows. Critical infrastructures on which society depends increasingly use computer systems as a central component but these can be flawed. Mark Batty at the University of Kent will develop a rigorous mathematical description of concurrency to improve safety in such systems. The second fellow, Rebecca Boston at the University of Sheffield, will take up her fellowship in 16/17.

**Lloyd’s Register Foundation International Conference 2016:** During the year we started planning for the first Lloyd’s Register Foundation International Conference which took place in London on 13-14 October 2016. The conference brought together our grant holders, industry and wider society to share what the Foundation has achieved and explore how we will proceed into the future.

## Our future plans

In 2016/17 we plan to:

- publish a foresight review of global safety knowledge, analytics and data. This will identify where trusted safety data is available around the world and where there are gaps
- work with others, through a public campaign, to identify the major global challenges and opportunities facing mankind for the safety of life and property
- publish our foresight reviews in robotics and autonomous systems and energy storage and establish programmes dependent on the review recommendations. We will initiate at least three further reviews
- publish a roadmap on additive manufacturing to support delivery of our Foresight review of structural integrity and systems performance.

## Case study

A global network to advance the application of nanotechnologies

Following a research call The International Consortium on Nanotechnology (ICON) at Southampton University was awarded a £3 million Foundation grant in 2015 with the aims of:

- developing a global capability in nanotechnology by providing partial funding for PhD studentships that address the recommendation of the foresight review in nanotechnology, and
- establishing a research community in nanotechnology across our grant holders.

ICON is led by Dr Themis Prodromakis from the University of Southampton who has established a programme management board (PMB) of experts from academia and industry to provide governance and decision making to the project.

In 2015 ICON launched its first open research call targeted at the recommendations of the Foundation's Foresight review in nanotechnology. The ICON model is to provide seed funding for PhD studentships which must be supported by, at least, matched funding from academia or industry.

The first call attracted 27 proposals from universities across the globe, each of which went through a rigorous peer review by leading academics before a final selection by the PMB. Each project was assessed on novelty of the proposed project, quality of the proposal, fit with the recommendations of the foresight review and relevance.

ICON announced that 10 proposals from eight countries had been successful:

- |             |             |
|-------------|-------------|
| • Australia | • Singapore |
| • Germany   | • Spain     |
| • Japan     | • UK        |
| • Malaysia  | • USA       |

During the year, Dr Prodromakis has written an article explaining why nanotechnology is important, Five ways nanotechnology is securing your future, for The Conversation, itself another one of our grant recipients, the article being republished in the *Guardian* newspaper in the UK.

ICON announced its second call for proposals in June 2016. It is planning its first conference in April 2017 to bring together nanotechnology researchers from across the Foundation's grants portfolio together with industry in order to showcase the nanotechnology work that is being carried out by Foundation grant holders. The conference will also engage with industry to understand better the challenges that future ICON calls can specifically address.

"The support of Lloyd's Register Foundation is key to our mission. Lloyd's Register itself is well-known for promoting safety worldwide for more than 250 years. Its Global Technology Centre is based in Southampton and its Foundation has become a catalyst to support research, training and education for the benefit of society. We are delighted to work alongside them."

Dr Themis Prodromakis,  
University of Southampton

## Strategic Theme 2: Accelerating the Application of Research

### Plans for 2015/16

Last year our plans for 2015/16 included carrying out external evaluation of the impact of our whole portfolio; embedding the Foundation's innovation model through our call for accelerating the uptake of research; considering how best to develop and deliver research networks focused on major infrastructure sectors; and supporting new grant holders to build end-user partnerships at the earliest stages of their research.

Here we describe the progress made in these and other areas to support the acceleration of the application of research to deliver our charitable goals.

### Activities and impact during 2015/16

#### Understanding our impact and improving our practices

We have commissioned the evaluation charity New Philanthropy Capital (NPC) to undertake an evaluation of the Foundation's impact in three areas of our activity:

- grant giving, including the impact of grants that originated under the Lloyd's Register Educational Trust
- external influence through other activities, such as our Foresight Reviews
- Heritage and Education Centre.

NPC will also provide recommendations to the Foundation on how it can improve and measure the impact of its grant giving.

In addition to the NPC study, the Foundation is communicating more regularly with its grant holders requesting examples of highlights and impacts from their research.

Notwithstanding it is early days for the Foundation but this is one area where we have not made the rate of progress we desire and will be looking to strengthen activities in 2016/17 working jointly with our Trading Group.

#### Highlights from our grant holders

##### Twente University

Jan Braaksma and Leo van Dongen delivered a professional course using our grant support, consisting of eight one-day master classes to maintenance professionals from 10 large international companies. Selected Dutch senior maintenance professionals follow this post-master level course to prepare for senior maintenance management functions. Twente also organized the first Maintenance Research Day 2016 which showcased an overview of all the research that is currently being undertaken in the Netherlands and Flanders in maintenance-related fields. More than 70 participants (PhD students, researchers and interested companies) attended the day and 20 young researchers discussed their own research during six different parallel sessions on various topics. The day was sponsored by Dutch World Class Maintenance and supported by NS-NedTrain.

##### Lancaster University

The LRF International Joint Research Centre for the Safety of Nuclear Energy used its Foundation grant to help leverage funding from the UK government to establish the UTGARD Lab (Uranium/Thorium beta/Gamma Active R&D Lab). UTGARD is a national facility for the study of new routes for reprocessing spent nuclear fuel.

##### Cardiff University

The Seafarers International Research Centre (SIRC) held a symposium at the end of their grant to disseminate their work and to build partnerships to ensure the work can be applied. It tested recommendations with stakeholders on two topics: improving the design and training associated with mandatory equipment, and improving the interactions between shore-side and shipboard personnel.

## The National Structural Integrity Research Centre

All PhD students funded through our NSIRC programme are allocated industrial mentors. These mentors ensure the student has an understanding of the practical application of their research, and help provide a route to accelerate the impact of the research.

## Imperial College: Centre for transport risk management

Milena Studic is now an observer/member of the International Civil Aviation Organisation task force on ground handling following her PhD research on this topic.

Gonzalo Tobaruela has built on his PhD on air traffic controller world modelling, automation and capacity estimation with the French air traffic control authority engaging towards a trial implementation of the research, in the form of a tool, in one of their control centres.

Sophie Damy's PhD work investigated the safety issues around the use of satellite positioning systems for railway scheduling. She has developed this work and won a highly competitive EPSRC Impact Grant worth £54,000 and was the overall winner of the Imperial College '3 minute thesis' competition.

In addition to the impact achieved through its ongoing grant, the Imperial Centre was also awarded a new grant this year under the Foundation's scheme to accelerate the application of research. The grant was for modelling and assessing the factors that affect human performance in railway operations and maintenance: the role of automation, and supports further engagement with end users of the research.

## New grants

We have also given grants for some major new programmes under this strategic theme.

## Resilience engineering to build resilience within and between critical global sectors

Following the recommendations from our Foresight review of resilience engineering, we have developed and awarded a five year, £10 million joint programme with Ove Arup and Partners in resilience engineering. Further information can be found in the case study on page 14.

## Wageningen University

We agreed a £500,000 grant to the world leading food sciences institution, Wageningen University, supporting the development of technical standards for safe production of food and feed from marine plants and safe use of ocean space. This is the first project targeted at the food sector to be funded by the Foundation. Competition for maritime space is on the rise from a number of sources, including tourism, transportation, energy production, fishing and aquaculture. One solution is to share this space between multiple activities, which raises significant safety issues. This project aims to develop a meaningful safety assessment and controls for multiple simultaneous uses to enable the safe creation of energy sources and food at sea in the form of aquatic algae (mostly seaweeds). Although seaweed has been collected for centuries as a source of food and animal feed, logistics and safety issues have often hampered large scale production. Cultivation of seaweed presents a number of significant opportunities: it is a sustainable and efficient source of protein; it provides a natural desalination process; it absorbs carbon dioxide – contributing to greenhouse gas reduction; and its residue can be used to create energy through biomass.

## Future plans

In 2016/17 we plan to:

- publish the results from our external evaluation of the impact of our grants
- develop and adopt new practices to improve our impact and the way we measure it
- develop new programmes for accelerating the impact of research open up the first opportunities within our programme on resilience engineering for critical global infrastructure sectors.

## • Case study

### A programme to build resilience in critical infrastructure

Resilience engineering is one of the four funding priorities in the Foundation's strategy. The Foundation's Foresight review of resilience engineering: designing for the expected and the unexpected, recommended the Foundation establish and lead a programme to build the resilience within and between critical global infrastructure sectors.

Implementation of this programme, launched in January 2016, occupies a key building block in our strategy delivery. The programme is designed to focus on sharing existing experience and knowledge within and between sectors, rather than doing further research, so it is also an important part of the delivery of our strategic theme accelerating the application of research.

The Foundation's programme will build resilience, for example, by addressing:

- governance: incentives, standards, rules, legal and financial
- capacity building and engagement: professional development, publications, communication and public engagement
- data and supporting tools: shared datasets, modelling and simulation, decision support
- international and global scale networks: studies of global systems, supply chains, knowledge networks.

Following the competitive international call, the Foundation selected the Arup partnership as the host institute and Dr Nancy Kete as the Director for the five year, £10 million programme to build resilience in critical infrastructure.

The Foundation has received expressions of interest from dozens of organisations who would like to participate in the programme. Through the open call and through the publication of the foresight review, the Foundation has become a global catalyst in a movement to collaborate and build a discipline of resilience engineering. The programme under Arup's leadership will build networks of interested parties and harnessing this global expertise towards the Foundation's charitable aims.

"We are delighted to be working with the Lloyd's Register Foundation to build this programme. Arup has an international reputation for high engineering standards within the built environment sector and is a global leader in supporting Resilient Cities. It has institutional values that align closely with the Foundation and with the concept of resilience engineering. Arup understands well the applied nature of the programme in terms of accelerating the uptake of research already undertaken, as recommended by the Foundation's foresight review. We have a strong understanding of the need and practice of engaging end users. Through our global networks of partners, clients and Universities, we can help support rapid impact for the Foundation's programme."

Dr Nancy Kete, Programme Director

## Strategic Theme 3: Promoting safety and public understanding of risk

### Plans for 2015/16

The 2015 Trustees' Report set out some of indicative plans for the year. These included: developing the next stage in the digitisation of our archive for educational purposes; strengthening the outreach of the Heritage and Education Centre via social media; holding a digitisation conference for holders of archive collections; reviewing where, as a Foundation, we can make greatest impact in the public understanding of risk; and continuing to strengthen links with our trading arm to add value to society. The following reviews our progress in these and other areas to support promoting safety and public understanding of risk.

### Activities and impact during 2015/16

#### Project Undaunted

To deliver the next stage of the Heritage and Education Centre's (HEC) pilot digitisation project of historic ship plans and reports, in 2015/16 we intend to make available £1 million over three years for HEC to rehouse, catalogue, conserve and digitise 10% of the 1.25 million items held in Foundation's heritage collection as part of our direct costs in this Strategic Theme. Project Undaunted will unlock this unique archive, much of it previously unseen by scholars, academics and the general public, making it openly and freely available for the first time via the web using a searchable database, as a unique historical and educational resource.

The collection charts a wealth of information and covers a range of topics including the progress of global maritime technology, shipbuilding and engineering over nearly three centuries. Ships in the archive include the *Cutty Sark*, *Mauretania*, *Sirius* - the first vessel to cross the Atlantic Ocean under steam, *Dunedin* - the first vessel to carry frozen meat from New Zealand to London, *Fullagar* - the first all-welded ship, and many more. Based on the success of Project Undaunted the decision will be taken in three years' time on tackling the remainder of the archive and putting it to work in line with the Foundation's charitable purpose.

"Although Project Undaunted is an ambitious project for the Foundation with undoubtedly many technical and logistical challenges ahead, it is something unique that only the Foundation can achieve because of its unique historical legacy and resources"

Victoria Culkin, Head of the Foundation Heritage and Education Centre

#### Strengthening our outreach via social media

The HEC's social media presence can help to forge stronger relations with the general public, academics and professionals. During the year we recorded 1,100,277 total impressions across our social media platforms plus 52,840 hits on our websites from 199 countries, with 72.6% of these due to new visitors. These figures do not include the outreach activities from our grants community via their own channels. Although this represents good progress there is still much for us to do in this space. For example, only 33.7% of the Foundation's website visitors were female; so we will be looking to improve on this gender balance.

#### Our first international digitisation conference

In October 2015 we held an international conference bringing together some of the best minds to discuss the digitised archive of the future, as part of our aim to put our unique archive and heritage collection to work as a unique educational resource and direct costs in this Strategic Theme. The conference, over two days, attracted over 90 delegates from 57 different heritage institutions across Europe and North America, including the British Library, National Archives, National Maritime Museum, Royal Institution and Bank of England. It's noteworthy that over 97% of delegates said they would want to attend if the conference were run again. The insight and knowledge gained was also crucial in feeding into the design of the project plan for Project Undaunted.

#### Major grant awarded in the public understanding of risk

The area of the public understanding of risk is one of the main objectives of the Foundation's strategy. In 2016 the Foundation awarded a major £10 million grant to the National University of Singapore to establish an Institute on the Public Understanding of Risk, which have global reach and be the first of its kind in the Asian region. This work will

- include a review of the issues and barriers connected with the public understanding of risk in order to identify the 'white space' where the Foundation can make a difference. Further details of this major grant in this important area is contained in the case study overleaf.

## Working together with Lloyd's Register to make the world a safer place

Our trading arm, LR, helps to deliver our charitable aims. Our unique governance structure with the Foundation as the parent and sole shareholder of the LR means we can work together towards making the world a safer place. The embodiment of this is that the Foundation and LR both share the same mission, of enhancing the safety of life and property and advancing public education. We estimate that over two thirds of the services delivered by LR support the Foundation in working towards a safer society. In addition to this, the Foundation and LR also work seamlessly together on technology development. It is the Foundation's aim to invest as a charity in areas that have a clear end-user application in mind; something that LR with its extensive sector experience and global reach can uniquely help with. A further benefit is that LR also supports the Foundation in mentoring many of the PhD students it funds around the world.

## Our lives in data

One way we fulfil our charitable purpose is by supporting and working with other organisations that share our aims. The Science Museum in London is one such organisation that we are proud to have worked with in 2015/16 providing a grant of £250,000 as a principal funder of its new exhibition on the subject of big data called Our Lives in Data. Linked to one of our four strategic priorities, enhancing the public understanding of risk and communication of science, sponsoring the big data-related exhibition is an impactful way of reaching a large international visitor audience and inspiring the next generation on how big data is transforming the world around us. Our grant to the Science Museum is part of a wider portfolio of investments made by the Foundation in the general area of big data, including our £10 million grant over five years to the Alan Turing Institute.

## Case study

Public understanding of risk institute is first of its kind

### Institute for the Public Understanding of Risk at the National University of Singapore

In 2016 the Foundation committed a major grant of £10 million to establish a world-leading centre in collaboration with the National University of Singapore (NUS), to be named the Lloyd's Register Foundation Institute for the Public Understanding of Risk. The area of the public understanding of risk and communication of science is less developed in Asia compared to the UK and USA; also, the culture, attitude, and role of science are different in Asian society. As a result, the Institute will be unique and the first of its kind in Asia. It will undertake research and education and build connections with practical end users such as policy makers, decision makers, and opinion formers in government, industry, regulators, the media, and general public. It will be multi-disciplinary, spanning engineering, statistics, sociology and psychology.

This collaboration with NUS heralds a unique opportunity for the Foundation to make a distinctive difference in the crucial area of the public understanding of risk. It also marks the contribution that the social sciences have towards achieving the Foundation's charitable aims. Quite often, the public perception of risk far outweighs the actual engineering risk. The new Lloyd's Register Foundation Institute for the Public Understanding of Risk will help address this by building a better understanding of the socio-technological processes and factors affecting public opinion forming, and using this to produce new tools and approaches for uptake by the end users mentioned above across Asia and other developing economies worldwide.

Sustainability and the long-term existence of the Institute will be ensured through some of the Foundation grant being used to establish an endowment fund that will underpin in perpetuity a number of key appointments. This includes a prestigious Chair to be named the Lloyd's Register Foundation Professorship in Public Understanding of Risk. A number of other key posts will also be endowed including fellows, distinguished visitors, and scholarships for PhD students with preference given to those from disadvantaged or under-represented communities. In line with its commitment to the Institute, NUS is to match the Foundation's grant with a contribution of £10 million to the endowment fund.

"The public understanding of risk in Asia is a nascent field, yet it is of growing importance. This multi-disciplinary institute will be the first of its kind that transforms the way policy makers, industry leaders and the public perceive



risk. This grant will enable NUS, in partnership with the Foundation, to take a leading role in shaping the future of risk communication in Asia.”

Prof Teck Hua Ho, Deputy President (Research and Technology), NUS

### **Future plans**

In 2016/17 we plan to:

- ensure that society has a trusted global evidence base for the safety of life and property
- identify and address grand challenges to safety taking into account public perception of risk
- establish the future of the Heritage and Education Centre’s services and preserve its unique assets
- continue to maximise the value of the Foundation’s unique governance structure and its connection with LR towards making the world a safer place.

## Strategic Theme 4: Promoting advancement of skills and education

### Plans for 2015/16

Last year's plans for 2015/16 included: progressing mapping of the UK STEM landscape with the RAEng; considering funding a further apprenticeship scheme; investigating under-represented communities to widen access, such as women in engineering; extending our international reach; and moving towards a more targeted directive approach to grant giving in the skills and education area.

In 2015/16 we made good progress reflected in the fact that we awarded 18 grants in year and that the skills and education area now equates to about 7% of our total live grants portfolio. However, we recognise in addition that some of the grants under other strategic themes also contribute to our skills and education objectives, for example the funding of PhD training as part of our research grants. To further strengthen this area we appointed a new member to the senior leadership team to head up and review the direction of travel of our skills and education activities. We did not make as much progress in two of the areas stated above, linked to women in engineering and extending our international reach. The new Head of skills and education will be revisiting these as part of his review in 2016.

### Activities and impact during 2015/16

STEM (Science, Technology, Engineering and Maths) education analysis

In May 2016, after considerable analysis of the findings, the Royal Academy of Engineering published our joint report, The UK STEM education landscape. The report found that a wide range of factors influence study choices and career decisions, concluding that work is needed to address shortfalls in STEM teaching; the perception of engineering, especially in engaging with parents; and the closing of opportunities through students de-selecting subjects at an early stage. The report is available at [www.raeng.org.uk/publications/reports/uk-stem-education-landscape](http://www.raeng.org.uk/publications/reports/uk-stem-education-landscape). The Royal Academy of Engineering has distributed hard copies of the report to senior industrialists, MPs, politicians and advisers in relevant government departments, members of the engineering profession and the STEM community. Along with further copies sent by email from the Academy and the Foundation and downloads, the number distributed is around 2,000. Since the end of the financial year, the Foundation has recruited a new director of skills and education who will take forward the findings in this report.

Direct charitable spend: widening access to the educational resources in our Heritage and Education Centre

Staff of the Heritage and Education Centre have contributed to two forthcoming publications and a digitisation bulletin during the year: statistical research on the shipbuilding output of various countries and the specialisations, for a book chapter relating to labour in shipyards from the 1950s until now; and the introductory chapter for a marine technology encyclopaedia covering thousands of years of maritime history. Our Heritage and Education Centre aims to contribute to more publications and to continue to produce articles and papers for conferences using the teams' specialisations.

Making more material available online and our social media posts, combined with related media stories has resulted in a 23% increase in the number of enquiries answered compared to 2014/15. We hope to see this rise further in 2016/17 as more historical resources are made available to the public for educational benefit.

We continued to conduct seminars and lectures for visiting universities, with support from LR. We welcomed over 1,250 visitors to our historic Collcutt building that houses the Foundation's offices, which is a steady increase on last year. This year there was an increase in the number of visitors from universities.

As the custodian of the LR Library and Archive, we are committed to maintaining and promoting this unique resource and making it freely available to researchers for educational purposes. With Project Undaunted, and various other projects in the pipeline, we aim to make far more of our material available online over the next few years. Project Undaunted (running for three years) will see a 10% sample of the ship plans and survey reports made accessible for the public benefit, with associated educational material. Other plans include a project using staff records to gain more information from the public about Lloyd's Register staff over the last 256 years and a project to make LR's historic statistics including casualties, shipbuilding, the world fleet, and other datasets available online.

"I had no idea of the scale and the richness of these records" Dr Janet Dempsey of the National Archives

## Grant giving

We agreed 18 new grants in 2015/16, most related to widening access.

In our contracts we specifically required EDT's Routes into STEM, Arkwright Scholarships Trust, the ERA Foundation and Villiers Park to address engineering apprenticeships. Villiers Park offers a holistic programme of support, including mentoring and support for parents and had proven their success prior to their application to us for a funding contribution complementary to other sources.

The Maritime London Officer Cadet Scholarship enables UK young people aged over 16 to train as merchant marine engineers. There are no grants or loans available for this training so without scholarships, including the three scholarships we fund, the training would not take place. UK training has a high reputation worldwide for safety and the cadets are likely to go on to be future Masters.

In Turkey, our funding enables a mobile classroom, Science Firefly, to reach disadvantaged children without access to science labs in their schools, bringing science to life with practical experiments and encouraging girls to participate.

In Timor Leste, apprentices are being trained in skills to equip them for local industry demand.

Using our grant, University College London's Centre for Engineering Education is convening an international research workshop to produce a publicly-available report on how to improve engineering education. The workshop will take place in September 2016 in London.

Some organisations were funded again on the basis of the impact of previous grants.

CIFAL Scotland used our £6,000 grant to enable 12 participants, from Ecuador, Malawi, Mali, Kenya, Barbados, DRC, India, Pakistan, Philippines and the UK to enrol in a seven-week course in renewable energies for developing countries. The majority taking part were from the NGO and civil sectors, local government or educational institutions. All participants who received our funding completed the course, with 83% strongly agreeing the course content was relevant for their job.

The Smallpeice Trust reported on their 2014/15 grant to support a girls-into-engineering residential course and we agreed to fund a further course.

Children's Radio UK reached a large audience through their radio and online content. This year they applied for £15,000 to create a third 10-part series of audio and video, contributed through working with young people undertaking degree courses and within the ship design and construction sectors, to help explain and demonstrate the underlying science, with practical tips on the Fun Kids website to help children try the science at home. Both audio and video content will remain available to listen again and view in perpetuity. They expect to reach 380,000 children through broadcast, achieve 6,000 downloads of audio content and 10,000 page views of web content. They are able to monitor and measure quality and effectiveness through their database of some 30,000 parents, who also engage.

Our grant to the University of Birmingham is to improve rail safety in China through a specially-developed MSc qualification which will be delivered at Beijing Jiaotong University.

Several 'new' grants were in response to reappraisals and renegotiations of existing grants, for example due to contract conditions or delays in progress, resulting in termination and entering into new contracts.

### What others say about our Heritage and Education Centre

"I visited the library to conduct research for a book I am writing about shipbuilding on the River Dee, I found other interesting material during my visit."

"We enquired about yachts that were owned by our family, we were able to learn about the yachts that my grandfather and uncle owned... we had no idea when we started the search."

"We visited as part of our Blue Badge City of London Tourist Guides course, the team were so enthusiastic and we learned so much about one of the City's most fascinating and beautiful buildings. We look forward to visiting next year!"

## Case study

### Addressing the skills gap: Born to Engineer

Engineering UK report that the lack of engineering skills could be costing the UK economy up to £27 billion per annum<sup>2</sup> and, for level 3 skills, the UK is generating less than half the people it needs. To help address this skills gap, the ERA Foundation, in partnership with other organisations and sponsors, runs the Born to Engineer campaign to

- *Improve perceptions and inspire more young people into engineering careers*
- Encourage the most able students to consider engineering
- Improve the diversity of engineers

Professionally produced videos, hosted on the Born to Engineer website at <http://www.borntoengineer.com/video>, feature young role model engineers talking about their studies and careers. In 2015/16 the Foundation agrees to fund the production of one video in this series. The videos are widely used by organisations, teachers, career advisers and societies in teaching and outreach, promoted by partners, and in social and traditional media. Online partners using the material because of its quality and alignment with their own objectives include UCAS, IMechE, The Manufacturer, the IET, Royal Commission for the Exhibition of 1851, while the videos are shown and shared by, for example, Arkwright Scholarships Trust, Royal Institution, Smallpeice Trust, Imagineering, Young Engineers, and the Women's Engineering Society.

Our video features Lewis Wilde, a marine apprentice at Island RIBs, talking about his route into his apprenticeship. We ensured our granting funding to the ERA Foundation related to our objective of widening access. Lewis's testimony demonstrates the value of our grant to The Shipwrights Company Charitable Fund for a nationwide apprenticeship programme. It helped Island RIBs to offer Lewis an apprenticeship and he found the right career path for him. We hope the video will broaden knowledge of the diversity of engineering opportunities available to young people, informing their decisions at any age, and encourage more to consider an apprenticeship.

The ERA Foundation will report to us in November 2016 on the impact and benefit of the grant. Our funding here recognises that a range of organisations working together can potentially make a real difference.

**"Engineers are cool! I knew they did bridges and buildings but there is so much more!" Year 7 student responding to Born to Engineer videos**

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<sup>2</sup> [http://www.engineeringuk.com/Research/Engineering\\_UK\\_Report\\_2015/](http://www.engineeringuk.com/Research/Engineering_UK_Report_2015/)

## Financial review and policies

This is the first year that the Company has presented its financial statements accordance with The Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) and the Charity SORP (FRS102) (Statement of Recommended Practice). Adoption has led to a change in the presentation of the Statement of Financial Activities and associated notes. The principal change is that grant commitments have been reduced to their present value to reflect the time value of money. However, the adoption of FRS 102 has not had an impact upon the timing of the cashflows of the Foundation as a whole.

Lloyd's Register Foundation generates its income from the investments that it holds.

These fall into two categories:

- Financial investments: a portfolio of listed investments;
- A mixed motive investment: 100% ownership of the unlisted shares in the immediate subsidiary company Lloyd's Register Group Limited (the Trading Group)

The Trustees consider that the policies outlined in this section constitute the framework for their key financial risk management policies.

### Results for the year

The Foundation had total income of £29.2m (2015: £19.5m) for the year consisting solely of income from investments.

Investment income of £29.2m (2015: £19.5m) comprised £20.2m (2015: £11.5m) of donations from the Trading Group and a further £9.0m (2015: £8.0m) of income from the return on the investment portfolio.

The Foundation had total expenditure of £35.7m (2015: £16.0m). The increase in expenditure arose from a higher value of grants awarded during 2015/16 in comparison to the prior year.

Lloyd's Register Foundation	2016 £m	2015 £m
Gift aid from Trading Group	20.2	11.5
Income from listed investments and other resources	9.0	8.0
Total income	29.2	19.5
Investment management costs	(1.0)	(1.1)
Charitable activity costs	(34.7)	(14.9)
Total expenditure	(35.7)	(16.0)
Net gains on listed investments	2.4	12.3
Net (expenditure)/income and net movement in funds	(4.1)	15.8

Charitable expenditure of £34.7m (2015: £14.9m) principally relates to grants awarded of £33.8m (2015: £14.2m) which are discussed further in the Trustees' report.

The financial review of the Foundation Group can be found on pages 44 and 45 and forms part of this strategic report.

### Subsidiaries: mixed motive investment

Lloyd's Register Foundation has one direct, wholly-owned subsidiary company: Lloyd's Register Group Limited.

Lloyd's Register Group Limited is itself the head of a global trading group of companies with over 250 years of history, focused on adding value to society through independent assurance and expert advice for clients who own, operate, design and build the critical infrastructure upon which society relies. The profits generated by the Trading Group help fund the public benefit activities of the Foundation. The Trading Group (LR) carries out a mix of charity-related and non-charitable activities globally. The Trustees welcome The Charities (Protection and Social Investment) Act 2016

- (the Act), which received Royal Assent on 16 March 2016. The Act sets out a general power for Trustees to make social investments (pursuing both a financial and social return). This effectively enshrines in legislation the basis for mixed motive investment. The extent to which public benefit is delivered by the work of the Trading Group forms part of the Trustees' assessment of the return on their investment.

The Trading Group's trading operations include many activities which are of a public benefit nature, aligned to the Foundation's mission of securing high technical standards of design, manufacture, construction, maintenance, operation and performance and to advance engineering-related public education.

LR Marine's core business includes the safety inspection of 8,500 ships each year and the ongoing development of Rules for their safe construction, maintenance and disposal. For example, LR Marine has helped the International Maritime Organization to devise international safety standards such as the Ballast Water Management Convention and helped the International Labour Organisation devise the Maritime Labour Convention. Following its input into the creation of these internationally recognised safety standards, the Trading Group then performs design approvals, surveys and audits to verify its customers' assets comply with these requirements.

LR's Energy business includes verifying the safe design and operation of rigs, platforms, Floating Production Storage and Offloading Installations (FPSOs) and refineries. LR also inspects boilers, pressure vessels and other land-based installations for safety-related purposes together with developing rules for those assets in the same way as described for ships in Marine. LR's Energy consultancy business primarily deals with safety case preparation for offshore exploration and nuclear power generation.

LR's Management Systems business includes the Trading Group's medical directive and CE marking activity helping to ensure the safety of a range of consumer products and medical equipment. As the only supplier of management system certification to the major UK nuclear sites its contribution to nuclear safety for society is also significant. In addition, the Trading Group devotes significant effort and resources to helping other standards-setting bodies to devise new or improved safety standards as well as auditing and providing advice relating to ISO 14001 certification.

Overall, the Trading Group's activities, particularly in marine and energy include considerable investment in furthering the understanding of technology. This directly benefits public understanding of technology and ensures that when technology is deployed it is safe, suitable and dependable and therefore safe for society in its application. Typical areas of research include: advance materials: propulsion and powering; energy production and storage; robotics; marine biotechnology; and autonomous systems.

The Trustees base their expectations of future financial return from the Foundation's investment in the Trading Group on quarterly reports to their board meetings and an annual five-year plan review from the executive leadership of the Trading Group. The performance of this unlisted investment is considered in the "Investment performance: mixed motive investment" section.

## **Funds**

In September 2012, the Trading Group transferred £206.4m of assets to the Foundation as an expendable endowment. The Trustees have the power to convert the capital within the fund to income and expend such amounts converted on the Foundation's objectives as they see fit. £100.0m of the endowment can only be converted to income from 1 July 2017 as discussed below in the reserves policy section.

Income generated from the assets held within the expendable endowment is shown in the Foundation's general fund, as it may be used in furtherance of the Foundation's charitable objectives.

Capital returns on the assets held within the expendable endowment are retained within the endowment and form part of the endowment into the future, subject to the same rules as the existing endowment funds.

## **Reserves policy**

The Foundation's reserves ensure its long term financial viability. The expendable endowment contains a condition that the Foundation must retain £100.0m of that sum until 1 July 2017. During that period, there is a contractual obligation to transfer an amount not exceeding £100.0m to the Trading Group's UK defined benefit pension scheme should there be an insolvency event affecting Lloyd's Register Group Limited.

- The Foundation's investment in Lloyd's Register Group Limited is held at cost. The funds represented by this mixed motive investment are not available for distribution to beneficiaries. The investment is integral to the Foundation's ability to generate future income and also to delivering its public benefit, as noted elsewhere.

The Trustees have considered the Foundation's level of general reserves. It does not currently have large overheads and, in general, is able to rely on recurring income from its endowment and from the Trading Group each year. For that reason, the Trustees do not consider that the charity has a need to hold other funds as reserve.

The Trustees review the Foundation's reserves policy on an ongoing basis and at least each financial year.

### **Financial position**

At 30 June 2016, the Foundation had unrestricted funds of £12.2m (2015: £17.6m). Of the total funds, all but £50,000 invested in the Trading Group and the £100.0m contingent liability is considered free reserves.

### **Going concern**

A review of financial performance and the Foundation's reserves position is set out above. In the opinion of the Trustees, the Foundation has adequate financial resources and is able to manage its business risks. The Foundation's planning process, including financial projections, has taken into consideration the current economic climate and its potential impact on the sources of income and planned expenditure. The Trustees have a reasonable expectation that the Foundation has adequate resources to continue in operational existence for the foreseeable future.

The Trustees believe that there are no material uncertainties that call into doubt the Foundation's ability to continue in operation. Accordingly, the Foundation's financial statements accounts have been prepared on the basis that the charity is a going concern.

### **Grant-making policy**

The Foundation has a formal governance structure for grant decision making. The Foundation can receive grant proposals and applications at any time. All proposals and applications are reviewed initially at our monthly grant applications meetings. The criteria for selection are based upon impact and excellence in line with the Foundation's charitable objectives. Applications between £150,000 – £250,000 must be approved by the chair of the Grants Committee. Applications over £250,000 must first go to the Grants Committee then to our Board of Trustees, which meets quarterly. Final decisions on these applications are made by the Trustees. The Managing Director has delegated authority from the Board to approve small grants up to £150,000 and to incur expenditure agreed by the Board. Details of available funding and the application process are published on our web site and notified on social media. Grant holders are required to submit staged reports as part of the process to track delivery against the agreed grant objectives, as well as to monitor the impact and public benefit being generated.

### **Investment policy**

The Trustees have delegated decision making on investment matters relating to all assets except the investment in the Trading Group (reviewed directly by the Board of Trustees) to an Audit, Risk and Investment Committee, which is governed by an agreed Terms of Reference, in order to provide appropriate focus on the investment arrangements. Day-to-day investment choice is delegated to investment managers subject to defined tolerances relative to the respective benchmarks.

The Foundation's financial objective is to at least maintain the real value of the 2012 initial donation from the Trading Group of £206m, whilst generating a stable and sustainable return to meet the Foundation's objectives as laid down under its governing document.

The investment portfolios are a mix of unrestricted funds and an expendable endowment, the income from which serves to provide funds for the ongoing charitable work of the Foundation.

In this context, a number of portfolios exist, each of which has specific objectives.

The Foundation seeks to produce an optimum level of return within an acceptable level of risk. The current investment objective is to generate a return of inflation plus 3% per annum from the initial endowment over the long term. This, when combined with future profit distributions from the Trading Group, will enable the present and future financial

requirements of the Foundation to be met whilst maintaining the real value of the initial donation. The Trustees review the performance of the Trading Group on a regular basis.

A set of measurable performance objectives has been developed for the investment managers and pooled funds. *Performance in each asset category is compared quarterly with a suitable benchmark and an out-performance objective.* The managers are expected to demonstrate skill in the management of their portfolios consistent with the performance objectives, given the level of risks adopted. Investment performance is considered quarterly by the Audit, Risk and Investment Committee.

Cash based investments represent the Foundation's working capital, and as such will be invested in a prudent manner with a secondary objective of achieving reasonable rates of return relative to the deposit market.

The Trustees' policy regarding social, environmental or ethical considerations is that day-to-day investment decisions are delegated to the active investment managers.

#### **Investment performance: listed investments**

During the year, the investments performed well, delivering a total yield of 4.8% (2015: 8.7%). This comprised an annualised income yield of 3.8% (2015: 3.4%) and a capital yield of 1.0% (2015: 5.3%). The return on the endowment is in line with the long term objective stated within the investment policy above.

#### **Investment performance: mixed motive investment**

The Trading Group faced significant challenges throughout 2015/16, with the further fall in the oil price along with market volatility leading to a lack of confidence amongst major oil and gas customers. This in turn led to reduced investment and cost cutting activity impacting both new business opportunities and the rates at which new work was won, thus reducing both revenue and margin in the Energy business. At the same time, the Marine new construction market has been coming off a peak, resulting in significantly less revenue in certain high margin activities not fully offset by an increase from other sources, and in the Management Systems business growth has been limited as customers have delayed in the expected transition to new international standards.

In order to adapt to the market and protect margins, the Trading Group took a number of significant actions, including a reduction in headcount not just in the Energy business but also in the support functions in the Regions and Corporate departments. Further restructuring of operations occurred with Marine assuming control of the Energy Compliance business and Management Systems assuming control of the Energy Inspection business, enabling the Energy business stream to concentrate on the areas, Drilling, Consulting and Senergy, experiencing the greatest challenge.

However given the overall strength of the business there has been increased investment for the future, in both back office systems and a customer focussed strategy that has put the business in a good position to face any further challenges that may be encountered in 2016/17. The Trading Group is in the process of making large-scale investments in future operating improvements, including the replacement of the Group's global financial and operating IT systems and the complementary development of existing operational software into new integrated information systems.

At the beginning of the financial year, the Group disposed of its transportation business to Ricardo plc recognising a profit on disposal of £27.7 million and completed its planned acquisition of the balance of shares in LR Senergy Limited.

The summarised financial information of the consolidated Trading Group as disclosed in the Trading Group's consolidated financial statements for the year ended 30 June 2016 is provided in note 11 to the company's financial statements. Further details of the financial performance of the Trading Group is included within the Lloyd's Register Group Limited's financial statements.

The Trustees are satisfied with the performance of the Trading Group, and will continue to maintain and develop its effective working relationship with the Trading Group. They will allow the Trading Group to retain funds for investment in operating improvements and potential acquisitions, but continue to expect cash distributions from the Trading Group.



## **Governance and management**

The Foundation is governed by a Board of Trustees, which is responsible for setting the Foundation's strategy, for ensuring good governance and that it fulfils its objectives – delivering public benefit. The Managing Director, Richard Clegg, is responsible to the Board for the operation of the Foundation.

The Board is currently made up of six Trustees who are also the members and directors of the Foundation for Companies Act purposes. The Board considers Foundation policies, receives committee reports and recommendations, approves annual budgets, reviews the performance of the trading arm, and guides the Managing Director.

### **Thomas Thune Andersen, Chairman**

Thomas Thune Andersen is the Chairman of the Lloyd's Register Foundation and Chairman of Lloyd's Register Group Limited and a member of the Foundation's Nominations Committee.

Thomas, a former Member of the Board for the A.P. Moller-Maersk Group with almost 32 years in the maritime and energy sectors, was appointed to the Board of the former Lloyd's Register in June 2010. Thomas is Chairman of Dong Energy A/S, Senior Independent Director of Petrofac, Vice Chairman of VKR Holding, the parent group of Velux and Non-Executive Director of BW Offshore Limited.

### **Sir Brian Bender**

Brian retired from the Civil Service in 2009 having been a Permanent Secretary for nearly 10 years. His final position was at the Department for Business, Enterprise and Regulatory Reform, having served previously at DEFRA. He is Chairman of the London Metal Exchange, Chair of Water UK, a governor of Dulwich College and non-executive Director of the Financial Reporting Council and Pool Reinsurance, among other posts. Brian chairs the Nominations Committee.

### **Ron Henderson**

Ron is a Chartered Accountant and former CFO of Network Rail and Balfour Beatty. In addition to other non-executive roles he also served on the UK Auditing Practices Board. Ron chairs the Audit Risk and Investment Committee.

### **Rosemary Martin**

Rosemary was appointed Group General Counsel and Company Secretary of Vodafone Group in April 2010. She previously served as CEO of the Practical Law Group, having spent 11 years with Reuters Group Plc in various company secretary and legal roles - the last five years as Group General Counsel and Company Secretary.

Before joining Reuters, she was a partner with Mayer, Brown, Rowe & Maw. Rosemary was admitted as a solicitor in 1984 and holds a degree in Philosophy and Literature and an MBA in Legal Practice. Rosemary is a member of the Financial Conduct Authority's Listing Group Advisory Panel.

### **Carol Sergeant CBE**

Carol has non-executive positions on the boards of Danske Bank and Tullett Prebon plc. She is also Chairman of the whistle blowing charity Public Concern at Work, Chairman of the BSI Standards Strategy and Policy Committee, a member of the Governing Council and Trustee of the Centre for the Study of Financial Innovation and member of the Cass Business School Advisory Board. She has previously been Managing Director on the board of the Financial Services Authority, and Chief Risk Officer at Lloyds Banking Group, having begun her career at the Bank of England. Carol is a member of the Audit, Risk and Investment Committee.

### **Lambros Varnavides**

Lambros is the former Managing Director and Global Head of Shipping at The Royal Bank of Scotland. He is Deputy Chair of the Baltic Exchange and sits on its Finance and Charity Committee. He is also a court assistant to the Worshipful Company of Shipwrights and Chair of its Finance Committee. He was appointed Senior Independent Trustee of the Lloyd's Register Foundation on 29 September 2015 and chairs the Grants Committee.

## Trustee recruitment and training

The Board and the Nominations Committee invest considerable time in identifying Trustees with appropriate skills which will benefit the Foundation. They are equally keen therefore that any new trustee is properly inducted into the Board. All new Board members go through a structured period of training.

During their training, the Chairman will talk to them about the history of the Foundation, its role in Society and the way the Board operates. The Secretary will provide a fuller briefing on the operations of the Foundation, its structure, its risks, its key documentation and will provide a general overview of Trustees' duties and responsibilities and charity law. The new Board members will also be encouraged to meet with the senior staff in the Trading Group, so they understand that business, and can therefore affect appropriate oversight.

During the financial year the Trustees commissioned an independent evaluation of the skills composition and operational effectiveness of the Board which did not identify any significant shortcomings. In addition, the Trustees received refresher training on the roles and responsibilities of charity trustees delivered by an external provider.

## Remuneration of Trustees

The Trustees are the directors of the Foundation. Trustees are not remunerated for their services as Trustees of the Foundation. The Foundation pays for Trustees' travel expenses to board meetings.

## Membership of committees:

	Status	Foundation Board	Grants	Audit, Risk and Investment	Nominations
Thomas Thune Andersen	Trustee	Chair	—	—	Member
Sir Brian Bender	Trustee	Member	—	—	Chair
Ron Henderson	Trustee	Member	—	Chair	—
Rosemary Martin	Trustee	Member	—	—	—
Carol Sergeant	Trustee	Member	—	Member	—
Lambros Varnavides	Trustee	Member	Chair	—	—
The Earl Cowley <sup>1</sup>	Independent	—	—	Member	—
Peter Christmas	Independent	—	Member	—	—
Keith Povey	Group Director Risk & Insurance	—	Member	—	—
Michelle Davies	Secretary	—	—	—	—
Richard Clegg	Managing Director	---	Member	---	---
Michael F. Lykiardopulo	Independent	—	—	—	Member
Richard Close-Smith <sup>2</sup>	Independent	—	—	—	Member

Notes:

<sup>1</sup> Until 15 September 2015

<sup>2</sup> Until 1 March 2016

## Executive

The Managing Director, Richard Clegg, is responsible to the Board for the operation of the Foundation.

## Employees

Lloyd's Register Foundation and its Trading Group strive to be equal opportunities employers.

Full consideration is given to applications for employment from disabled persons where the requirements of the job can be adequately fulfilled by a handicapped or disabled person.

Where existing employees become disabled, it is the Foundation's policy wherever practicable to provide continuing employment under normal terms and conditions and to provide training and career development and promotion to disabled employees wherever appropriate.

The Foundation and its Trading Group aim to provide employees with information on matters of concern to them as employees and to ensure that they are engaged with the operations and objectives of the organisation.

## Management of risk

The Board has established an Audit, Risk and Investment Committee and has delegated to it the identification, review and assessment of key risks to the Foundation. These risks are described in a Risk Register which is reviewed at each meeting of the Committee. The updated Risk Register, and the minutes of the meetings of the Audit, Risk and Investment Committee, are tabled at meetings of the Board, and further discussed and considered. The risks are ranked according to impact and likelihood and the register describes the current mitigations and controls and plans for future development. At the current time, the Board considers the following to be its key risks and associated mitigating controls and procedures.

Risk	Mitigation
<b>Lower income</b>  Lower than forecast income from investments or the Trading Group impacts the Foundation's direct charitable activities.	Continued close review by the Audit, Risk and Investment Committee with active management and frequent reporting by third party investment managers. Also periodic reporting of the Trading Group's strategy and financial performance to the Trustees. Cash flow and reserves are projected in the 5 Year Plan and performance against the plan is monitored by the Board.
<b>Grant giving</b>  Grants awarded do not achieve stated outcomes or benefits impacting the Foundation's adherence to its charitable purpose. This could arise from mismanagement or the project, misappropriation of funds or other unforeseen circumstances and might result in reputational damage and regulatory impact.	Strong control of grant applications, including due diligence and 'red flag' reviews applied to applicant individuals and organisations where there is uncertainty or risk. Regular reviews of the impact of grants by the Managing Director and Grants Committee focus on the need for strong evidence of impact. An independent evaluation of grant impact and metrics has been commissioned.
<b>Compliance</b>  Failure to comply with UK and international law, regulatory requirements or sanctions. Key areas of compliance are charity law, anti-bribery and corruption, sanctions and conflicts of interest.	The Foundation Managing Director and LR Group General Counsel and Company Secretary keep compliance under continuous review.
<b>People and talent</b>  Loss of key staff or insufficient talent to respond to increases in Foundation activity.	Succession planning and active talent management have been implemented, which includes consideration of seconding appropriate skills and talent from the Trading Group.
<b>Disaster</b>  Fire or similar event at the Foundation's offices results in destruction of irreplaceable historic records and artefacts.	The Foundation's offices at 71 Fenchurch Street, London, have appropriate fire suppression systems and incidence response plans, which are tested regularly.
<b>Cyber Attack</b>  An advanced targeted cyber-attack could result in the loss of sensitive information.	Sensitive information is identified and is subject to appropriate security measures, which are tested regularly.
<b>Fraud</b>  Internal misappropriation of funds	Internal controls have been established around the grant application and approval process. Delegated authorities to the Managing Director are monitored by the Trustees through the Grants Committee and Board. The Foundation adopts and follows LR policies and processes including internal and external audit. The Trustees periodically review the Foundation's grant processes and administration to satisfy themselves they are fit for purpose.

The Trading Group has Audit and Risk, and Technical Assurance and Quality functions which provide independent and objective opinions on the adequacy of the Foundation and Trading Group's processes on risk, control, and governance and finance systems. The resources of the Audit and Risk function are available to the Foundation's Audit, Risk and Investment Committee.

- For the future there are likely to be factors inside and outside of the Foundation's control that are relevant to us achieving our objectives. In the case of the management of risks, these are monitored by the Board of Trustees and the Audit, Risk and Investment Committee. Risks are identified and assessed and controls are reviewed throughout the year.

### **Public benefit**

As described throughout this Trustees' Report, the Trustees place specific focus on the public benefits arising from the output and activities of the Foundation having regard to the Charity Commission guidance on public benefit.

### **Research and development**

The Trading Group carries out research and development activities. The amount of £18.2 million (2015: £15.9 million) has been charged to the consolidated statement of financial activities.

### **Organisational structure**

The Foundation has a total of 16 dedicated staff at 30 June 2016. A service level agreement exists between the Foundation and its trading arm, LR, for the provision of specialist business support in areas including finance, HR, communications, legal and IT. The Foundation pays for these services at an agreed market rate.

### **Disclosure of information to auditor**

Having made enquiries each of the Trustees, listed above, in office at the time of approving the Trustees' Report confirm that:

- So far as each trustee is aware, there is no information relevant to the preparation of its report and the financial statements of which the Foundation's auditor is unaware; and
- Each trustee has taken all steps a trustee might reasonably be expected to have taken to be aware of relevant audit information and to establish that the company's auditor is aware of that information.

### **Independent auditor**

Deloitte LLP has expressed a willingness to continue in office.

## Legal and administrative details

### Financial statements and Trustees' report

The company and consolidated financial statements have been prepared in accordance with the accounting policies set out on pages 36 to 37 and 50 to 53 respectively and comply with applicable laws and the FRS102 Charity SORP (Statement of Recommended Practice).

This Trustees' report on pages 5 to 31 and 44 to 45 has been prepared in accordance with Part 8 of the Charities Act 2011 and the Companies Act 2006 and incorporates the directors' report.

### Governing document

Lloyd's Register Foundation is a company limited by guarantee, governed by its Memorandum and Articles of Association.

### Company number

07905861 (England and Wales)

### Charity number

1145988 (England and Wales)

### Bankers

Royal Bank of Scotland  
1 Princes Street  
London  
EC2R 8PB

### Statutory Auditor

Deloitte LLP  
2 New Street Square  
London  
EC4A 3BZ

### Investment managers

Sarasin & Partners LLP  
Juxon House  
100 St. Paul's Churchyard  
London  
EC4M 8BU

### Investment custodians

Bank of New York Mellon  
One Canada Square  
Canary Wharf  
London  
E14 5AL

### Solicitors

Geldards LLP  
Dumfries House  
Dumfries Place  
Cardiff  
CF10 3ZF

### Registered and principal office

71 Fenchurch Street  
London  
EC3M 4BS

By order of the Board



Michelle Davies  
Company Secretary

21 OCTOBER 2016

## **Statement of Trustees' responsibilities**

The Trustees (who are also directors of the Foundation for the purposes of company law) are responsible for preparing the annual report and the financial statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice) including FRS 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland".

Company law requires the Trustees to prepare the financial statements for each financial period which give a true and fair view of the state of affairs of the Foundation and the Group and of the incoming resources and application of resources, including the income and expenditure, of the Group for that period. Under company law, the Trustees 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 charitable company and the group and of the incoming resources and application of resources, including the income and expenditure, of the Foundation and charitable group for that period. In preparing these financial statements, the Trustees are required to:

- Select suitable accounting policies and then apply them consistently;
- Observe the methods and principles of the Charity SORP;
- Make judgements and estimates that are reasonable and prudent;
- State whether applicable accounting standards have been followed; and
- Prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Foundation will continue in operation.

The Trustees are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the Foundation and charitable group and enable them to ensure that the financial statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the Foundation and charitable group and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

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

## **Audit, Risk and Investment Committee Report**

This report describes the constitution and activities of the Audit, Risk and Investment Committee in place during the year ended 30 June 2016.

### **Summary of the role of the Audit, Risk and Investment Committee**

The membership of the Audit, Risk and Investment Committee is:

Mr R A Henderson (Committee Chairman)

Mrs C Sergeant

Mr Allan Whalley joined, as an independent member of the Committee, on 19 September 2016

The Earl Cowley was a member until 15 September 2015

The Audit, Risk and Investment Committee is a sub-committee of the Board of Trustees. The Committee reviews the application and effectiveness of the policies and processes of the Lloyd's Register Foundation.

The Committee assists the Board of Trustees in monitoring the integrity of the Foundation's published financial statements and ensures that the Foundation's Annual Report and Accounts comply with UK accounting standards, the Companies Act and the Charities SORP.

The Committee also reviews the performance of the Foundation's investment portfolio and its investment managers and makes decisions on behalf of the Board of Trustees as to an appropriate investment strategy for the Foundation.

The Group's internal audit function is able to report to the Committee on any issues which it considers to impact on the adequacy and effectiveness of the Company's internal financial controls and risk management systems. No material items have been reported to the Committee by Internal Audit during the financial year.

The Committee oversees the relationship with the external auditor including approval of the audit plan and scope of the audit. The annual assessment of the auditor's independence and review of the level of fees payable for non-audit services did not identify any significant matters.

The annual financial statements are reviewed by the Committee before recommending their consideration by the Board of Trustees, focusing particularly on any significant adjustments resulting from the audit and major judgmental areas. The Audit, Risk and Investment Committee meets three times a year, and once a year a meeting is held between the members of the Committee and the external auditor, at which no employees are present.

# INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF LLOYD'S REGISTER FOUNDATION

We have audited the financial statements of Lloyd's Register Foundation for the year ended 30 June 2016 which comprise the Group and Parent Company Statements of Financial Activities, the Group and Parent Company Balance Sheets, the Group and Parent Company Cash Flow Statements, notes 1 to 20 to the company financial statements and notes 1 to 33 to the consolidated financial statements. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice) including FRS 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland".

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.

## Respective responsibilities of trustees and auditor

As explained more fully in the Statement of Trustees' Responsibilities, the trustees (who are also the directors of the charitable company for the purposes of company law) are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view.

Our responsibility is to audit and express an opinion on the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). Those standards require us to comply with the Auditing Practices Board's Ethical Standards for Auditors.

## Scope of the audit of the financial statements

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the group's and the parent charitable company's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the trustees; and the overall presentation of the financial statements. In addition, we read all the financial and non-financial information in the annual report to identify material inconsistencies with the audited financial statements and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by us in the course of performing

the audit. If we become aware of any apparent material misstatements or inconsistencies we consider the implications for our report.

## Opinion on financial statements

In our opinion the financial statements:

- give a true and fair view of the state of the group's and the parent charitable company's affairs as at 30 June 2016 and of the group's and the charitable parent company's incoming resources and application of resources, including its income and expenditure, for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Companies Act 2006.

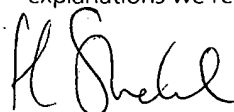
## Opinion on other matter prescribed by the Companies Act 2006

In our opinion the information given in the Strategic Report and Trustees' Annual Report for the financial year for which the financial statements are prepared is consistent with the financial statements.

## Matters on which we are required to report by exception

We have nothing to report in respect of the following matters where the Companies Act 2006 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept by the charitable parent company or returns adequate for our audit have not been received from branches not visited by us; or
- the charitable parent company financial statements are not in agreement with the accounting records and returns; or
- certain disclosures of trustees' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.



Hadleigh Shekle, FCA (Senior statutory auditor)  
for and on behalf of Deloitte LLP

Chartered Accountants and Statutory Auditor  
London, United Kingdom

21 October 2016



# FOUNDATION STATEMENT OF FINANCIAL ACTIVITIES (INCORPORATING AN INCOME AND EXPENDITURE ACCOUNT) FOR THE YEAR ENDED 30 JUNE 2016

	Note	General funds 2016 £000	Endowment funds 2016 £000	Total funds 2016 £000	General funds 2015 £000	Endowment funds 2015 £000	Total funds 2015 £000
<b>Income</b>							
Income from investments:							
Gift aid from Trading Group		20,162	—	20,162	11,461	—	11,461
From listed investments and other resources		9,008	—	9,008	8,055	—	8,055
<b>Total income</b>	3	29,170	—	29,170	19,516	—	19,516
<b>Expenditure on generating funds</b>							
Investment management costs	4	—	(1,025)	(1,025)	—	(1,127)	(1,127)
		—	(1,025)	(1,025)	—	(1,127)	(1,127)
<b>Expenditure on Charitable activities</b>							
Grants:							
Supporting excellent scientific research		(10,967)	—	(10,967)	(13,331)	—	(13,331)
Accelerating the application of research		(10,504)	—	(10,504)	(22)	—	(22)
Promoting safety and public understanding of risk		(11,578)	—	(11,578)	(201)	—	(201)
Advancement of skills and education		(761)	—	(761)	(608)	—	(608)
<b>Total grants</b>	5	(33,810)	—	(33,810)	(14,162)	—	(14,162)
Direct costs:							
Promoting safety and public understanding of risk		(877)	—	(877)	(737)	—	(737)
<b>Total expenditure on charitable activities</b>	5	(34,687)	—	(34,687)	(14,899)	—	(14,899)
<b>Total expenditure</b>		(34,687)	(1,025)	(35,712)	(14,899)	(1,127)	(16,026)
<b>Net (expenditure)/ income before (losses)/gains on investments</b>		(5,517)	(1,025)	(6,542)	4,617	(1,127)	3,490
Realised (losses)/ gains on disposal of listed investments		(858)	(11,404)	(12,262)	192	3,677	3,869
Unrealised gains on listed investments		1,026	13,639	14,665	419	8,039	8,458
<b>Net (expenditure)/income and net movement in funds</b>		(5,349)	1,210	(4,139)	5,228	10,589	15,817
<b>Reconciliation of funds</b>							
Funds brought forward	20	17,579	233,740	251,319	12,351	223,151	235,502
Funds carried forward		12,230	234,950	247,180	17,579	233,740	251,319

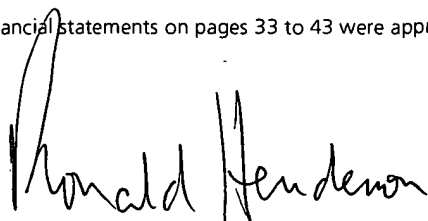
All of the Company's income is derived from continuing activities.

# FOUNDATION BALANCE SHEET

## AT 30 JUNE 2016

	Note	2016 £000	2015 £000
<b>Fixed assets</b>			
Investments	10	<u>272,270</u>	<u>246,903</u>
		<b>272,270</b>	<b>246,903</b>
<b>Current assets</b>			
Debtors	12	6,000	9,000
Cash at bank and in hand		<u>27,507</u>	<u>30,796</u>
		<b>33,507</b>	<b>39,796</b>
<b>Creditors: amounts falling due within one year</b>	13	<u>(15,690)</u>	<u>(8,608)</u>
<b>Net current assets</b>		<b>17,817</b>	<b>31,188</b>
<b>Total assets less current liabilities</b>		<b>290,087</b>	<b>278,091</b>
<b>Creditors: amounts falling due after one year</b>	14	<u>(42,907)</u>	<u>(26,772)</u>
<b>Net assets</b>		<u><b>247,180</b></u>	<u><b>251,319</b></u>
<b>The funds of the charity</b>			
General fund		<u>12,230</u>	<u>17,579</u>
<b>Total unrestricted funds</b>		<b>12,230</b>	<b>17,579</b>
Endowment funds		214,725	223,858
Revaluation reserve	17	<u>20,225</u>	<u>9,882</u>
<b>Total endowment funds</b>		<u><b>234,950</b></u>	<u><b>233,740</b></u>
<b>Total charity funds</b>	16	<u><b>247,180</b></u>	<u><b>251,319</b></u>

The financial statements on pages 33 to 43 were approved by the trustees on **21** October 2016 and signed on their behalf by:



R A Henderson, Trustee

**Lloyd's Register Foundation**  
Company registration number 07905861

# FOUNDATION CASH FLOW STATEMENT FOR THE YEAR ENDED 30 JUNE 2016

	Note	2016 £000	2015 £000
Cash flows from operating activities:			
Net cash provided by / (used in) operating activities	A	10,667	(5,078)
Cash flows from investing activities:			
Dividends and interest from investments		9,008	8,055
Purchase of investments		(169,209)	(161,663)
Proceeds from sale of investments		146,245	161,914
Net cash (used in) / generated by investing activities		(13,956)	8,306
Change in cash and cash equivalents in the year		(3,289)	3,228
Cash and cash equivalents at the beginning of the year	B	30,796	27,568
Cash and cash equivalents at the end of the year	B	<u>27,507</u>	<u>30,796</u>

## A. Reconciliation of net (expenditure) / income to net cash flow from operating activities

	2016 £000	2015 £000
Net (expenditure) / income for the reporting period (as per the statement of financial activities)	(4,139)	15,817
Adjustments for:		
Gains on investments	(2,403)	(12,327)
Dividends and interest from investments	(9,008)	(8,055)
Decrease / (increase) in debtors	3,000	(5,036)
Increase in creditors	23,217	4,523
Net cash provided by / (used in) operating activities	<u>10,667</u>	<u>(5,078)</u>

## B. Analysis of cash and cash equivalents

	1 July 2015 £000	Cash flow £000	30 June 2016 £000
Cash at bank and in hand	794	63	857
Short-term deposits (less than 3 months)	30,002	(3,352)	26,650
Total cash and cash equivalents	<u>30,796</u>	<u>(3,289)</u>	<u>27,507</u>

# NOTES TO THE FOUNDATION FINANCIAL STATEMENTS

## 1. Basis of accounting

These financial statements have been prepared under the historical cost convention as modified by the revaluation of certain fixed asset investments. They have been prepared in accordance with the Charities Statement of Recommended Practice (SORP) FRS102 "Accounting and Reporting by Charities" ("the Charities SORP"), the reporting requirements of the Companies Act 2006 and applicable accounting standards in the United Kingdom. The Foundation meets the definition of a public benefit entity under FRS102. The charitable company has adapted the Companies Act formats to reflect the Charities SORP. The financial statements have been prepared on the going concern basis as discussed in the trustees' report on page 23.

The functional currency of the company is considered to be Pound Sterling as this is the currency of the primary economic environment in which the company operates.

The prior year financial statements have been restated for material adjustments on adoption of FRS102 in the current year. A reconciliation of opening funds and 2015 net income with those shown under previous GAAP is shown in note 20.

## 2. Accounting policies

The principal accounting policies applied in the preparation of these separate financial statements are set out below. In the opinion of the trustees there are no critical accounting judgements or key sources of estimation uncertainty.

### a. Income

Income is accounted for on an accruals basis and included in the statement of financial activities when the Company is legally entitled to the income, receipt is probable and the amount can be quantified with reasonable accuracy.

### b. Expenditure

Expenditure is accounted for on an accruals basis.

Expenditure on raising funds is costs associated with generating income from investment management.

Expenditure on charitable activities comprises all the costs incurred by the Foundation in undertaking its work to meet its charitable objectives as opposed to the cost of generating the funds to finance these activities. Charitable activities are all the resources expended by the charity in the delivery of goods and services, including its programme and project work that is directed at the achievement of its charitable aims and objectives. Such costs include the direct costs of the charitable activities together with those support costs incurred that enable these activities to be undertaken.

Grants awarded are recognised when the Charity formally notifies the recipient of the award following approval by the Trustees. The liability recognised is for the full amount of the award, whether payable immediately or across a number of financial years as grants are subject to qualitative review rather than strict performance criteria. Where material, grant liabilities in excess of one year are discounted to net present value to reflect the time value of money which is based on the investment returns with a similar risk profile.

Support costs are defined as those costs that are incurred indirectly, and relate principally to grant making activities that then give the Foundation the capability to carry out its charitable activities. They are allocated to the SORP expenditure headings on the basis of underlying expenditure which reflects the level of activity performed.

Short-term employee benefits are recognised as an expense in the period in which they relate.

### c. Investments

Listed investments are stated at market value. The statement of financial activities includes realised gains and losses on investments sold in the year and unrealised gains and losses on revaluation of investments.

Investment in the Trading Group (Lloyd's Register Group Limited) is valued at cost less any impairment. In the trustees' opinion, obtaining an external valuation of the Trading Group would have a material impact on the resources available for charitable distribution, and due to the mixed motive nature of the investment, would lack reliability.

### d. Cash

Items considered to be cash are those held in hand, in current accounts and on short-term deposit (where the term is less than three months) with recognised financial institutions.

### e. Taxation and Value Added Tax

The Foundation is a UK registered charity and is exempt from Corporation Tax under Chapter 3 of Part 11 to the Corporation Tax Act 2010 and section 256 of the Taxation for Chargeable Gains Act 1992 to the extent that surpluses are applied to its charitable purposes.

The Foundation is not registered for VAT and therefore suffers irrecoverable VAT. This expense is recorded and disclosed with the cost of the underlying goods or services.

**f. Fund accounting**

The Foundation's general fund comprises accumulated unrestricted surpluses and deficits.

Endowment funds comprise one expendable endowment fund, a part of the September 2012 donation from the Trading Group. Generally, capital is retained within the fund, with income forming part of the Foundation's general fund. Trustees have the power to convert capital to income should they wish to expend capital subject to the contractual obligations of the initial donation as outlined in note 16.

**g. Financial assets and liabilities**

Financial assets and financial liabilities are recognised when the Foundation becomes a party to the contractual provisions of the instrument. All financial assets and liabilities are initially measured at transaction price (including transaction costs). With the exception of fixed asset investments, financial instruments are initially recognised at transaction value and subsequently measured at their settlement value.

Debtors are recognised at the settlement amount due. Creditors are recognised where the Foundation has a present obligation resulting from a past event that will result in the transfer of funds to a third party and the amount due to settle the obligation can be measured or estimated reliably. Creditors are recognised at their settlement amount.

**3. Investment income**

	General funds £000	Endowment funds £000	Total 2016 £000	Total 2015 £000
Gift aid from Trading Group	20,162	—	20,162	11,461
Listed and other investments:				
Fixed Interest – UK	1,220	—	1,220	1,076
Fixed Interest – Overseas	85	—	85	166
Equities – UK	2,856	—	2,856	2,580
Equities – Overseas	3,079	—	3,079	2,840
Index linked - Overseas	18	—	18	—
Pooled Funds	1,632	—	1,632	1,196
Cash Instruments	19	—	19	25
Bank interest	99	—	99	172
	<u>9,008</u>	<u>—</u>	<u>9,008</u>	<u>8,055</u>
Total	<u>29,170</u>	<u>—</u>	<u>29,170</u>	<u>19,516</u>

**4. Expenditure on generating funds**

Expenditure on generating funds represents investment management costs, which are charged to the endowment fund.

**5. Analysis of expenditure on charitable activities**

	Grants £000	Unwinding of discount £000	Activities undertaken directly £000	Support costs £000	Total 2016 £000	Total 2015 £000
Grant making activities:						
Supporting excellent scientific research	10,082	440	—	445	10,967	13,331
Accelerating the application of research	10,062	—	—	442	10,504	22
Promoting safety and public understanding of risk	11,057	33	—	488	11,578	201
Advancement of skills and education	730	—	—	31	761	608
	<u>31,931</u>	<u>473</u>	<u>—</u>	<u>1,406</u>	<u>33,810</u>	<u>14,162</u>
Direct costs:						
Promoting safety and public understanding of risk	—	—	874	3	877	737
Total	<u>31,931</u>	<u>473</u>	<u>874</u>	<u>1,409</u>	<u>34,687</u>	<u>14,899</u>

Support costs totalling £1,409,000 (2015: £1,223,000) have been allocated across the Foundation's activities. These include costs associated with IT, HR, finance, property and other central services of the Charity's staff. Included within support costs are staff costs of £828,000 (2015: £796,000) and governance costs of £108,000 (2015: £127,000).

Governance costs includes fees payable to the Foundation's auditor for the audit of the Foundation's annual accounts of £36,000 (2015: £36,000).

## NOTES TO THE FOUNDATION FINANCIAL STATEMENTS - CONTINUED

### 6. Grants awarded

Grants are awarded to institutions and fund tuition costs, employment costs or other costs of research. Grants awarded in 2015/2016 are analysed by institution below.

	Number of grants	Supporting excellent scientific research £000	Accelerating the application of research £000	Promoting safety and public understanding of risk £000	Advancement of skills and education £000	Total 2016 £000
The Alan Turing Institute	1	10,000	—	—	—	10,000
Global Young Scientists Summit	1	3	—	—	—	3
Imperial College London	1	75	—	—	—	75
Innovi Business Growth Ltd	1	70	—	—	—	70
Royal Academy of Engineering	1	499	—	—	—	499
University of Southampton(RECOIN)	1	19	—	—	—	19
Arup	1	—	10,000	—	—	10,000
Imperial College London	1	—	59	—	—	59
Wageningen University & Research	1	—	500	—	—	500
Blue Marine Foundation	1	—	—	20	—	20
CHIRP Maritime	1	—	—	60	—	60
National University of Singapore	1	—	—	10,000	—	10,000
Nautical Institute (Alert!40)	1	—	—	46	—	46
Royal College of Art	1	—	—	50	—	50
Royal National Lifeboat Institute	1	—	—	1,059	—	1,059
Science Museum	1	—	—	250	—	250
The Conversation	1	—	—	180	—	180
Admiral Makarov SUMIS	1	—	—	—	75	75
Arkwright Scholarships	2	—	—	—	50	50
British Science Association	1	—	—	—	17	17
Children's Radio UK	1	—	—	—	15	15
CIFAL, Scotland	1	—	—	—	6	6
Don Bosco Training Centre	1	—	—	—	20	20
Educational Volunteers Foundation of Turkey	1	—	—	—	132	132
Engineering Development Trust	1	—	—	—	50	50
ERA Foundation	1	—	—	—	14	14
Maritime London Officer Cadets	1	—	—	—	108	108
National Maritime Museum	1	—	—	—	104	104
National Space Centre	1	—	—	—	297	297
Smallpeice Trust (Girls in Engineering)	1	—	—	—	20	20
University College London	1	—	—	—	55	55
University of Birmingham	1	—	—	—	702	702
University of Southampton(Human powered submarine society)	1	—	—	—	4	4
Villiers Park Educational Trust	1	—	—	—	60	60
Grants returned		(36)	—	—	(999)	(1,035)
	35	10,630	10,559	11,665	730	33,584
Impact of discounting grants awarded		(548)	(497)	(608)	—	(1,653)
		10,082	10,062	11,057	730	31,931

Grants awarded in 2014/2015 are analysed by institution below:

	Number of grants	Supporting excellent scientific research £000	Accelerating the application of research £000	Promoting safety and public understanding of risk £000	Advancement of skills and education £000	Total 2015 £000
The Alan Turing Institute	1	80	—	—	—	80
Global Young Scientists Summit	2	400	—	—	—	400
Imperial College London	1	430	—	—	—	430
Innovi Business Growth Ltd	1	80	—	—	—	80
Royal Academy of Engineering	1	497	—	—	—	497
University of Southampton(RECOIN)	2	2,943	—	—	—	2,943
Arup	1	3,000	—	—	—	3,000
Imperial College London	2	307	—	—	—	307
Wageningen University & Research	4	3,700	—	—	—	3,700
Blue Marine Foundation	1	468	—	—	—	468
CHIRP Maritime	1	3	—	—	—	3
National University of Singapore	1	—	20	—	—	20
Nautical Institute (Alert!40)	1	—	—	40	—	40
Royal College of Art	1	—	—	105	—	105
Royal National Lifeboat Institute	1	—	—	19	—	19
Science Museum	1	—	—	13	—	13
The Conversation	1	—	—	6	—	6
Admiral Makarov SUMIS	1	—	—	—	75	75
Arkwright Scholarships	1	—	—	—	204	204
British Science Association	1	—	—	—	40	40
Children's Radio UK	1	—	—	—	45	45
CIFAL, Scotland	1	—	—	—	170	170
Don Bosco Training Centre	2	—	—	—	20	20
Educational Volunteers Foundation of Turkey	1	—	—	—	10	10
Engineering Development Trust	1	—	—	—	20	20
ERA Foundation	1	—	—	—	20	20
Maritime London Officer Cadets	1	—	—	—	15	15
National Maritime Museum	1	—	—	—	8	8
Grants returned		(3)	—	—	(72)	(75)
	35	11,905	20	183	555	12,663

#### 7. Grants awarded but not paid

	2016 £000	2015 £000
At 1 July	34,909	30,373
Awarded in the year	32,966	12,738
Unwinding of discounting	473	282
Grants returned in the year	(1,035)	(75)
Paid in the year	(9,271)	(8,409)
At 30 June	58,042	34,909

The aging of grants payable is shown in note 14.

#### 8. Employees

	General funds £000	Endowment funds £000	Total 2016 £000	Total 2015 £000
Wages and salaries	677	—	677	655
Social security costs	58	—	58	59
Pension costs	93	—	93	82
	828	—	828	796

The average number of employees engaged in charitable activities was 13 (2015: 12).

Foundation employees are employed by Lloyd's Register Group Services Limited, a member of the Trading Group. They are seconded to the Foundation to whom their employment costs, including contributions to Lloyd's Register Group Services Limited's defined contribution pension scheme, are charged.

## NOTES TO THE FOUNDATION FINANCIAL STATEMENTS - CONTINUED

The following number of employees earned emoluments within the bands shown below. Emoluments include benefits in kind, but exclude employer defined contribution pension costs.

	Year to 30 June 2016 Number	Year to 30 June 2015 Number
£60,001 - £70,000	1	1
£70,001 - £80,000	1	—
£90,001 - £100,000	1	2
£120,001 - £130,000	1	—

The Foundation made termination payments of £26,000 during the year (2015: £nil).

### 9. Trustees

The Trustees are the directors of the Foundation. The Trustees do not currently receive remuneration in respect of their duties as trustees. No Trustees received reimbursement for out of pocket expenses (2015: £nil). There were no expenses paid on behalf of Trustees (2015: £22,000 in respect of overseas travel expenses to board meetings).

The Foundation maintained throughout the year Trustees' and Officers' liability insurance in respect of itself and its trustees.

### 10. Investments

	2016 £000	2015 £000
Listed investments at market value comprise:		
Fixed Interest – UK	36,617	28,463
Fixed Interest – Overseas	1,420	2,055
Equities – UK	64,597	63,268
Equities – Overseas	108,721	111,350
Index linked – Overseas	1,832	—
Pooled Funds	52,983	33,391
Derivatives	(2,637)	(49)
Cash instruments	4,845	6,921
Cash at investment managers and accrued interest	3,842	1,454
	<u>272,220</u>	<u>246,853</u>
Unlisted investments		
Investment in subsidiaries – mixed motive investment	50	50
	<u>272,270</u>	<u>246,903</u>

Listed investments	2016 £000	2015 £000
At 1 July	245,399	231,378
Additions at cost	169,209	161,663
Disposals proceeds	(148,633)	(159,969)
Realised (loss) / gain on disposals	(12,262)	3,869
Unrealised gains	14,665	8,458
At 30 June	<u>268,378</u>	<u>245,399</u>
Cash at investment managers and accrued interest	3,842	1,454
	<u>272,220</u>	<u>246,853</u>

### Subsidiaries

The Foundation has invested £50,000 in its only immediate subsidiary, Lloyd's Register Group Limited. The subsidiaries and joint ventures of Lloyd's Register Group Limited are shown in note 33 to Lloyd's Register Foundation Group Consolidated Financial Statements.



## 11. Trading Group

The Foundation has a mixed motive investment in one trading subsidiary, Lloyd's Register Group Limited which has its own global group of trading companies (the Trading Group). The Foundation owns 100% of the issued share capital of Lloyd's Register Group Limited. The Trading Group's principal activities are the provision of independent inspection and compliance services to clients in capital intensive industries, in particular marine and energy industries.

The summarised financial information of the consolidated Trading Group is provided below, as per the Trading Group's consolidated financial statements for the year ended 30 June 2016.

	2016	2015
	£000	Total £000
Turnover	881,173	1,037,548
Cost of sales	(625,176)	(717,350)
<b>Gross profit</b>	<b>255,997</b>	<b>320,198</b>
Administrative expenses	(249,328)	(280,070)
Administrative expenses before restructuring costs and impairments	(203,190)	(256,151)
Operating profit before restructuring costs and impairments	52,807	64,047
Restructuring costs	(21,503)	(23,919)
Impairment of goodwill	(24,635)	—
Profit/(loss) on disposal of operations	27,664	(1,037)
<b>Operating profit</b>	<b>34,333</b>	<b>39,091</b>
Share of net operating loss of joint ventures	(1,173)	(1,823)
Net investment income	50,171	36,424
Other finance costs	(5,753)	(6,295)
<b>Profit on ordinary activities before taxation</b>	<b>77,578</b>	<b>67,397</b>
Tax on profit on ordinary activities	(5,333)	(25,037)
<b>Profit for the financial year</b>	<b>72,245</b>	<b>42,360</b>

	2016	2015
	£000	£000
Assets	821,148	804,781
Liabilities	(447,846)	(448,072)
<b>Net assets</b>	<b>373,302</b>	<b>356,709</b>
Shareholder's funds	375,954	398,447
Acquisition put option	—	(46,531)
Minority interests	(2,652)	4,793
	<b>373,302</b>	<b>356,709</b>

## 12. Debtors

	2016	2015
	£000	£000
Amounts due from Lloyd's Register Group Limited	6,000	9,000
	<b>6,000</b>	<b>9,000</b>

## 13. Creditors: amounts falling due within one year

	2016	2015
	£000	£000
Amounts due to Lloyd's Register Group Limited	226	162
Grants payable	15,135	8,137
Accruals and deferred income	329	309
	<b>15,690</b>	<b>8,608</b>

## NOTES TO THE FOUNDATION FINANCIAL STATEMENTS - CONTINUED

### 14. Creditors: amounts falling due after one year

	2016 £000	2015 £000
Grants payable	42,907	26,772
	<u>42,907</u>	<u>26,772</u>

The timing of grants payable is shown in the table below:

	2016 £000	2015 £000
Due within one year	15,135	8,137
Due within 1-2 years	13,702	7,691
Due within 2-5 years	26,772	13,685
Due within 6-10 years	4,956	6,739
Impact of discounting	(2,523)	(1,343)
	<u>42,907</u>	<u>26,772</u>
Net grants payable	<u>58,042</u>	<u>34,909</u>

### 15. Contingent liabilities

The Foundation has a contractual obligation until June 2017 to transfer up to £100m of the investment assets received from the Trading Group in September 2012 to the Lloyd's Register Superannuation Fund Association in the event of an insolvency of Lloyd's Register Group Limited. The Trustees consider the risk of insolvency, and therefore the risk of payment of the contingent liability, to be minimal.

### 16. Funds

	1 July 2015 £000	Income £000	Expenditure £000	Other movements £000	30 June 2016 £000
General funds	17,579	29,170	(34,687)	168	12,230
Endowment funds:					
Expendable endowment	233,740	—	(1,025)	2,235	234,950
	<u>251,319</u>	<u>29,170</u>	<u>(35,712)</u>	<u>2,403</u>	<u>247,180</u>

Other movements relate to realised and unrealised gains and losses on investment assets.

In September 2012, the Trading Group transferred a portfolio of investments to the Foundation, with a market value of £206.4m. The transfer was made as a gift of an expendable endowment. The gift also contained a condition that the Foundation must agree to keep £100.0m of that sum as a contingent asset of the Trading Group's UK pension scheme until June 2017. During that period the monies can only be transferred to the Pension Scheme in the event of the insolvency of the Trading Group.

### 17. Revaluation reserve

	1 July 2015 £000	Unrealised gains £000	Released from revaluation reserve £000	30 June 2016 £000
Endowment funds:				
Expendable endowment	9,882	14,665	(4,322)	20,225
	<u>9,882</u>	<u>14,665</u>	<u>(4,322)</u>	<u>20,225</u>

## 18. Analysis of net assets between funds

	General funds £000	Endowment funds £000	Total 2016 £000	Total 2015 £000
Fixed assets	37,320	234,950	272,270	246,903
Current assets	33,507	—	33,507	39,796
Creditors: amounts falling due within one year	(15,690)	—	(15,690)	(8,608)
Creditors: amounts falling due after one year	(42,907)	—	(42,907)	(26,772)
	<u>12,230</u>	<u>234,950</u>	<u>247,180</u>	<u>251,319</u>

## 19. Related party transactions

The Foundation has taken advantage of the exemption in Financial Reporting Standard 102, whereby transactions with subsidiary companies ultimately 100% owned by the same parent are not required to be disclosed.

In accordance with the provisions of Financial Reporting Standard 102 the related party transaction entered into by the charity is detailed below. The transaction that arose was in the normal course of business.

The charity awarded a grant of £600,000 in the 2013/14 year to the Worshipful Company of Shipwrights where Lambros Varnavides serves as a member of the Finance Committee. The interest was disclosed before the grant was made and Mr Varnavides did not participate in the grant making decision. Of the grant awarded, £425,000 (2015: £425,000) was outstanding as at 30 June 2016.

The Foundation defines its key management personnel as the Board of Trustees and the Executive Leadership Team. The total remuneration for key management personnel for the year totalled £96,000 (2015: £96,000).

## 20. Explanation of transition to FRS 102

This is the first year that the Foundation has presented its financial statements under the Charities Statement of Recommended Practice (SORP) FRS102. The following disclosures are required in the year of transition. The last financial statements under previous UK GAAP were for the year ended 30 June 2015 and the date of transition was therefore 1 July 2014.

As a consequence of adopting FRS 102, funds and net income have been restated as follows:

Reconciliation of funds	At 1 July 2014 £000	At 30 June 2015 £000
Funds (as previously stated)	<u>233,877</u>	<u>249,976</u>
Discounting of grant liabilities	1,625	1,343
Funds for the year (as restated)	<u>235,502</u>	<u>251,319</u>

### Reconciliation of net income for the year ended 30 June 2015

	£000
Net income for the year (as previously stated)	16,099
Unwinding of grant liabilities	(282)
Net income for the year (as restated)	<u>15,817</u>

The only change as a result of transition to FRS 102 is that where material, grant liabilities in excess of one year are discounted to net present value to reflect the time value of money.

# FINANCIAL REVIEW OF LLOYD'S REGISTER FOUNDATION GROUP

## Strategic report of the Foundation

The Foundation has a direct mixed motive investment in one trading subsidiary, Lloyd's Register Group Limited which has its own global group of trading companies (the Trading Group). The Foundation owns 100% of the issued share capital of Lloyd's Register Group Limited. The Trading Group's principal activities are the provision of independent inspection and compliance services to clients in capital intensive industries, in particular the marine and energy industries.

As noted in the Foundation Finance Review, this year, for the first time, the Foundation has prepared its financial statements under FRS102, the new financial reporting standard for unlisted companies in the UK. This has required the restatement of the Group balance sheet as at 1 July 2014 and the results and balance sheet for the year to 30 June 2015 which is presented as the comparative year. The total impact on the Group's consolidated net assets as at 1 July 2015 was a decrease of £3.1 million. The total impact on the 2014/15 profit for the year was a decrease of £13.0 million. Further information is provided in note 32 to the financial statements.

The Foundation's consolidated total income of £901.0 million (2015: £1,056.5 million) relates to the income recognised by the Trading Group (£892.0 million (2015: £1,001.4 million) - including turnover of £881.2 million (2015: £1,037.5 million) and investment income of £19.9 million (2015: £18.9 million).

The Foundation's consolidated total expenditure of £893.9 million (2015: £1,045.9 million) relates principally to the Trading Group (£858.2 million (2015: £986.7 million)) with the remainder relating to the activities of the charitable entity.

Consolidated net assets for the Foundation at 30 June 2016 are £620.4 million (30 June 2015: £608.0 million), an increase of £12.4 million (2015: £29.0 million) from the prior year.

Net consolidated funds (cash and short term deposits) for the Foundation at 30 June 2016 are £174.5 million (30 June 2015: £181.3 million), a decrease of £6.8 million (2015: decrease of £30.8 million) from the prior year.

The performance of the Charitable entity is discussed on pages 21 to 24, and the results of the Trading Group below.

## Results of the Trading Group

This financial review of the Trading Group forms part of the strategic report.

The summarised financial information of the consolidated Trading Group is provided in note 17 to the consolidated financial statements, as per the Trading Group's consolidated financial statements for the year ended 30 June 2016.

Turnover of £0.9 billion was 15.1% less than the prior year, (2015: £1.04 billion). Excluding the revenue contribution from the transport business in 2014/15 which was disposed of on 1 July 2015, Group revenue reduced by £109 million (11%). Turnover at prior year exchange rates would have been £11 million higher than at actual exchange rates (1%).

Operating profit before restructuring costs and impairments was £52.8 million (2015: £64.0 million). Excluding the operating profit from the transport business in 2014/15 this was £7.2 million lower than prior year and a direct result of the prevailing turbulent conditions in the energy market. Statutory operating profit, including restructuring costs, impairments and the £27.7 million profit on the sale of the transport business, was £34.3 million (2015: £35.1 million excluding the transportation business).

## Financial position of the Trading Group

Net funds for the Trading Group at 30 June 2016 are £373.3 million (30 June 2015: £356.7 million), an increase of £16.6 million (2015: £29.0 million) from the prior year.

## Branches of the Group

The Group has branches, as defined in section 1046(3) of the Companies Act 2006, which are outside the UK.

## Financial risk management policies and objectives

LR is exposed to certain financial risks as a result of its operations and the activities that it carries out. These financial risks include litigation, foreign exchange risk, credit risk, and interest rate risk.

### Litigation

In the normal course of business, the Group receives claims for compensation from clients and other associated parties. The Group has in place appropriate policies and procedures to mitigate litigation risk. Although insurance cover is carried to mitigate this risk, the results of litigation can be uncertain and the Group remains exposed to a potential shortfall in this cover.

### Foreign exchange risk (price risk)

Foreign exchange exposure is an expected risk of operating across a number of geographies. The Group monitors the impact of foreign exchange on a regular basis. Where possible, the company uses natural hedges (offsetting costs incurred in a particular currency against revenues earned in that currency) that arise from its normal operating activities to manage its foreign exchange exposures. Residual foreign exchange exposure is monitored and is considered tolerable. Derivative financial instruments are used by the Group's third party investment manager to manage the exposure to foreign exchange risk associated with the Company's investment portfolio. Aside from these derivatives, the Group does not currently use financial instruments to hedge foreign exchange risk.

#### **Liquidity risk and going concern**

The Group does not have any significant borrowings at the year-end and has net cash of £147.9million (2015: £150.6 million). In addition, the Group holds listed investments of £441.2 million (2015: £404.5 million) of which £84.9 million (2015: £81.9 million) is held in escrow to make good the deficit on the main UK defined benefit pension scheme in future periods.

The directors consider that the cash held by the Group, together with its listed investments, are sufficient to address the Group's liquidity requirements, both in the near and longer term.

The directors therefore have a reasonable expectation that the Company and the Group have adequate resources to continue in operational existence for the foreseeable future. Thus they continue to adopt the going concern basis in preparing the financial statements.

#### **Credit risk**

It is company policy to perform an assessment of the creditworthiness of new clients and, where appropriate, assign a credit limit to clients' accounts.

#### **Interest risk**

Derivative financial instruments are used by the Group's third party investment manager to manage the exposure to foreign exchange risk associated with the Company's investment portfolio. Aside from this potential risk the Group has only limited exposure to interest rate risk as it has no external borrowings or other interest-bearing financial instruments.

#### **Further details of the Trading Group**

Further details of the financial performance of the Trading Group is included within the Lloyd's Register Group Limited's statutory accounts.

## THE CONSOLIDATED FINANCIAL STATEMENTS

# CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES FOR THE YEAR ENDED 30 JUNE 2016

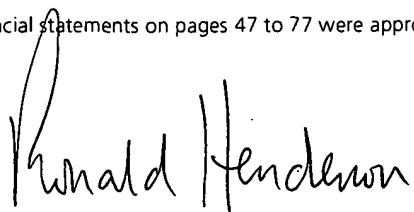
	Note	Trading funds £000	General funds £000	Endowment funds £000	Total funds 2016 £000	Total funds 2015 £000
<b>Income</b>						
<b>Incoming resources from generated funds</b>						
Income from investments:						
Listed investments	4	5,608	8,909	—	14,517	14,430
Property	4	4,493	—	—	4,493	3,493
Other	4	755	99	—	854	980
Activities for generating funds	5	881,173	—	—	881,173	1,037,548
<b>Total income</b>		<b>892,029</b>	<b>9,008</b>	<b>—</b>	<b>901,037</b>	<b>1,056,451</b>
<b>Expenditure on generating funds</b>						
Investment management costs		(194)	—	(1,025)	(1,219)	(1,369)
Cost of activities for generating funds		(874,409)	—	—	(874,409)	(997,257)
Other finance costs – pensions		(5,753)	—	—	(5,753)	(6,295)
Profit/(loss) on disposal of discontinued operations		27,664	—	—	27,664	(1,037)
Taxation	10	(5,333)	—	—	(5,333)	(25,037)
Other		(203)	—	—	(203)	—
<b>Total costs of generating funds</b>		<b>(858,228)</b>	<b>—</b>	<b>(1,025)</b>	<b>(859,253)</b>	<b>(1,030,995)</b>
<b>Expenditure on Charitable activities</b>						
Grants:						
Supporting excellent scientific research		—	(10,967)	—	(10,967)	(13,331)
Accelerating the application of research		—	(10,504)	—	(10,504)	(22)
Promoting safety and public understanding of risk		—	(11,578)	—	(11,578)	(201)
Advancement of skills and education		—	(761)	—	(761)	(608)
<b>Total grants</b>	<b>7</b>	<b>—</b>	<b>(33,810)</b>	<b>—</b>	<b>(33,810)</b>	<b>(14,162)</b>
Direct costs:						
Promoting safety and public understanding of risk		—	(877)	—	(877)	(737)
<b>Total expenditure on charitable activities</b>	<b>7</b>	<b>—</b>	<b>(34,687)</b>	<b>—</b>	<b>(34,687)</b>	<b>(14,899)</b>
<b>Total expenditure</b>		<b>(858,228)</b>	<b>(34,687)</b>	<b>(1,025)</b>	<b>(893,940)</b>	<b>(1,045,894)</b>
<b>Net income/ (expenditure) before gains / (losses) on investments</b>	<b>11</b>	<b>33,801</b>	<b>(25,679)</b>	<b>(1,025)</b>	<b>7,097</b>	<b>10,557</b>
Realised gains/ (losses) on disposal of investments		251	(858)	(11,404)	(12,011)	7,916
Unrealised gains on investments		39,366	1,026	13,639	54,031	30,069
<b>Net income/ (expenditure)</b>		<b>73,418</b>	<b>(25,511)</b>	<b>1,210</b>	<b>49,117</b>	<b>48,542</b>
Net interest in the results for the year in joint ventures		(1,173)	—	—	(1,173)	(1,823)
Transfers between funds		(20,162)	20,162	—	—	—
Foreign exchange differences on translation of net assets of overseas operations		11,324	—	—	11,324	4,399
Net actuarial movements on defined benefit pension schemes	24	(42,502)	—	—	(42,502)	(21,716)
Acquisition of non-controlling interest	17	736	—	—	736	(2,470)
Tax relating foreign exchange differences on translation of net assets of overseas operations		(5,056)	—	—	(5,056)	2,115
<b>Net movement in funds</b>		<b>16,585</b>	<b>(5,349)</b>	<b>1,210</b>	<b>12,446</b>	<b>29,047</b>
Funds brought forward		356,718	17,529	233,740	607,987	578,940
Funds carried forward		373,303	12,180	234,950	620,433	607,987

There are no recognised gains or losses for the year other than those shown above. An analysis of the prior year funds is shown in note 6.

# CONSOLIDATED BALANCE SHEET AT 30 JUNE 2016

	Note	2016 £000	2015 £000
<b>Non Current Assets</b>			
Goodwill	14	72,251	109,899
Intangible fixed assets	14	29,970	16,183
Tangible assets	15	159,862	134,745
Investments	16	445,205	404,877
Pension surplus	24	8,169	7,164
Deferred tax assets		15,757	3,021
Interests in joint ventures – share of net assets	16	282	888
		<u>731,496</u>	<u>676,777</u>
<b>Current assets</b>			
Work in progress	18	3,541	—
Debtors	19	211,106	224,153
Cash at bank and in hand		<u>174,536</u>	<u>181,336</u>
		<u>389,183</u>	<u>405,489</u>
<b>Creditors: amounts falling due within one year</b>	20	<u>(142,816)</u>	<u>(166,230)</u>
<b>Net current assets</b>		<u>246,367</u>	<u>239,259</u>
<b>Total assets less current liabilities</b>		<u>977,863</u>	<u>916,036</u>
<b>Creditors: amounts falling due after one year</b>	21	<u>(42,907)</u>	<u>(26,772)</u>
Provisions for liabilities	22	<u>(25,985)</u>	<u>(71,401)</u>
<b>Net assets excluding pension liability</b>		<u>908,971</u>	<u>817,863</u>
Pension liability	24	<u>(288,538)</u>	<u>(209,876)</u>
<b>Net assets including pension liability</b>		<u>620,433</u>	<u>607,987</u>
<b>The funds of the charity</b>	27,28		
Non charitable trading funds		577,623	560,603
Revaluation reserve		78,701	40,553
General fund	27	<u>12,180</u>	<u>17,529</u>
<b>Unrestricted funds excluding pension liability</b>		<u>668,504</u>	<u>618,685</u>
Pension reserve		<u>(280,369)</u>	<u>(202,700)</u>
<b>Total unrestricted funds</b>		<u>388,135</u>	<u>415,985</u>
Endowment funds		214,725	223,858
Revaluation reserve	28	<u>20,225</u>	<u>9,882</u>
<b>Total endowment funds</b>	27	<u>234,950</u>	<u>233,740</u>
<b>Total charity funds excluding minority interests and acquisition put option</b>		<u>623,085</u>	<u>649,725</u>
Acquisition put option	2t	—	(46,531)
Non-controlling interests		<u>(2,652)</u>	<u>4,793</u>
<b>Total charity funds</b>		<u>620,433</u>	<u>607,987</u>

The financial statements on pages 47 to 77 were approved by the trustees on 21 October 2016 and signed on their behalf by:



R A Henderson, Trustee

Lloyd's Register Foundation  
Company registration number 07905861



# **CONSOLIDATED CASH FLOW FOR THE YEAR ENDED 30 JUNE 2016**

	Note	2016 £000	2015 £000
Net cash inflow from operating activities	30	31,487	21,537
<b>Cash flows from investing activities</b>			
Repayment of staff loans		5	120
Proceeds from sale of investments		178,771	235,990
Proceeds from sale of tangible fixed assets		810	292
Purchase of investments		(198,622)	(212,200)
Purchase of intangible fixed assets		(17,072)	(5,298)
Purchase of tangible fixed assets		(9,981)	(12,404)
Interest paid		(301)	(140)
Investment income		20,156	19,288
Additional investment in existing joint ventures		(1,018)	(2,227)
Acquisition of unlisted investments		(3,697)	—
Payment of deferred consideration on acquisitions		(1,414)	(6,576)
Proceeds from disposal of subsidiary		43,118	—
Acquisition of subsidiaries		(45,856)	(8,628)
Net cash acquired		—	1,722
<b>Net cash flows from investing activities</b>		<b>(35,101)</b>	<b>9,939</b>
<b>Net (decrease) / increase in cash and cash equivalents</b>		<b>(3,614)</b>	<b>31,476</b>
<b>Cash and cash equivalents at beginning of year</b>		<b>181,336</b>	<b>150,456</b>
<b>Net (decrease) / increase in cash and cash equivalents</b>		<b>(3,614)</b>	<b>31,476</b>
<b>Cash disposed of</b>		<b>(3,186)</b>	<b>(596)</b>
<b>Cash and cash equivalents at end of year</b>		<b>174,536</b>	<b>181,336</b>

## **Analysis of cash and cash equivalents**

Group	At 1 July 2015 £000	Cash flow £000	At 30 June 2016 £000
Bank balances	150,609	(2,723)	147,886
Short term deposits	30,727	(4,077)	26,650
Net funds	181,336	(6,800)	174,536

# NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 30 JUNE 2016

## 1. Basis of accounting and consolidation

The Group financial statements consolidate the financial statements of the Foundation and its subsidiary undertakings drawn up to 30 June each year. The results of subsidiaries acquired or sold are consolidated from or to the date on which control passed. Acquisitions are accounted for under the acquisition method.

These consolidated financial statements have been prepared under the historical cost convention as modified by the revaluation of certain fixed asset investments. They have been prepared in accordance with the Statement of Recommended Practice FRS 102 "Accounting and Reporting by Charities" ("the Charities SORP"), the reporting requirements of the Companies Act 2006 and applicable accounting standards in the United Kingdom. The charitable company has adapted the Companies Act formats to reflect the Charities SORP. The financial statements have been prepared on the going concern basis as discussed further in the Trustees' report on page 23.

The functional currency of the Group is considered to be Pound Sterling as this is the currency of the primary economic environment in which the Group operates.

The prior year financial statements have been restated for material adjustments on adoption of FRS 102 in the current year. A reconciliation of opening funds and 2015 net income with those shown under previous GAAP is shown in note 32.

## 2. Accounting policies

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 years presented.

### a. Income

Income is accounted for on an accruals basis and included in the statement of financial activities when the Group is legally entitled to the income, receipt is probable and the amount can be quantified with reasonable accuracy.

Trading income from surveys and inspection, which are the main activities of the Trading Group, is recorded when service performance is complete and is recognised on the basis of invoices rendered or, in the case of long-term contracts, as work is carried out if the final outcome can be assessed with reasonable certainty. All income is recorded net of VAT and similar sales taxes.

### b. Expenditure

Expenditure is accounted for on an accruals basis.

Expenditure on raising funds includes costs associated with trading activities and investment management.

Expenditure on charitable activities comprise all the costs incurred applied by the Foundation in undertaking its work to meet its charitable objectives as opposed to the cost of generating the funds to finance these activities. Charitable activities are all the expenditure by the charity in the delivery of goods and services, including its programme and project work that is directed at the achievement of its charitable aims and objectives. Such costs include the direct costs of the charitable activities together with those support costs incurred that enable these activities to be undertaken.

Grants awarded are recognised when the Group formally notifies the recipient of the award following approval by the trustees. The liability recognised is for the full amount of the award, whether payable immediately or across a number of financial years as grants are subject to qualitative review rather than strict performance criteria. Where material, grant liabilities in excess of one year are discounted to net present value to reflect the time value of money which is based on investment returns with a similar risk profile.

Support costs are defined as those costs that are incurred indirectly, and relate principally to grant making activities that then give the Foundation the capability to carry out its charitable activities. They are allocated to the SORP expenditure headings on the basis of underlying expenditure which reflects the level of activity performed.

### c. Tangible fixed assets

Tangible fixed assets (other than investment properties) are stated at cost, net of depreciation and impairment.

Depreciation of tangible fixed assets is provided using the straight line method, commencing with the year in which they are ready for use, at rates estimated to write off their cost over their respective useful lives as follows:

Motor vehicles	5 years
Office fittings and equipment	8 years
Computer equipment	3 years
Plant and machinery	5 to 20 years
Freehold buildings	5 to 40 years
Leasehold improvements	Length of the lease

Depreciation is not provided in respect of freehold land as it is deemed to have an infinite useful life.

- d. **Intangible fixed assets; goodwill**  
Goodwill arises on the acquisition of subsidiary undertakings and businesses and represents the excess of the fair value of the consideration given over the fair value of identifiable assets and liabilities acquired.

Goodwill arising on acquisitions is capitalised and amortised on a straight line basis over its estimated useful economic life up to a maximum of 10 years. It is reviewed for impairment if events or changes in circumstances indicate that the carrying value may not be recoverable.

In accordance with Section 35 of FRS 102, Section 19 of FRS 102 has not been applied in these financial statements in respect of business combinations effected prior to the date of transition. More information can be found in note 32 to these financial statements.

e. **Intangible fixed assets**

Intangible assets relating to intellectual property rights acquired from third party developers are recognised at cost and amortised on a straight line basis over their estimated useful economics lives, which is estimated to be 10 years. Provision is made for any impairment.

Intangible assets relating to software acquired in a separate transaction are recognised at cost including any directly attributable costs of preparing the software for its intended use and amortised using the straight line method over their useful economic lives which are estimated to be from 3 to 15 years. Provision is made for any impairment.

f. **Investments**

Listed investments are stated at market value. Unlisted investments are stated at cost. The statement of financial activities includes realised gains and losses on investments sold in the year and unrealised gains and losses on revaluation of investments.

Investment properties includes one property that is in mixed functional and investment use. Areas of the building occupied by third party tenants are deemed to be in investment use and are held at market value with any change in fair value recognised in the consolidated statement of financial activities. A valuation of the building is pro-rated according to the floor space occupied by third party tenants. The valuation is carried out by a surveyor holding a relevant qualification (via an independent property company).

g. **Work in progress**

Work in progress is stated at the lower of cost (including overheads directly attributable to work carried out) and estimated selling price less costs to sell, which is equivalent to the net realisable value.

h. **Cash**

Items considered to be cash are those held in hand, in current accounts and on term deposit (where the term is less than three months) with recognised financial institutions.

i. **Taxation and Value Added Tax**

The Foundation is a UK registered charity, and is exempt from Corporation Tax under Chapter 3 of Part 11 to the Corporation Tax Act 2010 and section 256 of the Taxation for Chargeable Gains Act 1992, to the extent that surpluses are applied to its charitable purposes.

The Trading Group includes companies and branches that operate overseas and that are subject to foreign tax. Direct tax relating to those entities is included within the consolidated financial statements as a trading cost, and analysed in note 10 to the financial statements.

The Foundation is not registered for VAT and therefore suffers irrecoverable VAT. This expense is recorded and disclosed with the cost of the underlying goods or services.

j. **Deferred tax**

Deferred tax is recognised in respect of all timing differences that have originated but not reversed at the balance sheet date where transactions or events have occurred at that date that will result in an obligation to pay more tax in the future, or a right to pay less or to receive more tax in the future.

Deferred tax assets are recognised only to the extent that on the basis of all available evidence, it can be regarded as more likely than not that there will be suitable taxable profits from which the future reversal of the underlying timing differences can be deducted.

Deferred tax is measured on an undiscounted basis at the tax rates that are expected to apply in the periods in which timing differences reverse, based on tax rates and laws enacted or substantively enacted at the balance sheet date. Deferred tax relating to investment property is measured using the tax rates and allowances that apply to the sale of the asset.

k. **Fund accounting**

The Foundation's general fund comprises accumulated unrestricted surpluses and deficits.

Non-charitable trading funds represent the accumulated surpluses and deficits retained within the Trading Group.

Endowment funds comprise one expendable endowment fund, a part of the September 2012 donation from the Trading Group. Generally, capital is retained within the fund, with income forming part of the Foundation's general fund. Trustees have the power to convert capital to income should they wish to expend capital subject to the contractual obligations of the initial donation as outlined in note 27.

l. **Financial assets and liabilities:**

Financial assets and financial liabilities are recognised when the Foundation becomes a party to the contractual provisions of the instrument. All financial assets and liabilities are initially measured at transaction price (including transaction costs), with the exception of fixed asset investments, financial instruments are initially recognised at transaction value and subsequently measured at their settlement value.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

Debtors are recognised at the settlement amount due. Creditors are recognised where the Foundation has a present obligation resulting from a past event that will result in the transfer of funds to a third party and the amount due to settle the obligation can be measured or estimated reliably. Creditors are recognised at their settlement amount.

Income from quoted securities, which is recorded on an accruals basis, is recognised in Investment income as are changes in the fair value of the listed investment portfolio. The Group does not apply hedge accounting for any of its financial instruments.

**m. Foreign currencies:**

i. Foreign currency denominated assets and liabilities of the Group and its overseas operations are translated at the rate of exchange ruling at the balance sheet date. Exchange differences arising on translation of the opening net assets and results of overseas operations are reported in the statement of financial activities and accumulated in net funds.

ii. Income and expenditure for the year are translated at the appropriate rates prevailing during the year, updated on a monthly basis.

iii. Other exchange differences are shown in net income within the statement of financial activities except for exchange differences on monetary items receivable or payable from/to a foreign operation for which settlement is neither planned nor likely to occur (forming part of the net investment in the foreign operations) which are accumulated in net funds.

**n. Leases**

The costs of operating lease rentals are charged to the profit and loss account in the period to which they relate even if the payments are not made on such a basis. Benefits received and receivable as an incentive to sign an operating lease are similarly spread on a straight-line basis over the lease term.

**o. Rental income**

Rental income from operating leases is recognised on a straight line basis over the term of the relevant lease.

**p. Research and development expenditure**

Research expenditure is written off as incurred. Development expenditure, including all costs of developing internally generated intangible assets, is also written off, except for costs of bringing purchased software into use, where the directors are satisfied as to the technical, commercial and financial viability of individual projects. In such cases, the identifiable expenditure is capitalised as part of the cost of the purchased software as an intangible asset and amortised over the period during which the Group is expected to benefit. This period is between 1 and 10 years. Provision is made for any impairment.

**q. Interest receivable**

Interest receivable from bank and short term deposits includes interest accrued. Income from listed investments is recorded on an accruals basis when the income becomes payable to the Group.

**r. Short-term employee benefits**

Short-term employee benefits are recognised as an expense in the period in which they relate.

**s. Pensions**

For defined benefit schemes the amounts charged to costs of activities for generating funds are the costs arising from employee services rendered during the period and the cost of plan introductions, benefit changes, settlements and curtailments. They are included as part of staff costs. The net interest cost on the net defined benefit liability is charged to the statement of financial activities and included within other finance costs - pensions. Re-measurement comprising actuarial gains and losses and the return on scheme assets (excluding amounts included in net interest on the net defined benefit liability) are recognised immediately in the statement of financial activities.

Defined benefit schemes are funded, with the assets of the scheme held separately from those of the Group, in separate trustee administered funds. Pension scheme assets are measured at fair value and liabilities are measured on an actuarial basis using the projected unit credit method. The actuarial valuations are obtained at least triennially and are updated at each balance sheet date.

Pension scheme surpluses, to the extent that they are considered recoverable, or deficits are recognised in full and presented on the face of the balance sheet.

For defined contribution schemes the amount charged to the statement of financial activities account in respect of pension costs and other retirement benefits is the contributions payable in the year. Differences between contributions payable in the year and contributions actually paid are shown as either accruals or prepayments in the balance sheet.

Other long-term employee benefits are measured at the present value of the benefit obligation at the reporting date.

**t. Written put options**

Potential cash payments related to put options issued by the Group over the equity of subsidiary companies are accounted for as financial liabilities when such options are required to be physically settled by the exchange of shares paid for by cash or another financial asset. A gross obligation is recognised at an amount equal to the amount that the Group expects to be paid to the counterparty.

A corresponding charge to net funds is recognised for the amount that may become payable under the option on exercise. The charge to net funds is recognised as an acquisition put option adjacent to non-controlling interests. On settlement, the liability is de-recognised.

u. **Investment in Joint Ventures**

In the Group financial statements, investments in joint ventures are accounted for using the equity method. Investments in joint ventures are initially recognised at the transaction price and are subsequently adjusted to reflect the Group's share of the profit or loss and other comprehensive income of the joint venture.

v. **Heritage assets**

The group's collection of pictures, furniture and fittings, ship models, books and archive material are considered to be heritage assets. No value is attributed to them in the balance sheet and no depreciation charged on the grounds that for many of the assets, reliable historic cost information is not available and that the depreciated historical cost of these assets is now immaterial.

3. **Critical accounting judgements and key sources of estimation uncertainty**

In the application of the Group's accounting policies, which are described in note 2, the Trustees are required to make judgements, estimates and assumptions about the carrying amounts 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 period of the revision and future periods if the revision affects both current and future periods.

*Critical judgements in applying the Group's accounting policies*

The following are the critical judgements, apart from those involving estimations (which are dealt with separately below), that the directors have made in the process of applying the Group's accounting policies and that have the most significant effect on the amounts recognised in the financial statements.

*Revenue recognition*

The Group has long-term customer contracts under which service delivery can extend over a number of years. In accounting for such long-term contracts, an estimate is required of the costs to complete the contract to determine the percentage of completion, which is used to determine the amount of revenue to be recognised. These estimates are used to forecast the ultimate profitability of each contract. If, at any time, these estimates indicate that a contract will be unprofitable, the entire estimated loss for the contract is recognised immediately. If these estimates indicate that any contract will be less profitable than previously forecast, work in progress may have to be written down to the extent that it is no longer considered to be fully recoverable.

*Claims and contingent liabilities*

The Group exercises judgement in measuring and recognising provisions and the exposures to contingent liabilities related to pending professional indemnity or other litigation claims. Judgement is necessary in assessing the likelihood that a pending claim will succeed, or a liability will arise, and to quantify the possible range of the financial settlement. Because of the inherent uncertainty in this evaluation process, actual losses may be different from the originally estimated provision.

*Income tax*

The Group's current tax charge on ordinary activities necessarily involves a degree of estimation and judgement in respect of certain items whose tax treatment cannot be finally determined until resolution has been reached with the relevant tax authority or, as appropriate, through a formal legal process. The final resolution of some of these items may give rise to material profits, losses and / or cash flows.

The Group has operations in a large number of different tax jurisdictions which differ in their application of tax law. The scale and complexity of the Group's structure makes the degree of estimation and judgement more challenging. The resolution of issues is not always within the control of the Group and is often dependent on the efficiency of the legal processes in the relevant taxing jurisdictions in which the Group operates.

*Deferred tax*

The decision whether to recognise a deferred tax asset requires management judgement upon whether it is more likely than not that sufficient taxable income will be available in the future against which the reversal of timing differences can be deducted. To determine future taxable profits, reference is made to the latest available profit forecasts. Where the timing differences are related to losses, relevant tax law is considered to determine the availability of the losses to offset against future taxable profits.

Recognition therefore involves judgement regarding the future financial performance of the particular legal entity or tax group in which the deferred tax asset has been recognised.

Historical differences between forecast and actual taxable profits have not resulted in material adjustments to the recognition of deferred tax assets.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

### Pension plans

The Group operates pension schemes worldwide, including defined benefit pension schemes, the most significant of which is in the United Kingdom. For a description of the related accounting policies, refer to Note 2 above. Changes in significant assumptions could materially affect the amounts, particularly the rate used to discount the projected benefit obligation. Note 24 to the financial statements describes the principal discount rate, salary increase, inflation, mortality and pension payment increase assumptions that have been used to determine the pension and post-retirement charges. The calculation of any charge relating to pensions is dependent on the assumptions used, which reflects the exercise of judgement. The assumptions adopted are based on advice of the Group's actuaries, on prior experience and market conditions.

### Key sources of estimation uncertainty

#### Goodwill impairment

The Group assesses at each reporting date whether there is any indication that the goodwill recognised in respect of acquisitions is impaired. Where an indicator is identified an impairment review is performed which requires the estimation of the value in use of the cash-generating units to which goodwill has been allocated. The value in use calculation requires the entity to estimate the future cash flows expected to arise from the cash-generating unit and a suitable discount rate in order to calculate present value. The carrying amount of goodwill at the balance sheet date was £72,251,000 after an impairment loss of £24,635,000 was recognised during 2016.

#### Recoverability of aged trade receivables

Judgement is required in evaluating the likelihood of collection of customer debt after revenue has been recognised. This evaluation requires estimates to be made including the level of provision to be made for amounts with uncertain recovery profiles. Provisions are based on historical trends in the percentage of debts which are not recovered, or on more detailed reviews of individually significant balances. To the extent that actual recovery experience differs significantly from the historical trends of the Group or from the assumptions on recovery following the detailed reviews of individually significant balances the profit and loss account of the Group in future years may be materially affected.

#### Recoverability of work in progress

Judgement is required in evaluating the likelihood of recovery of work in progress, representing the cost of work performed to date but not yet invoiced. This evaluation requires judgement to be made on whether the costs incurred, together with expected costs to complete will be invoiced and settled at an amount in excess of the carrying amount. Provisions are based on historical trends in the percentage of work in progress not recovered based on the ageing of work in progress and specific review of individually significant work orders. To the extent that actual recovery experience differs significantly from the historical trends of the Group or from the assumptions on recovery following the detailed reviews of individually significant balances the profit and loss account of the Group in future years may be materially affected.

## 4. Investment income

	Trading funds £000	General funds £000	Endowment funds £000	Total funds 2016 £000	Total funds 2015 £000
Fixed Interest – UK	2,484	1,220	—	3,704	4,792
Fixed Interest – Overseas	—	85	—	85	166
Equities – UK	—	2,856	—	2,856	2,580
Equities – Overseas	—	3,079	—	3,079	2,840
Index linked - Overseas	—	18	—	18	—
Pooled Funds – UK	—	1,632	—	1,632	1,196
Pooled Funds - Overseas	3,124	—	—	3,124	2,831
Cash Instruments	—	19	—	19	25
Derivatives	—	—	—	—	—
	5,608	8,909	—	14,517	14,430
Bank interest	755	99	—	854	980
Income from UK Investment property	4,493	—	—	4,493	3,493
	10,856	9,008	—	19,864	18,903

## 5. Activities for generating funds

Costs of generating funds include investment management costs and all expenses of the Trading Group including those attributable to public benefit activities but excluding any charitable donations made directly by the Trading Group.

### Segmental analysis

	2016 £000	2015 £000
Turnover by business segment of the Trading Group:		
Marine	400,127	400,755
Energy	309,208	421,222
Management Systems	171,838	168,607
Transportation - discontinued	—	46,964
Trading activities	<u>881,173</u>	<u>1,037,548</u>

On 1 July 2015, the Group disposed of its Transportation business to Ricardo plc. The results of the Transportation business for the year ended 30 June 2015 are included in discontinued operations in the Group's comparative consolidated Statement of Financial Activity shown in note 6.

Segmental information showing segment result by class of business, segmental net assets and turnover by geographical region is not included since, in the opinion of the Trustees, such an analysis would be seriously prejudicial to the Group's interests.

### Expenditure on generating funds

Costs of generating funds include investment management costs and all expenses of the Trading Group including those attributable to public benefit activities but excluding any charitable donations made directly by the Trading Group.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

### 6. Breakdown of Total funds for 2015

	Trading funds - continued £000	Trading funds - discontinued £000	General funds £000	Endowment funds £000	Total funds 2015 £000
<b>Income</b>					
<b>Incoming resources from generated funds</b>					
Income from investments:					
Listed investments	6,547	—	7,883	—	14,430
Property	3,493	—	—	—	3,493
Other	808	—	172	—	980
Activities for generating funds	990,584	46,964	—	—	1,037,548
Other finance income – pensions	—	—	—	—	—
<b>Total income</b>	<b>1,001,432</b>	<b>46,964</b>	<b>8,055</b>	<b>—</b>	<b>1,056,451</b>
<b>Expenditure on generating funds</b>					
Investment management costs	(242)	—	—	(1,127)	(1,369)
Cost of activities for generating funds	(954,166)	(43,091)	—	—	(997,257)
Other finance costs – pensions	(6,295)	—	—	—	(6,295)
Loss on disposal of discontinued operations	(1,037)	—	—	—	(1,037)
Taxation	(24,971)	(66)	—	—	(25,037)
<b>Total costs of generating funds</b>	<b>(986,711)</b>	<b>(43,157)</b>	<b>—</b>	<b>(1,127)</b>	<b>(1,030,995)</b>
<b>Expenditure on Charitable activities</b>					
Grants:					
Supporting excellent scientific research	—	—	(13,331)	—	(13,331)
Accelerating the application of research	—	—	(22)	—	(22)
Promoting safety and public understanding of risk	—	—	(201)	—	(201)
Advancement of skills and education	—	—	(608)	—	(608)
<b>Total grants</b>	<b>—</b>	<b>—</b>	<b>(14,162)</b>	<b>—</b>	<b>(14,162)</b>
Direct costs:					
Promoting safety and public understanding of risk	—	—	(737)	—	(737)
<b>Total expenditure on charitable activities</b>	<b>—</b>	<b>—</b>	<b>(14,899)</b>	<b>—</b>	<b>(14,899)</b>
<b>Total expenditure</b>	<b>(986,711)</b>	<b>(43,157)</b>	<b>(14,899)</b>	<b>(1,127)</b>	<b>(1,045,894)</b>
<b>Net income / (expenditure) before gains on investments</b>	<b>14,721</b>	<b>3,807</b>	<b>(6,844)</b>	<b>(1,127)</b>	<b>10,557</b>
Realised gains on disposal of investments	4,047	—	192	3,677	7,916
Unrealised gains on investments	21,611	—	419	8,039	30,069
<b>Net income / (expenditure)</b>	<b>40,379</b>	<b>3,807</b>	<b>(6,233)</b>	<b>10,589</b>	<b>48,542</b>
Net interest in the results for the year in joint ventures	(1,823)	—	—	—	(1,823)
Transfers between funds	(11,461)	—	11,461	—	—
Foreign exchange differences on translation of net assets of overseas operations	4,399	—	—	—	4,399
Net actuarial movements on defined benefit pension schemes	(21,716)	—	—	—	(21,716)
Acquisition of non-controlling interest	(2,470)	—	—	—	(2,470)
Tax relating to foreign exchange differences on translation of net assets of overseas operations	2,115	—	—	—	2,115
<b>Net movement in funds</b>	<b>9,423</b>	<b>3,807</b>	<b>5,228</b>	<b>10,589</b>	<b>29,047</b>
Funds brought forward					<b>578,940</b>
Funds carried forward					<b>607,987</b>



## 7. Analysis of expenditure on charitable activities

	Grants £000	Unwinding of discount £000	Activities undertaken directly £000	Support costs £000	Total 2016 £000	Total 2015 £000
Grant making activities:						
Supporting excellent scientific research	10,082	440	—	445	10,967	13,331
Accelerating the application of research	10,062	—	—	442	10,504	22
Promoting safety and public understanding of risk	11,057	33	—	488	11,578	201
Advancement of skills and education	730	—	—	31	761	608
	<u>31,931</u>	<u>473</u>	<u>—</u>	<u>1,406</u>	<u>33,810</u>	<u>14,162</u>
Direct costs:						
Promoting safety and public understanding of risk	—	—	874	3	877	737
Total	<u>31,931</u>	<u>473</u>	<u>874</u>	<u>1,409</u>	<u>34,687</u>	<u>14,899</u>

Support costs totalling £1,409,000 (2015: £1,223,000) have been allocated across the Foundation's activities. These include costs associated with IT, HR, finance, property and other central services of the Charity's staff. Included within support costs are staff costs of £677,000 (2015: £655,000) and governance costs of £108,000 (2015: £127,000).

Governance costs includes fees payable to the Foundation's auditor for the audit of the Foundation's annual accounts of £36,000 (2015: £36,000).

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

### 8: Grants awarded

Grants are awarded to institutions and fund tuition costs, employment costs or other costs of research. Grants awarded in 2015/2016 are analysed by institution below.

	Number of grants	Supporting excellent scientific research £000	Accelerating the application of research £000	Promoting safety and public understanding of risk £000	Advancement of skills and education £000	Total 2016 £000
The Alan Turing Institute	1	10,000	—	—	—	10,000
Global Young Scientists Summit	1	3	—	—	—	3
Imperial College London	1	75	—	—	—	75
Innovi Business Growth Ltd	1	70	—	—	—	70
Royal Academy of Engineering	1	499	—	—	—	499
University of Southampton(RECOIN)	1	19	—	—	—	19
Arup	1	—	10,000	—	—	10,000
Imperial College London	1	—	59	—	—	59
Wageningen University & Research	1	—	500	—	—	500
Blue Marine Foundation	1	—	—	20	—	20
CHIRP Maritime	1	—	—	60	—	60
National University of Singapore	1	—	—	10,000	—	10,000
Nautical Institute (Alert!40)	1	—	—	46	—	46
Royal College of Art	1	—	—	50	—	50
Royal National Lifeboat Institute	1	—	—	1,059	—	1,059
Science Museum	1	—	—	250	—	250
The Conversation	1	—	—	180	—	180
Admiral Makarov SUMIS	1	—	—	—	75	75
Arkwright Scholarships	2	—	—	—	50	50
British Science Association	1	—	—	—	17	17
Children's Radio UK	1	—	—	—	15	15
CIFAL, Scotland	1	—	—	—	6	6
Don Bosco Training Centre	1	—	—	—	20	20
Educational Volunteers Foundation of Turkey	1	—	—	—	132	132
Engineering Development Trust	1	—	—	—	50	50
ERA Foundation	1	—	—	—	14	14
Maritime London Officer Cadets	1	—	—	—	108	108
National Maritime Museum	1	—	—	—	104	104
National Space Centre	1	—	—	—	297	297
Smallpeice Trust (Girls in Engineering)	1	—	—	—	20	20
University College London	1	—	—	—	55	55
University of Birmingham	1	—	—	—	702	702
University of Southampton(Human powered submarine society)	1	—	—	—	4	4
Villiers Park Educational Trust	1	—	—	—	60	60
Grants returned		(36)	—	—	(999)	(1,035)
	35	10,630	10,559	11,665	730	33,584
Impact of discounting grants awarded		(548)	(497)	(608)	—	(1,653)
		10,082	10,062	11,057	730	31,931

Grants awarded in 2014/2015 are analysed by institution below:

	Number of grants	Supporting excellent scientific research £000	Accelerating the application of research £000	Promoting safety and public understanding of risk £000	Advancement of skills and education £000	Total 2015 £000
The Alan Turing Institute	1	80	—	—	—	80
Global Young Scientists Summit	2	400	—	—	—	400
Imperial College London	1	430	—	—	—	430
Innovi Business Growth Ltd	1	80	—	—	—	80
Royal Academy of Engineering	1	497	—	—	—	497
University of Southampton(RECOIN)	2	2,943	—	—	—	2,943
Arup	1	3,000	—	—	—	3,000
Imperial College London	2	307	—	—	—	307
Wageningen University & Research	4	3,700	—	—	—	3,700
Blue Marine Foundation	1	468	—	—	—	468
CHIRP Maritime	1	3	—	—	—	3
National University of Singapore	1	—	20	—	—	20
Nautical Institute (Alert!40)	1	—	—	40	—	40
Royal College of Art	1	—	—	105	—	105
Royal National Lifeboat Institute	1	—	—	19	—	19
Science Museum	1	—	—	13	—	13
The Conversation	1	—	—	6	—	6
Admiral Makarov SUMIS	1	—	—	—	75	75
Arkwright Scholarships	1	—	—	—	204	204
British Science Association	1	—	—	—	40	40
Children's Radio UK	1	—	—	—	45	45
CIFAL, Scotland	1	—	—	—	170	170
Don Bosco Training Centre	2	—	—	—	20	20
Educational Volunteers Foundation of Turkey	1	—	—	—	10	10
Engineering Development Trust	1	—	—	—	20	20
ERA Foundation	1	—	—	—	20	20
Maritime London Officer Cadets	1	—	—	—	15	15
National Maritime Museum	1	—	—	—	8	8
Grants returned		(3)	—	—	(72)	(75)
	<u>35</u>	<u>11,905</u>	<u>20</u>	<u>183</u>	<u>555</u>	<u>12,663</u>

#### 9. Grants awarded but not paid

	2016 £000	2015 £000
At 1 July	34,909	30,373
Awarded in the period	32,966	12,738
Unwinding of discounting	473	282
Grants returned in the period	(1,035)	(75)
Paid in the period	(9,271)	(8,409)
At 30 June	<u>58,042</u>	<u>34,909</u>

The aging of grants payable is shown in note 21.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

### 10. Taxation

The Foundation is a UK registered charity and is not subject to UK corporation tax on its charitable activities.

Many companies and branches within the Trading Group are in jurisdictions where there is no such exemption, and so the overall Group is subject to tax.

	Group	
	2016	2015
	£000	£000
<b>Current tax on profit on ordinary activities</b>		
UK corporation tax	6,832	6,920
Double tax relief	(2,675)	(4,805)
	<u>4,157</u>	<u>2,115</u>
Foreign tax	<u>18,540</u>	<u>24,766</u>
	<u>22,697</u>	<u>26,881</u>
Adjustment in respect of prior periods		
• UK corporation tax	670	—
• Foreign tax	(2,622)	(1,948)
<b>Total current tax</b>	<u>20,745</u>	<u>24,933</u>
<b>Deferred tax</b>		
Origination and reversal of timing differences	(16,981)	(220)
Adjustments in respect of previous periods	1,569	324
<b>Total deferred tax</b>	<u>(15,412)</u>	<u>104</u>
<b>Total tax on profit on ordinary activities</b>	<u>5,333</u>	<u>25,037</u>

The standard rate of tax applied to the reported profit on ordinary activities in the Trading Group is 20.0% (2015: 20.75%). The applicable tax rate for UK deferred tax recognition has changed following the substantive enactment of Finance (No.2) Act 2015 from 20% to 19% from 1 April 2017 and to 18% from 1 April 2020. During the year beginning 1 July 2016, the net reversal of deferred tax assets and liabilities is expected to increase the corporate tax charge for the year by £2.9m. This is due to the reversal of timing differences expected within the next 12 months.

The differences between the total tax charge shown above and the amount calculated by applying the standard rate of UK corporation tax to the profit before tax is as follows:

	Group	
	2016	2015
	£000	£000
<b>Net income</b>	<b>49,117</b>	<b>48,542</b>
<b>Taxation</b>	<b>5,333</b>	<b>25,037</b>
<b>Net income before taxation</b>	<b>54,450</b>	<b>73,579</b>
Profit multiplied by the average standard rate of United Kingdom corporation tax of: 20.0% (2015: 20.75%)	10,890	15,268
Effects of:		
• Tax exempt profits	(1,644)	(5,413)
• Overseas rate differences	(715)	2,871
• Goodwill amortisation and impairment not deductible for tax purposes	9,415	4,489
• Expenses not deductible for tax purposes	3,732	3,803
• Brought forward unprovided timing differences now recognised in year	(8,685)	(2,415)
• UK qualifying corporate donations deductible when paid	(3,894)	(2,369)
• Current year unprovided timing differences	5,797	11,463
• Fair value gain on investment property not subject to tax	(5,052)	(3,403)
• Disposal of business not subject to tax	(5,533)	(215)
• Other taxes	1,406	2,582
• Prior year adjustments	(384)	(1,624)
<b>Group total tax charge for year</b>	<b>5,333</b>	<b>25,037</b>

# Deferred tax (assets) / liabilities

	2016 £000	2015 £000
At 1 July (asset) / liability	(184)	(288)
Arising in the year	(14,909)	104
Disposal	236	—
Foreign exchange differences	(503)	—
At 30 June (asset) / liability	<u>(15,360)</u>	<u>(184)</u>
Deferred tax asset	(15,757)	(3,021)
Deferred tax liability (note 22)	<u>397</u>	<u>2,837</u>
	<u>(15,360)</u>	<u>(184)</u>
<b>Deferred tax is recognised as follows:</b>		
Accelerated capital allowances	(591)	76
Deferred tax arising in relation to retirement benefits obligations	(8,931)	(3,700)
Tax losses available	(2,925)	(629)
Other timing differences	<u>(2,913)</u>	<u>4,069</u>
	<u>(15,360)</u>	<u>(184)</u>

Deferred tax liabilities on short-term timing differences are recognised whenever the treatment for tax purposes has enabled deductions to be taken in advance of the financial statements.

Deferred tax assets on short-term timing differences and any overseas losses have not been recognised unless the asset is expected to be recovered in the foreseeable future. Deferred tax assets not recognised amount to £61.8m (2015: £43.4m). Unrecognised assets will potentially become recoverable against future profits generated in the relevant overseas operations.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

### 11. Net income / (expenditure) before gains / (losses) on investments

This is stated after charging / (crediting):

	2016 £000	2015 £000
Staff costs	506,693	592,628
Impairment losses on trade debtors	1,790	3,372
Impairment of work in progress recognised as an expense	662	(306)
Research and development costs	18,179	15,883
Loss on disposal of fixed assets	107	40
(Profit) / loss on disposal of operations	(27,664)	1,037
Amortisation of intangible fixed assets	3,320	2,108
Depreciation	12,713	12,507
Amortisation of goodwill	19,121	21,079
Impairment of goodwill	24,635	—
Rentals payable under operating leases	41,754	47,518
Auditor's remuneration:		
Audit of parent	36	36
Audit of subsidiaries	1,577	1,429
Audit related assurance services	147	51
Tax compliance services	66	76
Foreign exchange loss / (gain)	9,500	(1,085)

### 12. Employees

	Trading funds £000	General funds £000	Total funds 2016 £000	Total funds 2015 £000
Wages and salaries	417,709	677	418,386	497,732
Social security costs	44,119	58	44,177	49,326
Pension costs (note 24)	44,037	93	44,130	45,570
	<u>505,865</u>	<u>828</u>	<u>506,693</u>	<u>592,628</u>

The average number of employees, analysed by function was:

	2016	2015
Charitable activities	13	12
Trading activities - continuing	8,159	8,478
Trading activities - discontinued	—	402
	<u>8,172</u>	<u>8,892</u>

Due to the high number of qualified and skilled staff the SORP's requirement to disclose the number of all Group employees who received emoluments over £60,000 is commercially sensitive to the operations of that Group and is not made here with the agreement of the Foundation's Trustees.

### 13. Trustees

The Trustees are the directors of the Foundation. The Trustees do not currently receive remuneration in respect of their duties as Trustees. No Trustees received reimbursement for out of pocket expenses (2015: £nil). There were no expenses paid on behalf of Trustees (2015: £22,000 in respect of overseas travel expenses to board meetings).

The Foundation maintained throughout the year Trustees' and Officers' liability insurance in respect of itself and its Trustees.

#### 14. Intangible fixed assets

	Goodwill	Software	Total
	£000	£000	£000
<b>Cost</b>			
At 1 July	250,253	21,896	272,149
Additions	—	17,072	17,072
Disposals	(45,101)	(42)	(45,143)
Exchange adjustment	19,389	109	19,498
At 30 June	224,541	39,035	263,576
<b>Amortisation</b>			
At 1 July	140,354	5,713	146,067
Provided during the year	19,121	3,320	22,441
Impairments	24,635	—	24,635
Disposals	(42,811)	(42)	(42,853)
Exchange adjustment	10,991	74	11,065
At 30 June	152,290	9,065	161,355
<b>Net book value</b>			
At 30 June 2015	109,899	16,183	126,082
At 30 June 2016	72,251	29,970	102,221

The rights to software intellectual property relating to geological surveys were acquired in September 2013 for £10.2 million. The carrying amount as at 30 June 2016 was £7,625,000 (30 June 2015: £8,376,000) and the software has an estimated remaining useful life of seven years.

Other material intangible assets at 30 June 2016 have a net book value of £9,070,000 (2015: £nil) related to the development of a group-wide enterprise resource planning and financial reporting solution and £7,478,000 (2015: £nil) for the development of a new operational system specific to our Marine business. Both assets were still in the course of development as at 30 June 2016, however when they become operational their estimated useful life will be between seven and ten years.

During the year the Group impaired £24.6m of goodwill to align the carried forward net book value to the forecast income generation of the respective operations.

#### 15. Tangible fixed assets

	Investment property	Land and buildings	Leasehold improvements	Office fittings and equipment	Plant and machinery	Computer equipment	Motor vehicles	Total
	£000	£000	£000	£000	£000	£000	£000	£000
<b>Cost or valuation:</b>								
At 1 July	76,942	58,954	14,179	32,443	3,508	51,274	4,434	241,734
Additions	—	1,118	881	5,033	703	1,779	465	9,979
Transfer*	7,233	(16,812)	—	—	—	—	—	(9,579)
Revaluations	25,262	—	—	—	—	—	—	25,262
Disposals	—	—	(1,492)	(1,006)	(329)	(1,218)	(605)	(4,650)
Exchange differences	—	—	3,804	2,298	(225)	5,157	1,069	12,103
At 30 June	109,437	43,260	17,372	38,768	3,657	56,992	5,363	274,849
<b>Depreciation:</b>								
At 1 July	—	33,465	5,826	19,658	1,646	43,482	2,912	106,989
Charged in year	—	579	2,403	3,010	893	5,003	825	12,713
Transfer*	—	(9,579)	—	—	—	—	—	(9,579)
On disposals	—	—	(929)	(816)	(272)	(824)	(530)	(3,371)
Exchange differences	—	—	1,411	812	172	4,937	903	8,235
At 30 June	—	24,465	8,711	22,664	2,439	52,598	4,110	114,987
<b>Net book value:</b>								
At 30 June 2016	109,437	18,795	8,661	16,104	1,218	4,394	1,253	159,862
At 30 June 2015	76,942	25,489	8,353	12,785	1,862	7,792	1,522	134,745

\*64% (2015: 50%) of the mixed used property is classified as an investment property. The transfer of the net book value between categories is due to an additional 14% of the property being let or marketed to third party tenants.

The group has accumulated a collection of heritage assets as described in the accounting policies. As a result of their age, and in many cases unique nature, reliable historic cost information is not available for these assets and could not be obtained except at disproportionate expense. The latest insurance valuation of these assets was £7.0m

Land and buildings includes freehold property in the United Kingdom with a net book value of £16,221,000 as at 30 June 2016 (2015: £26,186,000) and market value of £61,291,000 (2015: £81,965,000).

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

No investment represented more than 5% of the listed portfolio by value in the Group. Investment properties comprise the leased parts of the Trading Group London headquarters at 71 Fenchurch Street, London EC3M 4BS. This property is valued using an external valuation carried out as at 30 June 2016 by the commercial property advisory company CBRE, a member of the Royal Institution of Chartered Surveyors. The property is in mixed functional and investment use. A proportion of 64% (2015: 50%) is deemed an investment, based on floor space let or marketed to third party tenants.

The Group leases the freehold property to a number of tenants. Lease agreements are up to 25 years and typically include rent review clauses. At the balance sheet date, the Group and Company had contracted with tenants for the following future minimum lease payments:

	Group and Company	
	2016	2015
	£000	£000
Within one year	3,612	4,157
In the second to fifth years inclusive	11,028	11,912
After five years	9,597	12,333
	<u>24,237</u>	<u>28,402</u>

### 16. Investments

	2016	2015
	£000	£000
Listed investments at market value comprise:		
Fixed Interest – UK	172,158	153,817
Fixed Interest – Overseas	1,420	2,054
Equities – UK	64,597	63,268
Equities – Overseas	108,721	111,348
Index linked – Overseas	1,832	—
Pooled Funds – UK	13,346	12,071
Pooled Funds – Overseas	71,002	51,565
Derivatives	(2,637)	(49)
Cash Instruments	4,844	6,921
	<u>435,283</u>	<u>400,995</u>
Cash	5,869	3,548
	<u>441,152</u>	<u>404,543</u>
Unlisted investments	3,697	—
Long-term loans	356	334
	<u>445,205</u>	<u>404,877</u>
Investments in joint ventures – share of net assets	282	888
	<u>445,487</u>	<u>405,765</u>

#### Listed investments and cash held by investment managers

	2016	2015
	£000	£000
At 1 July	400,998	400,389
Other additions at cost	196,298	215,013
Disposals proceeds	(178,771)	(235,990)
Realised (loss) / gain on disposals	(12,011)	7,916
Unrealised gains	28,769	13,670
At 30 June	<u>435,283</u>	<u>400,998</u>
Cash held by investment managers and accrued interest	5,869	3,545
	<u>441,152</u>	<u>404,543</u>

#### Subsidiaries

A complete list of the subsidiaries and joint ventures is included in note 33.

#### Joint ventures

The following entities are treated as joint ventures of the Group:

Company	Share of company owned	Country of incorporation and registration	Principal activity
Lloyd's Register Apave Limited	51%	United Kingdom	Engineering inspection
LR Apave IES Limited	51%	United Kingdom	Engineering inspection
Lloyd's Maritime Information Services Limited	50%	United Kingdom	Publishing
CCS LR Technical Services Limited*	50%	China	Technical services
Common Structural Rules Software LLC	50%	United States of America	Software development
Nanjing Delta Win Transportation Technology Limited*	45%	China	Transportation technology
Chongqing Transportation Safety Assessment Centre*	30%	China	Safety assessment

\*Investment disposed of on 1 March 2016 as described in note 17.



Lloyd's Register Apave Limited and LR Apave IES Limited are treated as joint ventures as the shareholders' agreements that are in place means that Lloyd's Register Group Limited does not have overall control of the company despite the nominal level of ownership.

The following shows the share of net assets recognised by the Group for these entities, and the investments held by Lloyd's Register Group Limited.

	Group	
	2016 £000	2015 £000
Lloyd's Register Apave Limited	63	39
LR Apave IES Limited	—	—
Lloyd's Maritime Information Services Limited	115	115
CCS LR Technical Services Limited*	—	307
Common Structural Rules Software LLC	104	179
Nanjing Delta Win Transportation Technology Limited*	—	248
Chongqing Transportation Safety Assessment Centre*	—	—
	<b>282</b>	<b>888</b>

\*Investment disposed of on 1 March 2016 as described in note 17.

At 30 June 2016 the LR Apave IES Limited joint venture had net liabilities. The Group's share of the net liabilities amounted to £13,000 (2015: £nil) and is recognised within other provisions.

## 17. Trading Group

The Foundation has a mixed motive investment in one trading subsidiary, Lloyd's Register Group Limited which has its own global group of trading companies (the Trading Group). The Foundation owns 100% of the issued share capital of Lloyd's Register Group Limited. The Trading Group's principal activities are the provision of independent inspection and compliance services to clients in capital intensive industries, in particular marine and energy industries.

The summarised financial information of the consolidated Trading Group position is provided below, as per the Trading Group consolidated accounts for the year ended 30 June 2016.

	2016 Total £000	2015 Total £000
<b>Turnover</b>	<b>881,173</b>	<b>1,037,548</b>
Cost of sales	(625,176)	(717,350)
<b>Gross profit</b>	<b>255,997</b>	<b>320,198</b>
Administrative expenses	(249,328)	(280,070)
Administrative expenses before restructuring costs and impairments	(203,190)	(256,151)
Operating profit before restructuring costs and impairments	52,807	64,047
Restructuring costs	(21,503)	(23,919)
Impairment of goodwill	(24,635)	—
<b>Profit/(loss) on disposal of operations</b>	<b>27,664</b>	<b>(1,037)</b>
<b>Operating profit</b>	<b>34,333</b>	<b>39,091</b>
Share of net operating loss of joint ventures	(1,173)	(1,823)
Net investment income	50,171	36,424
Other finance costs	(5,753)	(6,295)
<b>Profit on ordinary activities before taxation</b>	<b>77,578</b>	<b>67,397</b>
Tax on profit on ordinary activities	(5,333)	(25,037)
<b>Profit for the financial year</b>	<b>72,245</b>	<b>42,360</b>
	<b>2016 £000</b>	<b>2015 £000</b>
Assets	821,148	804,781
Liabilities	(447,846)	(448,072)
<b>Net assets</b>	<b>373,302</b>	<b>356,709</b>
Shareholder's funds	375,954	398,447
Acquisition put option	—	(46,531)
Minority interests	(2,652)	4,793
	<b>373,302</b>	<b>356,709</b>

### Restructuring costs within administrative expenses

The Group has continued to incur material administrative expenses associated with its restructuring and development programs. The costs related to the research phases of major IT development projects (£6.6m) and costs for redundancy and severance incurred following the reduction in the size of some of the Group's key markets (£14.9m).

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

### Profit on disposal of Transportation business

On 1 July 2015 the Group completed the sale of its Transportation business to Ricardo plc. This involved the sale of the Group's 100% shareholdings in Lloyd's Register Rail Limited, a company registered in the United Kingdom, Lloyd's Register Rail (S) Limited, a company registered in Singapore, Lloyd's Register Rail (Asia) Limited, a company registered in Hong Kong and Lloyd's Register Rail Europe BV, a company registered in the Netherlands. In addition, with the exception of the Group's operations in three Chinese joint ventures detailed below, certain contracts, employees and working capital balances associated with the remainder of the Group's Transportation business held by other Group subsidiaries were novated and transferred to Ricardo plc group companies.

In addition, on 1 March 2016 the Group's Transportation operations in the following three Chinese joint venture entities were also sold to Ricardo plc group companies: CCS LR Technical Services Limited, Nanjing Delta Win Transportation Technology Limited, Chongqing Transportation Safety Assessment Centre. The Group's share of discontinued net operating profit of joint ventures amounted to £18,000 (2015: £135,000).

The total consideration received in cash after disposal costs for both transactions was £43,118,000. The book value of net assets disposed of was £15,454,000 realising a net profit on disposal of £27,664,000 which has been recognised within operating profit for the year ended 30 June 2016.

### Acquisition of non-controlling interest

On 1 July 2015, Lloyd's Register Group Limited increased to 100% its ownership of LR Senergy Limited, the parent company of Senergy Group Limited and its subsidiaries for £45.8m of consideration. As this transaction increased the Company's controlling interest from 55% to 100%, it has been accounted for as a transaction between equity holders. The carrying amount of the non-controlling interest and the fair value of the consideration paid has been recognised directly in net funds.

The transaction settled the put option issued by the Group over the equity of LR Senergy Limited for which the Group had recognised a provision equal to the amount that the Group expected to be paid to the counterparty. The corresponding charge to equity previously presented adjacent to non-controlling interests in the net assets of consolidated subsidiaries was also derecognised.

No gain or loss has been recorded, nor has any goodwill been recognised as a result of this transaction.

### 18. Work in progress

	2016 £000	2015 £000
Work in progress	34,567	—
Less: amounts paid on account	(31,026)	—
	<u>3,541</u>	<u>—</u>

At 30 June 2015 invoices on account for the Group exceeded work in progress. The net liability of £403,000 has been reclassified to Creditors: amounts falling due within one year, where it is disclosed as Invoices on account net of work in progress.

### 19. Debtors

	2016 £000	2015 £000
Trade debtors	161,652	178,581
Other debtors	10,899	9,845
Prepayments and accrued income	23,766	26,210
Taxation recoverable	14,789	9,517
	<u>211,106</u>	<u>224,153</u>

### 20. Creditors: amounts falling due within one year

	2016 £000	2015 £000
Payments received on account	5,989	4,088
Invoices on account net of work in progress	—	403
Trade creditors	19,410	24,214
Grants payable	15,135	8,137
Other creditors	2,366	2,612
Other taxation and social security	19,599	17,592
Taxation	17,411	18,254
Accruals and deferred income	62,906	90,930
	<u>142,816</u>	<u>166,230</u>

## 21. Creditors: amounts falling due after one year

	2016 £000	2015 £000
Grants payable	42,907	26,772
	<u>42,907</u>	<u>26,772</u>

The timing of grants payable is shown in the table below:

	2016 £000	2015 £000
Due within one year	15,135	8,137
Due within 1-2 years	13,702	7,691
Due within 2-5 years	26,772	13,685
Due within 6-10 years	4,956	6,739
Impact of discounting	(2,523)	(1,343)
	<u>42,907</u>	<u>26,772</u>
Net grants payable	<u>58,042</u>	<u>34,909</u>

## 22. Provisions for liabilities

Analysis of other provisions:	Legal claims £000	Acquisition related £000	Employee related £000	Deferred Taxation £000	Other £000	Total £000
At 1 July 2015	8,257	48,085	8,059	2,837	4,163	71,401
Exchange revaluation	—	—	803	—	453	1,256
Charged / (credited) to Statement of Financial Activities	1,705	—	9,387	(2,440)	1,015	9,667
Utilised	(122)	(48,007)	(5,137)	—	(110)	(53,376)
Released	(2,820)	—	(143)	—	—	(2,963)
At 30 June 2016	<u>7,020</u>	<u>78</u>	<u>12,969</u>	<u>397</u>	<u>5,521</u>	<u>25,985</u>

**Legal claims:** In the normal course of business, Lloyd's Register Group entities may receive claims for compensation from clients. Substantial insurance cover is carried for this purpose. Where appropriate, provision is made for the uninsured costs arising from such claims. Adequate provision has been made for the claims notified. The timing on these liabilities is dependent upon the conclusion of the continuing legal proceedings which typically span a number of years.

**Acquisition-related:** Provisions relating to amounts payable in future periods for acquisitions completed by the balance sheet date and to liabilities relating to acquisition put options. Included within this category at 1 July 2015 was a £46.5m provision in relation to the put option to purchase the remaining 45% shareholding in LR Senergy Limited. As described in note 17, on 1 July 2015, this put option was terminated by mutual agreement and the remaining 45% shareholding in LR Senergy Limited purchased for cash consideration of £45.8m.

**Employee related:** Provision is made for redundancy and relocation costs with respect to the restructuring programmes in addition to certain employee benefits and repatriation of expatriate workers and other employment related costs. Settlement of these provisions is expected within five years.

**Deferred tax:** Liabilities are recognised in relation to deferred tax in respect of all timing differences that have originated but not reversed at the balance sheet date where transactions or events have occurred at that date that will result in an obligation to pay more tax.

**Other:** Included in this category are provisions maintained to meet contractual obligations to perform restoration on leasehold properties on exit. In addition, provision is made for losses on long-term contracts, share of net liabilities of JVs, the future anticipated rent expense and related costs of leasehold property (net of estimated sublease income) where the space is vacant or currently not planned to be used for ongoing operations, and other project related costs. With the exception of a small number of leasehold properties, settlement of these provisions is expected within 10 years.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

### 23. Financial instruments

The carrying values of the Group financial assets and liabilities are summarised by category below.

	2016 £000	2015 £000
<b>Financial assets</b>		
Measured at fair value through profit and loss		
Investments in listed investments (note 16)	441,152	404,543
Measured at cost less impairment		
Unlisted investments (note 16)	3,697	—
Measured at undiscounted amount receivable		
Trade and other debtors (note 19)	172,551	188,426
Long-term loans (note 16)	356	334
	<u>617,756</u>	<u>593,303</u>
<b>Financial liabilities</b>		
Measured at fair value through profit and loss		
Acquisition put option (see note 22)	—	45,631
Measured at amortised cost		
Grant liabilities (note 21)	58,042	34,909
Measured at undiscounted amount payable		
Trade and other creditors (note 20)	21,776	26,826
	<u>79,818</u>	<u>107,366</u>

The Group's gains and losses in respect of financial instruments are summarised in note 11 (impairment losses).

### 24. Retirement benefits

The Group operates pension schemes worldwide including defined benefit final salary schemes. Assets of certain schemes are held separately from those of the Group ('funded' schemes) whilst others are unfunded.

The main funded scheme, the Lloyd's Register Superannuation Fund Association was closed to future accrual from 1 October 2010. The scheme continues to fund benefits accrued to that date, and valuations of the scheme are carried out on a triennial basis. The most recent completed valuation was carried out as at 31 March 2013. This showed that the funding position of the scheme had improved from the previous valuation. The funding shortfall was £69m, a decrease from £129m in the previous valuation as at 31 March 2010. Lloyd's Register Group Limited has placed investments with a market value of £85m in an escrow account as surety.

In the year ended 30 June 2016 special contributions of £3.75m (2015: £30.0m) were paid.

The disclosures have been calculated by qualified independent actuaries, based on the assumptions of the directors and the most recent full actuarial valuations for funded schemes (completed at various dates) and updated to 30 June 2016.

The value of the defined benefit liabilities has been measured using the projected unit method.

The financial assumptions used at 30 June 2016 and 2015 for the different areas are summarised below.

	UK <sup>(1)</sup>		Japan <sup>(2)</sup>		Eurozone <sup>(3)</sup>		Rest of the World <sup>(4)</sup>	
	2016	2015	2016	2015	2016	2015	2016 <sup>(5)</sup>	2015 <sup>(5)</sup>
<b>Liabilities:</b>	%	%	%	%	%	%	%	%
Rate of price inflation	2.7	3.1	1.0	1.0	1.8	1.8	2.0 to 5.0	2.0 to 5.0
Rate of increase in salaries	n/a	n/a	1.8	1.8	1.8	1.8	4.4 to 7.0	2.0 to 7.0
Rate of increase in pensions	1.7	2.1	0.8	0.8	Nil to 1.8	Nil to 1.8	1.7 to 5.0	2.0 to 5.0
Discount rate	2.9	3.8	0.4	1.2	1.1 to 2.2	2.0 to 2.9	2.0 to 7.8	2.5 to 8.2

(1) Main United Kingdom funded scheme.

(2) Japanese unfunded liability.

(3) The Eurozone rates have been used to assess the overall deficit within the separate funded schemes in Europe.

(4) This represents a grouped disclosure for the remaining liabilities.

(5) Represents the range of assumptions used for the countries covered in the region.

For mortality tables, the Group has used various different tables appropriate to the territory under review. The most significant contribution to the Group pension liability is from the United Kingdom, where tables based on the Self-administered pension scheme (SAPS) light table projected from 2002 have been used, with an allowance for future improvements based on the Continuous Mortality Investigation (CMI) 2013 long-term

projections adjusted by 110% for males and 105% for females, with a long-term trend of 1.25% per annum. The assumptions shown above are arrived at following discussion with, and in accordance with advice received from the scheme actuaries.

The assumptions shown above are arrived at following discussion with, and in accordance with advice received from the scheme actuaries.

**Amounts recognised in the consolidated balance sheet:**

	United Kingdom		Japan		Eurozone		Rest of the World		Total	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
Cash and cash equivalents	15.8	11.6	—	—	1.4	0.9	3.9	3.3	21.1	15.8
Equity instruments	182.9	331.5	—	—	82.2	73.3	26.4	24.1	291.5	428.9
Debt instruments	708.8	412.6	—	—	105.0	76.1	24.4	21.1	838.2	509.8
Real estate	—	—	—	—	1.2	1.3	—	—	1.2	1.3
Other	1.3	89.4	—	—	—	—	14.6	14.3	15.9	103.7
Market value of assets	908.8	845.1	—	—	189.8	151.6	69.3	62.8	1,167.9	1,059.5
Present value of scheme liabilities	(933.3)	(876.5)	—	—	(228.8)	(164.6)	(153.4)	(123.9)	(1,315.5)	(1,165.0)
	(24.5)	(31.4)	—	—	(39.0)	(13.0)	(84.1)	(61.1)	(147.6)	(105.5)
Present value of unfunded liabilities	(9.6)	(9.7)	(63.3)	(42.3)	(49.1)	(37.2)	(10.8)	(8.0)	(132.8)	(97.2)
Net pension liability	(34.1)	(41.1)	(63.3)	(42.3)	(88.1)	(50.2)	(94.9)	(69.1)	(280.4)	(202.7)

The net pension liability is reported on the balance sheet as:

Pension surplus	8.2	7.2
Pension liability	(288.6)	(209.9)
Net pension liability	(280.4)	(202.7)

**Amounts recognised within income and expenditure (statement of financial activities):**

	2016	2015
	£m	£m
Current service cost	14.7	12.6
Past service cost	0.4	2.0
Administrative expenses	1.9	1.4
Total amount included under staff costs	17.0	16.0
Interest cost on schemes' liabilities	43.9	46.5
Interest income on schemes' assets	(38.1)	(40.4)
Total amount included under Other finance costs	5.8	6.1

In addition, there is a charge in respect of contributions to defined contribution plans of £27.1m (2015: £29.5m).

The actual return on scheme assets was £112.3m (2015: £104.1m).

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

- Amounts recognised in the Consolidated Statement of Comprehensive Income (statement of financial activities):

	2016 £m	2015 £m
Gain on pension scheme assets	74.2	63.7
Experience gains/ (losses)	8.2	10.9
Change in assumptions	(124.9)	(96.3)
Actuarial loss	<u>(42.5)</u>	<u>(21.7)</u>

Changes in the present value of the defined benefit obligations are as follows:

	2016 £m	2015 £m
Opening defined benefit obligation	(1,262.2)	(1,197.9)
Current service cost	(14.7)	(12.6)
Past service cost	(0.4)	(2.0)
Member contributions	(0.9)	(0.9)
Interest cost	(43.9)	(46.5)
Actuarial loss	(116.7)	(85.4)
Exchange adjustment	(64.4)	31.2
Benefits paid	54.9	51.9
Closing defined benefit obligation	<u>(1,448.3)</u>	<u>(1,262.2)</u>

Changes in the market value of plan assets are as follows:

	2016 £m	2015 £m
Opening market value of plan assets	1,059.5	983.0
Expected return on plan assets	38.1	40.4
Benefits and expenses paid	(56.8)	(53.2)
Employer contributions	19.0	43.4
Member contributions	0.9	0.9
Actuarial gain on assets	74.2	63.7
Exchange adjustments	33.0	(18.7)
Closing market value of plan assets	<u>1,167.9</u>	<u>1,059.5</u>

### 25. Contingent liabilities

	2016 £000	2015 £000
In respect of bank guarantees	12,143	9,824
Escrow account for UK Pension Scheme	84,928	81,900
Other	3,961	1,679
	<u>101,032</u>	<u>93,403</u>

It is not anticipated that claims will arise from bank guarantees given.

Due to the funding shortfall on the main defined benefit scheme in the UK, part of Lloyd's Register Limited's portfolio of listed investments was transferred to an escrow account during the year ended 30 June 2011, the beneficiary of which is the Lloyd's Register UK Pension Scheme. Subject to the results of future pension scheme valuations, amounts may be paid out of this escrow account to make good the deficit in future periods. The escrow arrangement will terminate no later than 30 June 2023, when any remaining balance will revert to Lloyd's Register unencumbered.

In addition, the Foundation has a contractual obligation until 2017 to transfer up to £100m of the investment assets received from the Trading Group in September 2012 to the Lloyd's Register Superannuation Fund Association in the event of insolvency of Lloyds Register Group Limited. The Trustees consider the risk of insolvency, and therefore the risk of payment of the contingent liability to be minimal.

## 26. Operating lease commitments

At 30 June 2016, the Group had total future lease payments under non-cancellable operating leases as follows:

	Land and buildings		Other equipment	
	2016 £000	2015 £000	2016 £000	2015 £000
Operating leases which expire:				
Within one year	21,953	21,371	9,810	9,540
Within two to five years	40,631	46,824	13,720	14,456
Thereafter	54,933	57,860	126	151
	<u>117,517</u>	<u>126,055</u>	<u>23,656</u>	<u>24,147</u>

## 27. Funds

Trading funds are the retained reserves of the Trading Group, and include that Trading Group's pension deficit.

	Brought forward £000	Incoming resources £000	Resources expended £000	Other movements £000	Total 2016 £000
Trading funds	356,718	892,029	(858,228)	(17,216)	373,303
Unrestricted funds - general funds	17,529	9,008	(34,687)	20,330	12,180
Endowment funds:					
Expendable endowment	233,740	—	(1,025)	2,235	234,950
	<u>607,987</u>	<u>901,037</u>	<u>(893,940)</u>	<u>5,349</u>	<u>620,433</u>

Other movements include realised and unrealised gains and losses on investment assets and also include transfers between funds, foreign exchange differences on the translation of net assets in overseas operations, and actuarial movements relating to defined benefit pension schemes.

Transfers between funds comprise a gift from the Trading Group to the Foundation.

In September 2012, the Trading Group transferred a portfolio of investments to the Foundation, with a market value of £206.4m. The transfer was made as a gift of an expendable endowment. The gift also contained a condition that the Foundation must agree to keep £100.0m of that sum as a contingent asset of the Trading Group's UK pension scheme until June 2017. During that period the monies can only be transferred to the Pension Scheme in the event of insolvency of the Trading Group.

## 28. Revaluation reserve

	Brought forward £000	Unrealised gains arising in year £000	Released from revaluation reserve in period and other movements £000	Total 2016 £000
Trading funds – listed investments	14,158	14,104	(1,218)	27,044
Trading funds – investment property	26,395	25,262	—	51,657
Endowment funds:				
Expendable endowment	9,882	14,665	(4,322)	20,225
	<u>50,435</u>	<u>54,031</u>	<u>(5,540)</u>	<u>98,926</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

### 29. Fund distribution

	Trading funds £000	Unrestricted funds £000	Endowment funds £000	Total 2016 £000	Total 2015 £000
Non-current assets	459,276	37,270	234,950	731,496	676,777
Current assets	357,643	27,507	—	385,150	405,489
Creditors: amounts falling due within one year	(123,093)	(15,690)	—	(138,783)	(166,230)
Creditors: amounts falling due after one year	—	(42,907)	—	(42,907)	(26,772)
Provisions	(25,985)	—	—	(25,985)	(71,401)
Pension deficit	(288,538)	—	—	(288,538)	(209,876)
Inter-fund balance	(6,000)	6,000	—	—	—
	<u>373,303</u>	<u>12,180</u>	<u>234,950</u>	<u>620,433</u>	<u>607,987</u>

### 30. Reconciliation of operating surplus to net cash inflow from operating activities

	2016 £000	2015 £000
Net incoming resources before transfers and other recognised gains and losses	7,097	10,557
Pension interest cost	5,753	6,108
(Profit)/loss on disposal of discontinued operations	(27,664)	1,037
Loss on disposal of fixed assets	107	40
Taxation	5,333	25,037
Exchange adjustment	33,645	(7,572)
Depreciation	12,713	12,507
Amortisation and impairment charges	47,076	26,089
(Increase) / decrease in work in progress	(3,782)	22,493
Decrease in debtors	3,828	17,131
Decrease in creditors	(747)	(12,945)
Increase/ (decrease) in provisions	3,752	(2,721)
Foreign tax paid	(34,781)	(32,141)
Tax received	3,110	2,076
Defined benefit contributions in excess of funds charges	(4,098)	(24,917)
Gains on settlements and curtailments	—	(2,339)
Investment income	(19,855)	(18,903)
Cash generated by operations	<u>31,487</u>	<u>21,537</u>



### 31. Related parties

The Foundation has taken advantage of the exemption in Financial Reporting Standard 102, whereby transactions with subsidiary companies ultimately 100% owned by the same parent are not required to be disclosed.

The Group defines its key management personnel as the Board of Directors and the Executive Leadership Team. The total remuneration for key management personnel for the period totalled £8,578,000 (2015: £5,786,000).

The following transactions took place between Lloyd's Register Group Limited undertakings in which the Group holds less than 100%:

	Turnover arising from trading with other LR Group companies £'000	Operating costs charged by LR Group companies £'000	Amounts owed (to) / from Group companies £'000
<b>Subsidiaries</b>			
Lloyd's Register Industrial Services (India) Pvt Ltd	—	(10)	—
Lloyd's Register International (Thailand) Ltd	75	(883)	(3,359)
Lloyd's Register Oman LLC	143	(1,709)	110
Lloyd's Register Qatar LLC	721	(1,228)	536
Lloyd's Register Technical Services Sdb Bhd	46	(2,906)	1,246
LRQA (Shanghai) Co Ltd	521	(1,879)	(961)
<b>Joint ventures</b>			
Lloyd's Register Apave Limited	—	(210)	(26)
Lloyd's Register Apave IES Limited	—	(2,642)	(624)

During the year the Group has increased its investment in Common Structural Rules Software LLC from \$15.5 million to \$17.0 million.

The Company provides administrative services to the Group's pension schemes. The following transactions took place between Lloyd's Register Group Limited and Lloyds Register Superannuation Fund Association.

	2016 £000	2015 £000
Administrative services provided	387	360
Administrative services payable	39	30

The charity awarded a grant of £600,000 in 2013/14 to the Worshipful Company of Shipwrights where Lambros Varnavides serves as a member of the Finance Committee. The interest was disclosed before the grant was made and Mr Varnavides did not participate in the grant making decision. Of the grant awarded, £425,000 (2015: £425,000) was outstanding as at 30 June 2016.

### 32. Explanation of transition to FRS 102

This is the first year that the Foundation has presented its financial statements under the Charities Statement of Recommended Practice (SORP) FRS102. The following disclosures are required in the year of transition. The last financial statements under previous UK GAAP were for the year ended 30 June 2015 and the date of transition was therefore 1 July 2014. The Group has also restated the comparative financial statements to recognise a dilapidation accrual for its leasehold property portfolio and increase its net defined benefit pension liability following the re-evaluation of the terms of four pension schemes. These adjustments had not been identified under previous UK GAAP.

As a consequence of adopting FRS 102, funds and net income have been restated as follows:

Reconciliation of funds	Note	Group	
		At 1 July 2014 £000	At 30 June 2015 £000
<b>Funds (as previously stated)</b>		<b>584,270</b>	<b>616,866</b>
Capitalisation of directly attributable costs of preparing software intangible assets for use	i	2,912	4,679
Accrual for short-term employee benefits	ii	(9,618)	(8,885)
Impact of changes in foreign exchange rates on restatement of Goodwill denominated in functional currency of acquisition	iii	—	(2,531)
Derecognition of goodwill on acquisition of Senergy Alternative Energy, Inc	iv	—	(1,205)
Recognition of defined benefit surplus	vi	9,127	9,185
Discounting of grant liabilities	x	1,625	1,343
Deferred tax on gift aid donation	xi	—	(2,694)
Deferred tax on investment revaluation	xii	(3,779)	(2,950)
<b>Funds (as restated for FRS 102)</b>		<b>584,537</b>	<b>613,808</b>
Recognition of property dilapidation provision	v	(3,879)	(3,672)
Recognition of defined benefit scheme changes	ix	(1,718)	(2,149)
<b>Funds (as restated)</b>		<b>578,940</b>	<b>607,987</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

### Reconciliation of net income for year ended 30 June 2015

	Note	Group £000
Net income (as previously stated)		23,977
Capitalisation of directly attributable costs of preparing software intangible assets for use	i	1,767
Change in accrual for short-term employee benefits	ii	733
Impact of changes in foreign exchange rates on restatement of goodwill denominated in functional currency of acquisition	iii	494
Derecognition of goodwill on acquisition of Senergy Alternative Energy, Inc	iv	58
Net interest cost for defined benefit liabilities based on discount rate	vii	(17,517)
Foreign exchange translation differences	viii	738
Tax relating to currency translation difference on foreign currency net investments	xiii	(2,115)
Unwinding of grant liabilities	x	(282)
Deferred tax on gift aid donation	xi	(2,694)
Deferred tax on investment revaluation	xii	829
Net Income before gains on investments (as restated for FRS 102)		10,988
Recognition of defined benefit scheme changes	ix	(431)
Net Income before gains on investments (as restated)		10,557

### Notes to the reconciliation of funds and net income

- i. **Capitalisation of directly attributable costs of preparing software intangible assets for use**  
Under the Group's accounting policies under previous UK GAAP, when a software licence was purchased as a separate acquisition the licence was capitalised as a fixed asset and all costs of bringing it into use were expensed to the profit and loss account as incurred. Under FRS102, software licences are capitalised as intangible assets. Where costs of preparing the software for its intended use are directly attributable they are capitalised as part of the cost of the intangible asset and amortised over its useful economic life.
- ii. **Accrual for short-term employee benefits**  
This adjustment reflects the required accrual to recognise a liability for all short-term employee benefits payable as at the reporting date. The majority of the balance relates to employee's accrued paid annual leave and associated social security costs. The change in the accrual during the financial year ended 30 June 2015 results in a change in net income for the financial year under FRS 102.
- iii. **Impact of changes in foreign exchange rates on restatement of Goodwill denominated in functional currency of acquisition**  
Section 30 of FRS 102 requires any goodwill or fair value adjustments arising on the acquisition of a foreign operation to be treated as assets and liabilities of foreign operation and expressed in its functional currency. Previously, the Group has treated all goodwill balances as if they were denominated in Sterling. This adjustment reflects the impact of the carrying value of goodwill balances after translating them to their functional currency at the transition date.
- iv. **Derecognition of goodwill on acquisition of Senergy Alternative Energy, Inc**  
On 30 January 2015, the Group acquired the remaining 36% of the issued share capital of Senergy Alternative Energy, Inc not already held. Previous UK GAAP required the recognition of additional goodwill representing the excess of consideration over the fair value of the net assets acquired. Under FRS 102 this transaction is treated as a transaction with equity holders and is not considered a business combination as the Group already had control. As such no additional goodwill is recognised and excess of consideration over net assets acquired is recognised directly in unrestricted funds.
- v. **Recognition of property dilapidation provision**  
In previous reporting, the Group did not recognise a provision for liabilities for dilapidations in leased properties where it has obligations to restore leased properties under the terms of its lease contracts. In reassessing the classification of its leasehold property portfolio, the Group has identified dilapidation obligations and has recognised them as part of the restatement of the transition balance sheet as at 1 July 2014.
- vi. **Recognition of defined benefit surplus**  
The requirements for the recognition of pension scheme surpluses have changed under FRS102 compared to old UK GAAP. On restatement for adoption of FRS102, the Group has recognised the surpluses for schemes in surplus at each balance sheet date with a corresponding credit to the Statement of Financial Activities where the Group is able to recover the surplus either through reduced contributions in the future or through refunds from the plans.
- vii. **Net interest cost for defined benefit liabilities based on discount rate**  
Section 28 of FRS 102 requires the net interest cost to be derived by multiplying the net defined benefit obligation by the discount rate. Previous UK GAAP under FRS 17 Retirement benefits required the application of the discount rate only to pension liabilities and an expected return to the assets.
- viii. **Foreign exchange translation differences on intercompany balances**  
In previous reporting foreign exchange translation differences on long-term intercompany receivables and payable loan accounts were taking entirely to reserves on the basis that they were regarded as permanent as equity. FRS102 requires that if there is an element of the long-term balance for which settlement is either planned or likely to occur in the foreseeable future, the foreign exchange on this portion must be recognised in profit and loss. Only the foreign exchange on the portion of the outstanding balance on each loan of which settlement is neither planned nor likely to occur is taken to reserves, with the remainder of the foreign exchange impact recognised in the statement of financial activities.

- ix. **Recognition of defined benefit pension schemes**  
As part of the transition to FRS 102, the Group re-evaluated the terms of its defined benefit pension schemes. This review identified that a number of schemes were defined benefit in nature and should be recognised on the balance sheet with an adjustment to the profit and loss account to reflect the associated service cost and interest movement.
- x. **Discounting of grant liabilities**  
Where material grant liabilities in excess of one year are discounted to net present value to reflect the time value of money
- xi. **Recognition of deferred tax charge on gift aid donations**  
The UK tax provisions prepared under old UK GAAP for prior years have assumed that sufficient gift aid would be paid to reduce the UK current tax liabilities to nil, even if the gift aid declared and recognised as a liability in the financial statements at the balance sheet date was lower. In accordance with FRS 102, the profit and loss account tax provision for 2015 has now been amended to include a deferred tax charge on the difference between gift aid accrued in the accounts at 30 June 2015 and the amount deducted in calculating the 2015 tax provision. The resulting balance sheet deferred tax liability is then released to the profit and loss account in 2016, when the gift aid is paid.
- xii. **Deferred tax investment revaluation**  
The UK tax provisions prepared under old UK GAAP for prior years have assumed that sufficient gift aid would be paid to reduce the UK current tax liabilities to nil. In accordance with FRS 102, the deferred tax provision for 2014 and 2015 has now been amended to recognise a liability in respect of the revaluation of listed investments held in the trading group.
- xiii. **Tax relating to currency translation difference on foreign currency net investments**  
In consolidated group accounts foreign exchange gains and losses as described in viii (above) are included within 'currency translation difference on foreign currency net investments' in the statement of financial activities below net income. Under UKGAAP the related tax credit was included in net income; whilst under FRS 102 the related tax credit is now included below net income. In the year ended 30 June 2015 a foreign exchange loss was made on intragroup loans and thus a tax credit has been reclassified from within the statement of financial activities.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

### 33. Group companies

The following are the subsidiaries and joint ventures of the Group at 30 June 2016. Details are given of the principal country of operation. The equity share capital of these entities is wholly owned by the Group except where its percentage interest is shown otherwise. All companies are incorporated in their principal country of operation except where stated.

Company	Country of Origin	% of Ownership
71FS Insurance Company Limited	GUERNSEY	100
Classification and Quality Services Ltd	UK	100
Classification Holdings Ltd	UK	100
Common Structural Rules Software LLC	USA	50
Hellenic Lloyd's SA	GREECE	100
Human Engineering Limited	UK	100
Human Engineering (Australia) Limited	UK	100
Knowledge Based Management Ltd	UK	100
Lloyd's Maritime Information Services Inc.	USA	50
Lloyd's Maritime Information Services Ltd	UK	50
Lloyd's Register (Polska) Sp Zoo	POLAND	100
Lloyd's Register (Romania) SRL	ROMANIA	100
Lloyd's Register (Ukraine)	UKRAINE	100
Lloyd's Register Americas, Inc.	US	100
Lloyd's Register Apave Limited	UK	51
Lloyd's Register Asia	UK	100
Lloyd's Register Asia Trustees Limited	UK	100
Lloyd's Register Asia (Vietnam) Company	VIETNAM	100
Lloyd's Register Bangladesh Pvt Ltd	BANGLADESH	100
Lloyd's Register Belgie vzw	BELGIUM	100
Lloyd's Register Canada Limited	CANADA	100
Lloyd's Register Consulting – Energy AB	SWEDEN	100
Lloyd's Register Consulting – Energy AS	NORWAY	100
Lloyd's Register Consulting – Energy A/S	DENMARK	100
Lloyd's Register Consulting – Energy Limited	UK	100
Lloyd's Register Consulting – Energy Private Ltd	INDIA	100
Lloyd's Register Energy Canada Limited	CANADA	100
Lloyd's Register Classification Society China Co Ltd	CHINA	100
Lloyd's Register Central and South America Ltd	UK	100
Lloyd's Register Central and South America (Curaçao) NV	NETHERLANDS	100
Lloyd's Register D.O.O. (Beograd)	ANTILLIES	100
Lloyd's Register Denmark Holdings ApS	SERBIA	100
Lloyd's Register Do Brasil Ltda	DENMARK	100
Lloyd's Register Drilling Integrity Services Australia Pty Ltd	BRAZIL	100
Lloyd's Register Drilling Integrity Services Asia Pacific Pte. Ltd.	AUSTRALIA	100
Lloyd's Register Drilling Integrity Services (International) BV	SINGAPORE	100
Lloyd's Register Drilling Integrity Services Canada Ltd	NETHERLANDS	100
Lloyd's Register Drilling Integrity Services Holding B.V	CANADA	100
Lloyd's Register Drilling Integrity Services (UK) Ltd.	NETHERLANDS	100
Lloyd's Register Drilling Integrity Services, Inc.	UK	100
Lloyd's Register Drilling Integrity Services International (L) Ltd	USA	100
Lloyd's Register Egypt LLC	MALAYSIA	100
Lloyd's Register EMEA	EGYPT	100
Lloyd's Register EMEA (Nigeria) Ltd Gte	UK	100
Lloyd's Register EMEA Trustees Ltd	NIGERIA	100
Lloyd's Register Employment Services Limited	UK	100
Lloyd's Register Energy Americas, Inc.	GUERNSEY	100
Lloyd's Register Energy & Transportation S de CV.de RL	USA	100
Lloyd's Register Energy Canada Ltd	MÉXICO	100
Lloyd's Register España SA	CANADA	100
Lloyd's Register Gozetim Ltd Sti	SPAIN	100
Lloyd's Register Group Limited	TURKEY	100
Lloyd's Register Group Services Limited	UK	100
Lloyd's Register Industrial Services (India) Pvt Ltd	UK	100
Lloyd's Register Industrial Technical Services (Shanghai) Co. Ltd.	INDIA	51
Lloyd's Register Inspection Ltd	CHINA	100
Lloyd's Register International	UK	100
Lloyd's Register International (Thailand) Ltd	UK	100
Lloyd's Register Japan Yugen Kaisha	THAILAND	49
Lloyd's Register Kazakhstan LLP	JAPAN	100
Lloyd's Register Limited	KAZAKHSTAN	100
Lloyd's Register Middle East LLC	UK	100
Lloyd's Register Nederland BV	UNITED ARAB EMIRATES	49
Lloyd's Register North America, Inc.	NETHERLANDS	100
Lloyd's Register Norway Holdings AS	US	100
Lloyd's Register of Shipping (Malaysia) Bhd	NORWAY	100
	MALAYSIA	100

Company	Country of Origin	% of Ownership
Lloyd's Register ODS AB	SWEDEN	100
Lloyd's Register Oman LLC	OMAN	70
Lloyd's Register Quality Assurance (Korea) Ltd.	KOREA	100
Lloyd's Register Quality Assurance France SAS	FRANCE	100
Lloyd's Register Quality Assurance GmbH	GERMANY	100
Lloyd's Register Quality Assurance Italy Srl	ITALY	100
Lloyd's Register Quality Assurance Ltd	UK	100
Lloyd's Register Quality Assurance, Inc.	USA	100
Lloyd's Register Qatar LLC	QATAR	49
Lloyd's Register Superannuation Trustees Ltd	UK	100
Lloyd's Register Saudi Arabia Ltd	SAUDI ARABIA	100
Lloyd's Register Technical Services Sdn Bhd	MALAYSIA	49
Lloyd's Register Technical Services, Inc.	USA	100
Lloyd's Register Global Technology Centre Pte Limited	SINGAPORE	100
Lloyd's Register Verification Ltd	UK	100
LR Apave IES Limited	UK	51
LR Holdings BV	NETHERLANDS	100
LR Insurance, Inc.	USA	100
LRQA España SL	SPAIN	100
LRQA (Shanghai) Co Ltd	CHINA	82
LRQA Lietuva UAB	LITHUANIA	100
LRQA Sverige AB	SWEDEN	100
MARTEC Limited	CANADA	100
Lloyd's Register Serviços de Integridade de Perfuração Ltda	BRAZIL	100
PT Lloyd's Register Indonesia	INDONESIA	100
Lloyd's Register Sweden Holdings AB	SWEDEN	100
RiskSpectrum AB	SWEDEN	100
Lloyd's Register Consulting Energy Inc	USA	100
Lloyd's Register Consulting Energy Inc	CHINA	100
WEST Engineering Services Brazil Inc.	USA	100
WEST Services Tecnicos do Brasil Ltda	BRAZIL	100
Redcar3 limited	UK	100
Gabiz limited	UK	100
Luoli Limited	UK	100
LR Senergy Limited	UK	100
Senergy Holdings Ltd	UK	100
Senergy Limited	UK	100
Senergy Trustees Limited	UK	100
Senergy Aligned Services Limited	UK	100
Senergy Alternative Energy Limited	UK	100
Senergy Wells Limited	UK	100
Senergy International Sdn Bhd	MALAYSIA	49
Senergy (GB) Limited	UK	100
Senergy Development Solutions Limited	UK	100
Floyd and Associates Limited	UK	100
Isis Energy Limited	UK	100
Interactive Petrophysics Limited	UK	100
Ternan Limited	UK	100
Senergy Australia Pty Limited	AUSTRALIA	100
Floyd and Associates Holdings Limited	UK	100
Senergy Oil & Gas Limited	UK	100
Senergy Technology Limited	UK	100
Senergy Survey & Geoengineering Limited	UK	100
Senergy Econnect Limited	UK	100
Senergy Oil and Gas (Ireland) Limited	IRELAND	100
Senergy Econnect Australia Pty Limited	AUSTRALIA	100
Senergy Resources Limited	UK	100
Senergy LEA Limited	UK	100
Leading Edge Advantage (Underbalanced) Limited	UK	100
Leading Edge Advantage (Sustainment) Limited	UK	100
Senergy Group Limited	UK	100
Senergy Global Resources Sdn Bhd	MALAYSIA	49
Senergy Software Limited	UK	100
Senergy Americas Inc	USA	100
SGC Engineering LLC	USA	100
Senergy France Limited	UK	100
Leading Edge Advantage International Limited	UK	100
Senergy Oil and Gas (Singapore) Pte. Ltd.	SINGAPORE	100
Senergy Alternative Energy Inc	USA	100
OFP Voorzorgsfonds Lloyd's Register	BELGIUM	100
Lloyd's Register Nominee 1 Ltd.	UK	100
Lloyd's Register Nominee 2 Ltd.	UK	100
Lloyd's Register GMT Ltd	UK	100
Lloyd's Register Quality Assurance Canada Limited	CANADA	100