



**|2016|  
2017| ANNUAL REPORT  
& ACCOUNTS**



**Science & Technology**

**Facilities Council**

**10 Years of Impact and Inspiration**

# Science and Technology Facilities Council Annual Report and Accounts 2016-17

Presented to Parliament pursuant to paragraphs 2(2) and 3(3) of Schedule 1 to the Science and Technology Act 1965

Ordered by the House of Commons to be printed on 13<sup>th</sup> July 2017

*HC 92*

© Science and Technology Facilities Council copyright 2017

The text of this document (this excludes, where present, the Royal Arms and all departmental or agency logos) may be reproduced free of charge in any format or medium provided that it is reproduced accurately and not in a misleading context.

The material must be acknowledged as Science and Technology Facilities Council copyright and the document title specified. Where third party material has been identified, permission from the respective copyright holder must be sought.

Any enquiries related to this publication should be sent to us at [enquiries@stfc.ac.uk](mailto:enquiries@stfc.ac.uk).

This publication is available at <https://www.gov.uk/government/publications>

Print ISBN 9781474144995

Web ISBN 9781474145008

ID 15051701 07/17

Printed on paper containing 75% recycled fibre content minimum

Printed in the UK by the Williams Lea Group on behalf of the Controller of Her Majesty's Stationery Office

## CONTENTS

---

PERFORMANCE REPORT	04
ACCOUNTABILITY REPORT	17
THE FINANCIAL STATEMENTS	48
NOTES TO THE FINANCIAL STATEMENTS	52

## PERFORMANCE REPORT

---

### OVERVIEW

---

#### CHAIRMAN'S FOREWORD

---



#### Welcome to the Science and Technology Facilities Council's (STFC) 10<sup>th</sup> Annual Report and Accounts, covering the year 2016-17 and demonstrating our profound impact across a broad range of scientific fields.

From the discovery of a new 'Earth-like' planet to the launch of the world's first 'cognitive hospital', 2016 saw STFC contribute to ground-breaking discoveries and advances that push forward the frontiers of modern science. The impact of our work is evident far beyond our research communities. Close partnerships with business and industry are helping to drive innovation and commercial success, leading to new investment into the UK economy and continued prominence within the global market.

In the face of growing competition internationally, and the challenges raised by the decision to leave the European Union, it is more important than ever before that the UK remains competitive within the global knowledge economy. STFC helps achieve that aim through outstanding contributions to domestic research and skills development through our university partners and our own laboratories, and through strong and enduring international collaborations including the European Spallation Source (ESS), Square Kilometre Array (SKA), the Large Hadron Collider (LHC) at CERN and many other collaborative endeavours.

Our outreach to the public and schools is bolstering the UK's science capital, now and for the future, and helping secure the nation's vital skills base. Our laboratories hosted more than 9,700 school students and 25,000 members of the public during the year, while our STFC travelling roadshows in partnership with science centres, and our public engagement grant scheme, reached a further 1.37 million members of the UK public. Feedback from these activities is very positive, and during the year we introduced new goals in relation to reaching new and more diverse audiences. One such example is the third phase of our Explore Your Universe partnership with the Association for Science and Discovery Centres that targets audiences that don't usually engage with science, technology, engineering and mathematics (STEM).

Many challenges and opportunities lie ahead for the world, our nation and for STFC, as our Chief Executive outlines below. As Chairman of the STFC Council, I look forward to the contribution that our science and technology will make in coming years to ensuring the UK retains its reputation as the global research partner of choice, and a nation at the heart of innovation and progress.

Professor Sir Michael Sterling FREng

A handwritten signature in black ink, appearing to read "Michael Sterling". The signature is fluid and cursive, with a large, stylized 'M' at the beginning.

## CHIEF EXECUTIVE'S STATEMENT



**The information contained within this 10<sup>th</sup> Annual Report is testament to STFC's ongoing impact on world-leading research and pioneering science. As in previous years we have continued to deliver outstanding scientific achievements that accelerate innovation and drive national economic growth, but, as the Report makes clear, we face significant challenges over the coming years.**

I became Chief Executive of STFC on 1 November 2016, having served on the Council since May 2013. It was an honour to follow Professor John Womersley, whose dedicated leadership helped to build STFC's reputation for high-calibre research and innovation.

STFC's unique combination of highly skilled staff, university partnerships, international collaborations and national laboratories plays a major role in delivering societal and economic benefit to the UK. I am very confident this will not only continue but be enhanced.

Following a lively year on the world stage, we foresee a number of new challenges and opportunities on the horizon. Science is and has always been a key international platform for the UK, and the continued success of our national research outputs will be instrumental as we move forward.

STFC's commitment to growth and discovery is reflected within all of our research and innovation. Through close partnerships with business, we ensure that innovation generated through STFC programmes delivers benefits to the wider economy. Companies from diverse fields benefit from our cutting-edge services and facilities, and by collaborating with these companies we support their growth and national prosperity.

An example of our direct engagement with business is our management and co-funding of the European Space Agency (ESA) Business and Innovation Centre (BIC) at the Harwell Campus. The centre's mission is to support companies looking to use space technologies to drive business innovation. During 2017, the 50th company joined ESA BIC Harwell, and is now enjoying access to ESA technology and expertise and to our cutting-edge STFC facilities – including the Central Laser Facility, Diamond Light Source and the ISIS Neutron Source. Industrial sectors supported during the last 12 months include regenerative healthcare, advanced agricultural techniques and state-of-the-art mobile apps.

In addition to our work with the business community, STFC has also supported the growth of science capital more broadly. Over the course of 2016, our work with the public and schools has delivered measurable impact and led to increased engagement with these groups. Meanwhile, we have continued to invest in postgraduate training and fellowships, alongside our popular apprenticeship schemes.

As a Government agency, our successes are only possible through sustained public investment. The Government's confirmation in the 2016 Autumn Statement of substantial new investment in research and innovation was therefore particularly welcome. The new Industrial Strategy Challenge Fund, coupled with the Grand Challenges Research Fund for official development assistance compliant research activity, offer the UK research base significant new opportunities. These opportunities will be important for STFC.

The pressures of more than seven years of flat cash funding were becoming evident in 2016-17, but were manageable despite reduced operating capital and higher operational costs as a result of falls in the value of sterling. As our risk register confirms, and our Council has noted, these financial pressures will become unsustainable in the coming years and we are working with our sponsoring department to identify appropriate solutions. An additional concern is the economic and staff uncertainty arising from the Brexit vote, and we are working hard to provide as much information and support possible to the hundreds of our staff from EU and EEA nations.

From 2018-19 onward, STFC will cease to exist as an independent Non-Department Public Body, although our name and activities will continue. Along with the other Research Councils, Innovate-UK and parts of the Higher Education Funding Council for England, we will be merged into the new single national research and innovation funding body: UK Research and Innovation (UKRI). STFC staff are playing key roles in the establishment of UKRI, which I am confident will lead to an even stronger and more collaborative environment within the UK for research and innovation. I am also confident that with our well-earned reputation for world-leading science and international partnership, STFC will continue to provide the facilities, resources and expertise necessary to keep the UK at the forefront of global innovation.

**Dr Brian Bowsher**

## STATEMENT OF STFC'S PURPOSE AND ACTIVITIES

The Science and Technology Facilities Council (STFC) is one of the seven UK Research Councils. Our research seeks to understand the Universe from the largest astronomical scale to the tiniest constituents of matter, yet creates impact on a tangible level. From clean energy to crop protection, dementia research to data-centric computing, our impact is felt across many aspects of daily life. Public investment in science supports economic growth, improves productivity and creates a highly skilled workforce. Through collaboration with industry and long-term research and development (R&D) we underpin sectors that contribute billions of pounds annually to the UK economy, including space, pharmaceuticals, digital communication, microelectronics and physics-based manufacturing.

We achieve this breadth of impact by operating in three ways. Firstly, we support world-class frontier research with our university partners in particle physics, astronomy, nuclear physics, accelerator physics, and space science. Secondly, we provide access to cutting-edge, large-scale research infrastructure both in the UK and internationally. These facilities support interdisciplinary research from a range of physical and life sciences through focused missions, such as the detection of gravitational waves. Thirdly, we help businesses thrive, promoting academic and industrial collaboration and the translation of our research to market applications across all our programmes, particularly through our national Research and Innovation Campuses.

STFC was created in 2007 as an inherently cross-disciplinary research council with a broad remit. With the establishment of UK Research and Innovation (UKRI) in 2018, STFC, along with the other six Research Councils, Innovate UK and parts of HEFCE, will become one of the UKRI's nine component organisations that will enhance the UK's research and innovation system.

Our Corporate Strategy, originally published in 2010, is currently being refreshed and retains our strategic goals of delivering world-class research, world-class innovation and world-class skills. We will introduce three new strategic themes around our campuses, data-intensive science and strategic technology to reflect STFC's key capabilities in these areas.

---

## KEY ISSUES AND RISKS AFFECTING STFC IN DELIVERING OUR OBJECTIVES

---

As with any large organisation, STFC must manage a series of internal and external challenges in order to deliver our objectives. We do so through a robust risk management framework, reflecting an organisation that operates on an international scale with novel and complex technologies, large-scale investments and major high-profile facilities.

The Government has announced its intention to create UKRI by 2018, and STFC is working with other Councils on transitional arrangements. In the interim, we are continuing to ensure the UK delivers world-leading science that in turn supports economic growth and improves national productivity. We continue to use our brokerage skills to strengthen our relations with industry, academia and other stakeholders and will continue to deliver science of the highest quality.

To deliver our objectives, the key issues we are managing include:

- **Staffing:** we face a challenge in attracting and retaining staff in science, engineering and technology roles, due to lack of pay flexibility compared with the private sector.
- **The changing business environment:** has introduced a number of risks around transitional planning for UKRI and BREXIT.
- **Future funding and financial management:** consistent with all public sector bodies, STFC continues to work within tight financial constraints and maintains close scrutiny over its financial decisions and performance. A particular challenge is the financial volatility inherent within our cost base (e.g. foreign exchange risks, energy costs and cost of materials).
- **Cyber Security –** in common with organisations in all sectors STFC are not immune from increasingly common and sophisticated cyber threats.
- **Procurement –** STFC has a number of high-profile, large-scale projects and initiatives with incumbent complex procurements.

STFC will continue to play a key role in providing the scientific foundation for a long-term positive impact on the United Kingdom. We will use our capabilities, working with our partners and by prioritising our activities and investments, to address some of the major challenges of the 21st century and maintain the UK's position as the best place in the world to do science.

## STFC FINANCIAL PERFORMANCE

The financial statements have been prepared in accordance with a Direction issued by the Secretary of State for Business, Energy and Industrial Strategy (BEIS) in pursuance of Section 2(2) of the *Science and Technology Act 1965*.

The financial statements have been prepared in accordance with the *International Financial Reporting Standards (IFRS)* and the accounting and financial reporting standards issued or adopted by the International Accounting Standards Board as interpreted for Government use by the *Financial Reporting Manual (FRM)*.

STFC's financial statements are the consolidation of the Council and its wholly owned subsidiary, STFC Innovations Limited (SIL). STFC's consolidated financial statements incorporate the Council's share of the results of its joint ventures. The results of SIL and the joint ventures are consolidated in accordance with *IFRS*.

As a non-departmental public body (NDPB), the Council is required to remain within its specific budgeted limits agreed with BEIS, under the governance of Resource Accounting and Budgeting (RAB); the regime by which HM Treasury, on behalf of Central Government, ensures public sector spending is satisfactorily controlled.

In compliance with the budgeting regime, the Council was required throughout the year to advise BEIS of its total forecast net expenditure for the year end, split between administration, programme and capital, based on the requirement from HM Treasury to adhere as closely as possible to the forecast.

	Resource		Capital	Total
	Programme	Administration		
	£000	£000	£000	£000
<b>Allocation</b>	526,199	10,898	239,249	776,346
<b>Outturn</b>	536,292	11,238	240,223	787,753
<b>In Year (under)/over spend</b>	<b>10,093</b>	<b>340</b>	<b>974</b>	<b>11,407</b>

Following the necessary accounting policies the financial statements show net expenditure for the year of £670,453k. This is reconciled to the outturn position as shown below:

	Note to the financial statements	£000
<b>Net expenditure for the year as per Consolidated Statement of Comprehensive Net Expenditure (CSCNE)</b>		670,453
<b>Annually Managed Expenditure not included in allocation</b>		(5,368)
<b>Property, plant and equipment (PPE) additions</b>	6	81,668
<b>Intangible asset additions</b>	7	18,941
<b>Net PPE disposal</b>	6	(180)
<b>Donated Asset</b>		(5,000)
<b>Investment additions</b>	9.1	27,239
<b>Total Outturn</b>		<b>787,753</b>

## EXPLANATION OF THE ADOPTION OF THE GOING CONCERN BASIS

STFC is dependent on funding from BEIS to meet liabilities falling due within future years. In March 2016 BEIS published The Allocation of Science and Research Funding 2016-17 to 2019-20, which shows continued funding for STFC for this period. On the basis of this publication, STFC has no reason to believe that future funding will not be forthcoming and therefore the accounts are produced on a going concern basis. Confirmation of the 2017-18 allocation was received from BEIS in March 2017 detailing the STFC ring-fenced budgets.

The Higher Education & Research Bill received its first reading in May 2016 setting out the government's intention regarding the research council's future, with the creation of a single executive non-department public body operating at arm's length from Government – UK Research and Innovation (UKRI). The Bill states the Government will ensure the seven research discipline areas continue to have strong and autonomous leadership, and that UKRI will incorporate the assets, liabilities and functions of the seven Research Councils, Innovate UK, and HEFCE's research funding. The names and brands of the Research Councils and Innovate UK will be retained amongst a number of other protections. The bill received royal assent on the 27th April 2017. On the strength of this information, the accounts have been prepared on a going concern basis.

## EFFICIENCY PROGRAMME

From 2011-16 the Research Councils implemented an efficiency programme to drive down the costs and overheads associated with research. The efficiency savings derived from this programme were re-invested in research.

In the spring of 2011 RCUK published *Efficiency 2011-15: Ensuring Excellence with Impact* describing how the Research Councils would implement the recommendations in Sir William Wakeham's report *Financial Sustainability and Efficiency in Full Economic Costing of Research in UK Higher Education Institution*. The efficiency savings are being applied to both research grants and fellowships awarded via competitive routes to research organisations and also to Research Council institutes.

The efficiency programme ended in March 2016 and during its five years achieved savings of £545 million, exceeding the planned target. This figure will rise to over £610 million over the next few years as the ongoing contributions from the efficiency savings deducted at source from grants awarded during this period are included. Further details of the efficiency programme can be found at [www.rcuk.ac.uk/research/efficiency/efficiency2011/](http://www.rcuk.ac.uk/research/efficiency/efficiency2011/) and [www.rcuk.ac.uk/Publications/policy/Efficiency2011/](http://www.rcuk.ac.uk/Publications/policy/Efficiency2011/)

Alongside these measures the Research Councils also introduced changes to the requests for equipment on grants, including asking applicants to demonstrate how the usage of the equipment will be maximised. RCUK has worked with university partners to develop options to promote and assist equipment sharing, including exploring the issues around asset registers. There is good anecdotal evidence of significant progress by universities to promote sharing, and of very efficient usage of large pieces of experimental equipment.

## PERFORMANCE SUMMARY

By monitoring and evaluating our impact we track our progress towards delivering our Strategy. We consistently meet our targets including helping to sustain the UK's global research ranking, developing our campuses and key high-tech clusters on them, and developing our strategic partnerships. Additional targets include organisational improvement through better business processes and planning, and continuing to reduce our costs and improve efficiencies.

## PERFORMANCE ANALYSIS

---

In 2016 STFC published its *Delivery Plan for the Period 2016-2020*. During this period STFC will deliver high quality, internationally leading, data-intensive research providing a new understanding of the structure and evolution of the universe and addressing 21st century challenges, by:

- Continuing to deliver an excellent programme in particle physics, nuclear physics and astronomy.
- Providing UK academia and industry with access to international world-leading science facilities.
- Delivering new Government commitments to next-generation flagship European facilities ESS and the European X-ray Free Electron Laser (XFEL), and establishing the UK-headquartered SKA as the next big global inspirational science project.

We will realise the innovative capacity of STFC's science and research facilities to support the growth of a high-technology UK economy by:

- Developing opportunities to engage industry and other partners earlier in the development of technology solutions.
- Increasing innovation output from our funded activities, including from funded university programmes and STFC laboratories.
- Developing and implementing plans with our campus partners to deliver high value job creation and economic growth for the benefit of the UK.
- Establishing the Higgs Centre for Innovation in Edinburgh.

Finally, we will help to deliver a scientific and technically skilled workforce that will sustain the UK as one of the world's leading research nations and support the growth of a high technology economy by:

- Delivering a skills programme that reflects modern science and engineering requirements by coupling traditional science, technology, engineering and mathematics (STEM) disciplines with skills in software engineering, technology development and innovations in data science.
- Delivering a programme that increases the number of apprentices and graduates that join STFC's programmes.
- Delivering a strong programme of public engagement in inspirational science to sustain the STEM skills pipeline.

---

## HOW STFC MANAGES PERFORMANCE

---

Performance against the targets, milestones and metrics defined in STFC's *Delivery Plan* is monitored routinely by BEIS through the use of a quarterly 'Dashboard' which includes a 'traffic light' reporting system. The Dashboard is also reviewed by Council. We also have a range of output metrics (plus a set of indicators that are common across all Research Councils) that are reported in our annual *Impact Report*, which is available online: [www.stfc.ac.uk/files/stfc-impact-report-2016/](http://www.stfc.ac.uk/files/stfc-impact-report-2016/)

---

## THE DEVELOPMENT AND PERFORMANCE OF STFC IN 2016-17

---

Progress against our strategic goals is highlighted below.

### WORLD-CLASS RESEARCH

---

Our frontier research in astronomy, particle physics and nuclear physics ranks first in the world, measured by citation impact. We invested more than £160 million in 2015-16<sup>1</sup> in these areas, supporting a community of more than 1,000 academics in 86 universities<sup>2</sup>.

UK researchers played a major role in supporting the Advanced Laser Interferometer Gravitational-Wave Observatory (LIGO), which in 2015 detected gravitational waves for the very first time and announced a second

---

<sup>1</sup> STFC Impact Report 2016. Available at [www.stfc.ac.uk/files/stfc-impact-report-2016/](http://www.stfc.ac.uk/files/stfc-impact-report-2016/) Accessed June 2017

<sup>2</sup> STFC Impact Report 2016. Available at [www.stfc.ac.uk/files/stfc-impact-report-2016/](http://www.stfc.ac.uk/files/stfc-impact-report-2016/) Accessed June 2017

detection in June 2016. The project was awarded a prize worth £2 million for extraordinary scientific achievements<sup>3</sup>, and UK universities have been translating the technology from the project into areas such as stem cell technology and improved surgical safety.

Our UK facilities deliver considerable impact, and some examples this year are: Diamond Light Source (Diamond, or DLSL) celebrated its 5000th publication<sup>4</sup> whereby researchers published the discovery of a genetic trigger behind birth defects; ISIS supported the pharmaceutical industry in the delivery of more effective drugs and in the development of new antibiotics; and the Central Laser Facility (CLF) recently delivered a £10 million pulsed laser system, the most advanced high power laser of its kind in the world, for the HiLASE research facility in Prague<sup>5</sup>.

Working with the European Space Agency (ESA) and the United States' National Aeronautics and Space Administration (NASA) on hundreds of missions, RAL Space has been central to the UK space industry for over 30 years. The sector has doubled over the past decade, to be valued at £13.7 billion in 2014-15<sup>6</sup>. RAL Space is playing a key role in the EU Copernicus earth observation system and has built a dedicated facility for pre-flight calibration. The Copernicus programme is expected to create 48,000 jobs and a £27 billion<sup>7</sup> boost to Europe's GDP<sup>8</sup> by 2030<sup>9</sup>.

## WORLD-CLASS INNOVATION

The Harwell and Sci-Tech Daresbury campuses currently host more than 300 enterprises and support more than 6,000 jobs, creating the right conditions for high-tech small and medium-sized enterprises (SMEs) to grow.

This year, tenant companies at Sci-Tech Daresbury created nearly 100 jobs, attracted £15 million of investment (£181 million since 2010) and developed 98 new products (754 since 2010)<sup>10</sup>. Sci-Tech Daresbury Campus contributed an estimated £163 million gross GVA<sup>11</sup> to the UK economy in 2014-15, and supported almost 2,000 jobs across the UK. When the campus masterplan is fully realised, this could add £660 million to Sci-Tech Daresbury's gross impact by 2040<sup>12</sup>.

Between 2010 and 2016<sup>13</sup>, over £100 million was invested into companies supported by STFC Business Incubation programmes and over 266 new jobs were created. In 2016 alone, companies have been developing 64 new products and services with 11 companies filing patents, firmly indicating the success of this unique incubation model.

MIRICO Ltd, an STFC spin-out in 2015, is adapting technology originally designed for exploring Mars for a range of commercial applications in environmental monitoring, detecting counterfeit foods and disease diagnostics. This year, a £1 million investment<sup>14</sup> from the Rainbow Seed Fund<sup>15</sup> and Longwall Ventures will bring MIRICO's product closer to market.

<sup>3</sup> [www.ligo.caltech.edu/news/ligo20160504](http://www.ligo.caltech.edu/news/ligo20160504) Accessed June 2017

<sup>4</sup> www.diamond.ac.uk/lHome/News/LatestNews/2016/06-10-16.html Accessed June 2017

<sup>5</sup> www.stfc.ac.uk/news/journey-through-europe-1-000-miles-later-and-10-million-laser-contract-is-complete/ Accessed June 2017

<sup>6</sup> www.ukspace.org/wp-content/uploads/2015/07/Space-IGS-Report-Update-July-2015.pdf Accessed June 2017

<sup>7</sup> Converted from Euros [www.xe.com/currencyconverter/convert/?From=EUR&To=GBP](http://www.xe.com/currencyconverter/convert/?From=EUR&To=GBP) 7 October 2016.

<sup>8</sup> GDP refers to Gross Domestic Product, which is total value of all the goods a region has produced and the services it has provided in a particular year.

<sup>9</sup> ec.europa.eu/growth/tools-databases/newsroom/cf/itemdetail.cfm?item\_id=7888&lang=en Accessed July 2017.

<sup>10</sup> The Sci-Tech Daresbury Campus survey reports on company sales figures comparing last financial year with the previous financial year. Other information around recruitment, investment collaboration etc. the figures report activity in 2015.

<sup>11</sup> GVA refers to Gross Value Added which is a key measure of wealth in an economy.

<sup>12</sup> The Sci-Tech Daresbury Campus Impact Study STFC/SQW Ltd, publication in 2017.

<sup>13</sup> Only 63% of companies have contributed data for 2016 due to the timing of this report.

<sup>14</sup> midven.co.uk/rainbow-seed-fund-backs-new-stfc-spin-out-mirico/ Accessed June 2017.

<sup>15</sup> rainbowseedfund.com/ Accessed June 2017.

## WORLD-CLASS SKILLS

---

We play a key role in attracting young people to follow STEM careers. Applications to university physics courses continue to rise and in 2015 physics applications increased by nearly 3% from the year before, up 32% between 2008 and 2015<sup>16</sup>.

We invested £23.2 million in postgraduate training and fellowships in particle physics, nuclear physics and astronomy, including 229 new PhD studentships, bringing the current cohort to 766<sup>17</sup>. Working in frontier science gives our students a range of transferrable skills applicable to both the research base and high-tech industries, for example in data-intensive science. 38% of STFC graduates move into industry, whilst 38% remain in a research post at university, and 8% get a post in the third sector, for example in a charity or not-for-profit organisation.

STFC's apprenticeship scheme offers structured training to over 50 people<sup>18</sup> starting their career with an apprenticeship. Whether it is engineering, computing and IT, or electrical and mechanical apprenticeships, a structured programme of training supports the apprentices in gaining qualifications, ranging from foundation degrees to NVQs and HNDs.

Further information about STFC's impact can be found in our annual Impact Report and in the Evaluation Studies that we publish on a regular basis. Recently published studies include *STFC Impact Report 2016*<sup>19</sup> and *ISIS Neutron and Muon Source Lifetime Impact Report*<sup>20</sup>.

## PERFORMANCE TARGETS ACHIEVED

---

STFC also reports on operational performance targets in our facility operations. The following figures are for 2016-17:

Lasers at our CLF include the Octopus, Ultra, Vulcan, Artemis and Gemini systems. In 2016-17, the CLF scheduled 305 weeks of user time (including eight weeks of commercial access) for 102 unique experiments. The CLF recorded a user satisfaction of 95.3% and reliability of 93.2%, both against a target of 85%. The CLF availability was 45% over and above the agreed 100% delivery target.

At Diamond, in its 10th full year of operation, 5347 external user visits were made by academia and industry, with an additional 3907 remote users, for a total 2242 experiments.

During 2016-17, STFC ensured the UK research community had access to Europe's major research facilities: 21.59% of public access to the neutron source at the Institut Laue-Langevin (ILL) and 10.3% of public access to the European Synchrotron Radiation Source (ESRF), both in Grenoble, France.

2016 was an excellent year for CERN, with unprecedented performance of the accelerator complex, and many other achievements across the international organisation's range of science and innovation activities. The Large Hadron Collider (LHC) has continued to perform above expectation over its second physics run (2015-2018).

The LHC is currently in the middle of Physics Run 2 and delivering collision energies of 13 TeV, almost double the collision energy of its first physics run. The LHC experiments took data efficiently throughout the year, with more than 90% of the delivered luminosity used in physics analyses.

---

<sup>16</sup> UCAS 2015 End of Cycle Report Available at: [www.ucas.com/sites/default/files/eoc\\_data\\_resource\\_2015-dr3\\_010\\_03.pdf](http://www.ucas.com/sites/default/files/eoc_data_resource_2015-dr3_010_03.pdf) Accessed June 2017

<sup>17</sup> STFC Impact Report 2016 Available at [www.stfc.ac.uk/files/stfc-impact-report-2016/](http://www.stfc.ac.uk/files/stfc-impact-report-2016/) Accessed June 2017

<sup>18</sup> STFC internal data.

<sup>19</sup> STFC Impact Report 2016 Available at [www.stfc.ac.uk/files/stfc-impact-report-2016/](http://www.stfc.ac.uk/files/stfc-impact-report-2016/) Accessed June 2017

<sup>20</sup> [www.stfc.ac.uk/files/impact-publications/isis-neutron-and-muon-source-lifetime-impact-report/](http://www.stfc.ac.uk/files/impact-publications/isis-neutron-and-muon-source-lifetime-impact-report/)

## SUSTAINABLE DEVELOPMENT

This is the STFC Sustainability Report in accordance with HM Treasury reporting guidelines for public sector sustainability reporting<sup>21</sup>. This report sets out STFC's UK environmental performance against a common basket of metrics: greenhouse gas emissions; water usage and waste disposal, and their corresponding financial data.

In line with HM Treasury (HMT) sustainability reporting guidelines<sup>1</sup> STFC facilities located overseas<sup>22</sup> and STFC shareholdings in scientific facilities in the UK and overseas are excluded from the data presented.

### GREENHOUSE GAS EMISSIONS

Greenhouse gas emissions <sup>a</sup>		2013-14	2014-15	2015-16	2016-17	
Non-financial indicators (1000t CO <sub>2</sub> e)	Total gross emissions	74.67	66.35	70.29	60.15	
	Total net emissions	74.67	66.35	70.29	60.15	
	Gross emissions Scope 1 (direct)	Gas & LPG	3.32	2.70	2.66	1.64
		Owned transport	0.08	0.09	0.08	0.08
		Fugitive emissions <sup>c</sup>	1.52	1.51	1.52	1.52
	Gross emissions Scope 2 and 3 (indirect)	Electricity <sup>b</sup>	69.25	61.53	65.55	56.46
		Business travel	0.50	0.53	0.48	0.46
	Electricity: non-renewable	128.01	118.3	131.0	125.7	
	Electricity: renewable	0.0	0.0	0.0	0.0	
	Gas	17.82	14.58	14.42	8.86	
Related energy consumption (million kWhr)	LPG	0.03	0.02	0.03	0.03	
	Other	0	0	0	0	
Financial indicators (£ million)	Expenditure on energy	11.35	10.40	10.6	11.1	
	CRC Licensed expenditure	0.83	1.33	1.17	0.98	
	Expenditure on accredited offsets	0	0	0	0	
	Expenditure on business travel	0.84	0.95	0.92	0.99	

Year	Fugitive	Business Travel	Gas & LPG	Electricity	Total
2013-14	~1	~0	~0	~73	~74.67
2014-15	~1	~0	~0	~66	~66.35
2015-16	~1	~0	~0	~69	~70.29
2016-17	~1	~0	~0	~56	~60.15

a. Data omit a small contribution to STFC's overall greenhouse gas emissions arising from its shareholding in the UK Shared Business Service Ltd.

b. STFC science facilities, for example ISIS, CLF and super computers, account for a large proportion of STFC's electricity usage. The ISIS neutron science facility accounts for two thirds of STFC electricity consumption. Variation in the number of days ISIS operates due to maintenance and upgrade has a significant impact on STFC electricity consumption.

c. Fugitive emissions added as per 2015-16 Treasury guidance.

STFC greenhouse gas emissions are dominated by the use of electricity. The operation of the ISIS spallation neutron source at the Rutherford Appleton Laboratory accounts for some two-thirds of all STFC electricity usage. While the annual electrical consumption is affected by the number of days during which ISIS runs<sup>23</sup>, the facility is constantly looking at ways to reduce consumption.

Following a review by STFC's Energy Manager, a number of projects have been identified as 'spend to save': combined heat and power units at two sites and installation of local monitoring and control equipment. Two major building refurbishments have included measures to reduce consumption such as building cladding and passive infrared sensor (PIR) lighting sensors.

As a major electricity user, STFC is registered with the Environment Agency (EA) administered CRC Energy Efficiency scheme and purchases allowances based on carbon emissions.

<sup>21</sup> See HMT Guidance 2015-16 Sustainability Reporting in the Public Sector

<sup>22</sup> Key 2016-17 data for STFC overseas site: ING Canaries: electricity 1.23M kWh; water 60m<sup>3</sup>; landfill 2.4tes

<sup>23</sup> ISIS operating days: 2013/14 – 174; 2014/15 – 102; 2015-16 – 176; 2016-17 – 153

## WASTE MANAGEMENT

Waste <sup>a</sup>		2013-14	2014-15	2015-16	2016-17	
Non-financial indicators (tonnes)	Total waste	961	998	878	951	
	Hazardous waste <sup>b</sup>	177	82	46	157	
	Non-hazardous waste	Landfill <sup>e</sup>	183	220	134	90
		Reused/recycled <sup>c</sup>	559	647	644	644
		Composted <sup>d</sup>	27	25	19	25
		Incinerated with energy recovery	14	24	35	35
		Incinerated without energy recovery	-	-	-	-
Financial indicators (£k)	Total disposal cost	240.69	87.63	92.19	109.97	
	Hazardous waste <sup>b</sup>	280.08	55.78	36.86	72.50	
	Non-hazardous waste	Landfill	27.97	36.62	13.83	8.40
		Reused/recycled <sup>c</sup>	-72.62	-8.55	39.05	23.47
		Composted	5.56	3.78	2.45	4.37
		Incinerated with energy recovery	-	-	0.07	1.24
		Incinerated without energy recovery	-	-	0	0

**Waste (tonnes)**

Year	Other	Landfill	Hazardous	Reused/Recycled waste	Total
2013-14	~50	~150	~100	~400	~900
2014-15	~50	~150	~100	~400	~950
2015-16	~50	~100	~50	~450	~850
2016-17	~50	~100	~100	~450	~900

Legend: Other (purple), Landfill (red), Hazardous (blue), Reused/Recycled waste (green)

a. All reported weights are based on waste management contractor calculated averages for the weight of standard containers/skips, and omits a small contribution to STFC's waste arising from its shareholding in the UK Shared Business Service Ltd.

b. Hazardous waste data include weight and costs for disposal of radioactive wastes. 2013-14 data include a shipment of 155 tonnes of active concrete shielding. 2016-17 data include shipments of around 100 tonnes of waste from the ISIS facility.

c. Variation in the weights of material recycled reflects volumes of scrap metals arising from the disposal or decommissioning of current or past science facilities. Variation in the cost/value of scrap metals is subject to prevailing metal prices.

d. Two STFC sites, Rutherford Appleton and Daresbury Laboratories, recycle unused food waste from their restaurants.

e. Excludes waste from large construction projects as there is no mechanism to extract the waste costs from the overall project costs.

Whilst STFC's performance in this area is, as a result of its disparate science programmes, generally variable, there has been continued reduction in the proportion of waste going to landfill and an increased proportion being recycled. This is partially due to the improved performance of its waste contractors diverting waste from landfill to recycling and energy recovery. It is to be hoped that the mobilisation of a new large 'soft services' contract this year will enable us to continue with this trend.

## FINITE RESOURCE CONSUMPTION

Finite resource consumption: Water <sup>a</sup>		2013-14	2014-15	2015-16	2016-17	
Non-financial indicators (000 m <sup>3</sup> )	Total consumption	155.7	144.56	153.61	127.41	
	Water consumption (office estate)	101.4	105.46	97.51	73.99	
	Supplied	0	0	0	0	
	Abstracted	-	-	-	-	
	Per FTE <sup>b</sup>	54.3	39.1	56.1	53.4	
	Water consumption (non-office estate)	0	0	0	0	
	Supplied <sup>c</sup>	272.47	321.16	339.39	291.67	
	Abstracted	175.47	234.29	215.44	169.39	
	Water supply costs (non-office estate)	97.00	88.87	123.95	122.28	
Financial indicators <sup>d,e</sup> (£k)	Total cost					
	Water supply costs (office estate)					
	Water supply costs (non-office estate)					

**Water ('000 m<sup>3</sup>)**

Year	Annual consumption ('000 m <sup>3</sup> )
2013-14	155.7
2014-15	144.56
2015-16	153.61
2016-17	127.41

■ Annual consumption

- a. Data omit a small contribution to STFC's overall water usage arising from its shareholding in the UK Shared Business Service Ltd.
- b. Current water metering does not allow accurate reporting of office and non-office estate consumption and therein the reporting of comparable normalised water consumption data by FTE.
- c. STFC science facilities account for a large proportion of water consumption - employed for equipment cooling and generating deionised water. The largest single non-office water consumer is ISIS whose data are presented.
- d. Total cost of water supply and disposal.
- e. Data for 2016-17 include a number of estimates due to continued failure of metering equipment and billing issues.

This year saw continued problems with water meter failures and billing issues with utility firms. STFC continues to work with its utility suppliers to ensure meters are maintained and billing is normalised.

## ENVIRONMENTAL MANAGEMENT

STFC has a published *Environmental Policy* supported by a documented environmental management system which continues to be developed consistent with recognised environmental management standards such as ISO14001. STFC personnel at Polaris House, Swindon, are already working under a registered ISO14001 management system managed by the Natural Environment Research Council (NERC).

The STFC Environmental Policy was reviewed and reissued by the STFC CEO for 2016-17, and again supported by a focussed set of corporate environmental improvement targets communicated to all staff:

1. Agree and report against new Environment Agency permit and establish project for legacy waste disposal at Rutherford Appleton Laboratory.
2. Review STFC estate energy usage.
3. Environmental 'duty of care' audits.

Progress on 2016-17 Environmental Improvement objectives was good:

1. Following considerable effort and discussion a new permit was agreed with the Environment Agency
2. STFC's Energy Manager has presented a number of 'spend to save' projects to management for consideration.
3. Following the mobilisation of contracts for STFC's soft services which include waste, the two service contractors were audited and given a 'moderate assurance' rating.

STFC's core focus remains the operation of its scientific facilities but has continued to seek and deliver environmental improvements where it is economic to do so. The refurbishment of one large STFC science facility building resulted in a number of significant improvements, the:

- Recycling of 120 tonnes of steel.
- Removal, by a licensed contractor, of 90 tonnes of asbestos cladding.
- Installation of thermally insulated cladding enabling the temperature control of the building to be held within 2°C.

STFC has continued work on 'Energy Efficient Computing' with the purchase of an 'Asian Cat' supercomputer based around a large network of ARM v8 energy efficient microprocessors. Work has also continued on data centre infrastructure management that allows automated monitoring of power, temperature and humidity in its computer data halls.

Signed by

A handwritten signature in black ink that reads "Brian Bowsher". The signature is fluid and cursive, with "Brian" on the left and "Bowsher" on the right, connected by a flourish.

Dr Brian Bowsher

Chief Executive  
28 June 2017

## ACCOUNTABILITY REPORT

---

### CORPORATE GOVERNANCE REPORT

---

#### DIRECTORS' REPORT

---

##### STFC COUNCIL

---

Council is the governing body for STFC, and is established by the Royal Charter. Its members are appointed by the Secretary of State for BEIS. The CEO is a full member of Council. The Council is comprised of a combination of non-executive directors from academia and industry.

Professor Sir Michael Sterling DEng, CEng, FREng, FAEng(CZ), FIEE, FInstMC, CCMi, FRSA (Chair)  
Mrs Gill Ball OBE

Dr Brian Bowsher FRSC, FInstP, FInstMC (Hon)

Mr Gerard Connell

Professor Karen Holford FREng, FLSW, Ceng, FIMechE

Professor Richard Kenway OBE, FRSE, FInstP, FLSW, CPhys

Professor Carole Mundell

Professor Jordan Nash FInstP

Professor David Price FGS

Professor Tony Ryan OBE

Mr Ian Taylor MBE

Dr Richard Worswick FRCS

Members' biographies and register of interest (see also the note about related parties on page 73) can be found on the STFC website: [www.stfc.ac.uk](http://www.stfc.ac.uk).

#### STFC EXECUTIVE BOARD

---

The Executive Board is chaired by Dr Brian Bowsher, the Chief Executive Officer (CEO) of STFC. The Council appoints the membership of the Executive Board, with the exception of the CEO who is appointed by the Secretary of State for BEIS. Dr Brian Bowsher took over the role of CEO from Professor John Womersley on 1 November 2016. The CEO is ultimately responsible to Council for the management of the organisation and the delivery of its mission.

The CEO has a specific responsibility for ensuring that Council is fully briefed on all relevant matters in a timely manner. Inter alia the Executive Board is responsible for the delivery of the following, within the strategic direction and guidance set by Council:

- The science programme.
- International subscriptions and engagement.
- Financial management and planning.
- The economic impact agenda.
- The campuses.
- Outreach, external relations and communications.

Current membership is as follows:

Dr Brian Bowsher – CEO

Dr Tim Bestwick – Executive Director, Business and Innovation

Professor Grahame Blair – Executive Director, Programmes

Mrs Diana Chaloner – Executive Director, Human Resources

Dr Sharon Cosgrove – Executive Director, Strategy, Planning and Communications

Mr Neil Phimister – Executive Director, Finance

Mr Gordon Stewart – Executive Director, Corporate Services

Dr Andrew Taylor – Executive Director, National Laboratories

## AUDITORS

---

Internal audit was provided by the Government Internal Audit Agency (GIAA).

The accounts of the Council were audited by the Comptroller and Auditor General of the National Audit Office (NAO), under the terms of Section 2(2) of the Science and Technology Act 1965.

No non-audit work was undertaken by the NAO during 2016-17.

So far as the Accounting Officer is aware, there was no relevant audit information of which the Council's auditors were unaware. The Accounting Officer had taken all steps that he ought to have taken to make himself aware of any relevant audit information and to establish that the Council's auditors were aware of that information.

## CHARGING

---

The Council has complied with the charging requirements set out in HM Treasury and Office of Public Sector Information guidance, where they are appropriate.

## FREEDOM OF INFORMATION

---

During 2016-17 STFC received 33 formal requests for information under the Freedom of Information (FOI) Act 2000 and responded to most requests within the required 20-day time limit. Five requests required extensions of time. No internal reviews were required.

STFC publishes responses to FOI requests on its website.

The STFC Publication Scheme and Information Charter are available at:

[www.stfc.ac.uk/foi.aspx](http://www.stfc.ac.uk/foi.aspx)

## HEALTH AND SAFETY

---

STFC continues to maintain a safe and healthy working environment at its laboratories.

Health and safety (H&S) management is based on the establishment of clear line management responsibility for H&S. In addition the Chief Executive appoints directors at each of the major STFC laboratories to maintain independent oversight of site H&S, to monitor the implementation of Council policy and to bring to his attention to the need for any action to improve H&S performance.

H&S committees are a key component of the STFC safety management system. These meet regularly on corporate, site and departmental levels, and include management and employee representatives. They consider incident reports, safety statistics and provide a forum through which employee safety representatives can raise issues. Independent of the departmental and site safety committees, the STFC Safety, Health and Environment (SHE) Committee, chaired by the Executive Director of Corporate Services, provides a focus for reviewing and developing the overall STFC SHE management system, including approving new code launches.

The STFC SHE group, including site radiation protection advisers (RPAs), radioactive waste advisers (RWAs), and occupational health professionals monitor corporate SHE performance against a basket of input and output H&S metrics, and provide advice to management and H&S committees.

During 2016-17 STFC made further progress in developing its SHE management systems:

- Corporate STFC wide annual H&S (and environmental) improvement objectives were communicated to all staff by the STFC Chief Executive helping to shape Departmental SHE improvement plans which provide the focus for driving STFC SHE improvement.
- During 2016-17 the SHE compliance audit programme continued to provide independent assurance to senior management of the implementation of the STFC SHE management system and recommend improvements. The documented SHE management system (SHE Codes) continue to be revised and updated to meet audit findings, organisational need and good practice.
- A focus on contractor safety management has resulted in a new STFC bespoke one-day Contractor Safety Management course for technical managers, a major review of the contractor management code and is supported by site specific contractor safety management handbooks ensuring contractors are clear of STFC expectations for safety management and their role.
- Improving communication on SHE matters remains a key focus. Learning from SHE incidents was shared using ‘What, Why, Learning (WWL)’ posters, SHE notices, the SHE website, and ‘SHE information’ posters – during 2016-17, ten WWL posters and SHE information posters were distributed across STFC sites and our successful ‘SHE fairs’ were used to engage with staff in a novel way on SHE matters.
- There has been significant investment in STFC bespoke online SHE training, including the installation of an online learning management system, Totara, to manage online training delivery more effectively. During 2016-17 six new BiteSize SHE code refresher packages were launched, refreshing SHE code awareness.
- During 2016-17, STFC SHE Group delivered a very extensive programme of classroom and online training courses based on our ‘SHE training catalogue’ of ~60 courses for staff and others working at STFC sites. The programme was developed to meet the needs of a changing staff population and regulatory requirements. More than 4800 course places were delivered on 42 different courses during 2016-17 of which 20% were delivered online.
- During 2016-17 the principal STFC laboratories – Daresbury Laboratory and Rutherford Appleton Laboratory – jointly received the Royal Society for the Prevention of Accidents (RoSPA) ‘Order of Distinction’ for their health and safety management practices and overall health and safety performance.

Accident and near-miss reporting and investigation continue to be an important driver of improvement in the STFC SHE management system, and provide the basis of objective reporting of health and safety performance. The reporting of learning opportunities (near misses and other non-injury incidents) remains strong and provides essential opportunities to improve STFC safety by minimising the potential for future incidents.

STFC injury statistics for the financial years 2015-16 and 2016-17 are presented in the following table.

Statistics	2015-16	2016-17
Total injuries to employees	71	60
Total injuries to contractors	20	7
Total injuries to users/visitors/tenants	15	23
<b>All injuries</b>	<b>106</b>	<b>90</b>
Reportable injuries to employees	2	2
Reportable injuries to contractors	2	1
Reportable injuries to users/visitors/tenants	0	1
<b>All reportable injuries</b>	<b>4</b>	<b>4</b>
<b>Reportable injuries per 1000 employees</b>	<b>1.04</b>	<b>0.98</b>

The total number of injuries to STFC staff, contractors and others working at STFC sites in 2016-17 was 90, the lowest on record. Of these injuries, four were *Reporting of Injuries, Diseases and Dangerous Occurrences Regulations* (RIDDOR) reportable and one asbestos related incident was reported as a RIDDOR Dangerous Occurrence, this is consistent with historic STFC RIDDOR performance.

When STFC was established, liability for employment-related matters and historical liabilities transferred to it from its operational sites. The buildings at these sites date from the period when asbestos was a widely used building material, primarily in lagging and insulation. Managed early removal exercises were undertaken 20-30 years ago but there are still significant quantities of asbestos in the fabric of buildings and, in some cases, there are small quantities of debris from previous removal. STFC is strengthening its policy towards asbestos in the light of

previous regulatory engagements and is changing its asbestos management policy to commence the active removal of asbestos from its sites.

Occupational health teams at STFC sites, in addition to providing employment, give hazard-specific health screening and surveillance, pre-employment health screening and managing first aid teams. They continue to participate in and support a range of national health initiatives including: 'No smoking Day'; 'Know your Numbers' (blood pressure awareness); and other services promoting mental, sexual, traveller and eye health, and providing individual lifestyle advice. Hazard-specific health screening has reported no instances of occupational ill health.

## RADIOLOGICAL SAFETY

As part of STFC's on-going commitment to managing and reducing the radiation exposure of individuals in line with 'As low As Reasonably Practicable' (ALARP) principles, radiation protection advisors/radioactive waste advisors (RPAs/RWAs) provided the focus for the on-going revision and application of radiation SHE codes, radiation local rules, completion of prior risk assessments, and development of safe systems of work, with radiation protection supervisors (RPSs) for all work involving ionising radiation hazards. A major update to the radiation SHE codes addressed radiation protection and dosimetry for STFC employees working at other sites worldwide.

The RPS Network continues to meet and encourages communication between the RPSs and RPA/RWAs within STFC. The networks assist RPSs sharing information and learning experiences. It also provides the RPAs with an opportunity to communicate information from external sources, e.g. regulators and professional networks. This includes the forthcoming update to the new *Ionising Radiations Regulations* in preparation for its implementation in January 2018.

RPAs/RWAs continue to develop and audit the implementation of STFC's radiation management SHE codes independently. Currently, in order to comply with STFC radiation permits, RWA advice is provided by external specialists. The internal audit programme provides a focus and impetus to improve STFC radiation management. The audit programme has identified non-compliances, mainly related to accountancy, with radiation SHE Codes that have been raised with relevant department directors.

Radon monitoring is being carried out in Royal Observatory Edinburgh and Daresbury Laboratory using passive monitors and a programme of active monitoring is being undertaken at Rutherford Appleton Laboratory in preparation of a full passive monitoring programme next year.

All statutory returns relating to STFC's radioactive pollution inventory and holding of radioactive materials, including HASS sources, were made to schedule to both the Environment Agency (EA) and UK Safeguards Office/European Atomic Energy Community (EURATOM).

Increasing focus on radioactive material security and the testing of associated contingency plans resulted in a series of exercises employing the advice of STFC RPA/RWAs at Rutherford Appleton Laboratory and Daresbury Laboratory in respect to the management of incidents involving radioactive materials. These exercises and the lessons learned have improved our capability and preparedness in the event of such incidents.

Quarterly radiation management reports continue to be enhanced to provide the most appropriate information available to allow STFC management to control radiological risks.

## DARESBURY LABORATORY

The Daresbury Laboratory radiation protection officer (RPO) is the first point of contact for radiation issues and responsible for providing operational health physics support: management of radioactive materials; radiation surveys; provision of personal dosimetry; and management of health physics instrumentation, for the Daresbury Laboratory site. The RPO and RPA continued to provide support to radiation test facilities, including the continued commissioning of CLARA and ESS, and radiation surveys were carried out for X-ray-generating equipment and at key radiation test facility commissioning milestones.

The collaboration between STFC, the Department of Nuclear Medicine at the Royal Liverpool University Hospital Trust and Liverpool University continues to provide trainee medical physicists with access to advanced medical imaging training outside the hospital environment; thus saving valuable patient time by removing the need for training to be undertaken on hospital equipment. This collaboration has evolved to support of the development of new technology that refines the patient's dose during iodine-131 treatment.

There are currently no classified radiation workers at Daresbury Laboratory, however, ~40 non-classified workers were provided with regular personal dosimetry as part of the Laboratory's demonstration that doses are ALARP. The majority of recorded doses to non-classified workers were below minimum detectable limits.

A new Environment Agency (EA) site open source permit for accumulation and recycling or disposal of radioactive materials and wastes was agreed and issued.

### RUTHERFORD APPLETON LABORATORY

RPA advice and assistance was provided for a wide range of new experiments and projects including: Muon Ionisation Cooling Experiment; new or modifications to existing ISIS Target Station 1 and 2 beam lines; Target Station 1 project; Front End Test Stand; CLF in respect to future high power laser facilities; the STFC Dark Matter Facility in Boulby Mine; radioactive waste management; characterisation of radioactive waste; and X-ray-producing equipment critical examinations.

After considerable work, involving a Best Available Techniques assessment of disposal options, a waste disposal planning, and waste characterisation studies, a new site EA permit was obtained for the accumulation and recycling or disposal of legacy and operational radioactive materials and waste.

Landauer Inc. provides Rutherford Appleton Laboratory with an HSE approved dosimetry service making statutory returns to both the HSE's Central Index of Dose Information and Public Health England's National Registry for Radiation Workers. Annual, calendar year, radiation doses for ISIS classified workers remained low and within its dose investigation level of 3 mSv/year and for other Rutherford Appleton Laboratory employees and contractors below their 1 mSv/year dose investigation level.

The following table presents the results of personal radiation dose monitoring (including contractors) conducted at Rutherford Appleton Laboratory:

Year	Dose (mSv)							Total Persons
	0.00-0.09	0.10 – 0.49	0.50 – 0.99	1.00 – 1.99	2.00 – 2.99	3.00 – 3.99	>3.99	
2015	351	125	14	5	1	0	0	496
2016	356	170	10	4	0	0	0	540

The dosimetry results are comparable with previous years, but with a decrease in doses in the higher ranges. This positive result reflects a decreased radiation workload.

The ISIS Facility at Rutherford Appleton Laboratory, through its normal operation, produces small quantities of radioactive solid, liquid and gaseous wastes. The gaseous wastes, mainly tritium and short-lived radioactive nuclides, are discharged into the atmosphere via authorised and monitored ventilation stacks. The annual measured gaseous radiation levels of 160GBq of tritiated water vapor and 7.0TBq of other nuclides were typical of previous years and well within EA permitted annual limits of 600GBq and 100TBq respectively.

Annual disposals of solid and liquid radioactive wastes, via approved and licensed disposal routes, from Rutherford Appleton Laboratory were in compliance with its EA Permit: 0.98GBq tritiated water and 0.1MBq beta/gamma to sewer; 18GBq tritium; and 78MBq beta/gamma solids.

STFC's radioactive sealed source accountancy software has been upgraded to improve information for sealed source owners and management information with regard to their security and testing.

## PERSONAL DATA INCIDENTS

During 2016-17 there have been two reportable incidents involving personal data. The following tables illustrate these using the structure and format establish by the Cabinet Office in 2008/09.

<b>Summary of protected personal data related incidents formally reported to the Information Commissioner's Office (ICO) in 2016-17</b>				
<b>Statement on information risk</b>	<p>STFC continues to implement the Security Policy Framework (SPF) as well as identify areas for improvement within its information security environment by implementing best practice from the likes of the Cyber Essentials Scheme, 10 Steps to Cyber Security and CESG's End User Device standards, based on the agreed STFC Information Security Risk appetite. Aspects of Information Security are independently audited and verified by the GIAA through focussed Information Security audits throughout the year and as part of the annual HMG Security Health Check independent review process.</p> <p>On-going Information Security development work and outcomes from a number of independent assurance reviews of information security this reporting year have been used to support and develop known areas for improvement. These include:</p> <ul style="list-style-type: none"> <li>• The development of a formal patching policy.</li> <li>• The development of a formal disposal policy, standards and processes.</li> <li>• Implementation of a phishing awareness exercise.</li> <li>• Implementation of a central security incident and event management system – monitoring central logs for malicious activity.</li> <li>• Implementation of the internal vulnerability scanning service.</li> <li>• Implementation of a configuration manager for inventory, patching and software distribution.</li> <li>• Implementation of cyber essentials standards within STFC.</li> <li>• The development of an intrusion detection/prevention system.</li> <li>• The development of a mobile device management system.</li> </ul> <p>STFC has arrangements in place to monitor and assess its information risks and will continue to identify and address any weaknesses and ensure continuous improvements of its systems.</p>			
<b>Date of incident (month)</b>	<b>Nature of incident</b>	<b>Nature of data involved</b>	<b>Number of people potentially affected</b>	<b>Notification steps</b>
6/10/16	Data breach at third party supplier	Dosimetry monitoring reports	1500	BEIS and ICO informed
10/11/16	Data breach of in-house system	Event booking data	12,000	BEIS and ICO informed
<b>Further action on information risk</b>	<ul style="list-style-type: none"> <li>• STFC is committed to continue strengthening the following information risk areas: <ul style="list-style-type: none"> <li>◦ Further strengthening appropriate information security and data protection requirements within relevant contracts.</li> <li>◦ Further expanding regular information security compliance checks of external service providers/processors.</li> <li>◦ Further improving the lifecycle management of personal data.</li> <li>◦ Further embedding regular checks and updates of web based application coding.</li> </ul> </li> </ul>			

Incidents deemed by the Data Controller (STFC) not serious enough to fall within the criteria for report to ICO or BEIS but recorded centrally within STFC are set out below. Small, localised incidents that do not involve STFC personal or sensitive data are not cited in these figures.

<b>Summary of other official personal data related incidents in 2016-17</b>							
<b>Category</b>	<b>Nature of incident</b>						<b>Total</b>
I	Loss of inadequately-protected electronic equipment, devices or paper documents from secured Government premises						NIL
II	Loss of inadequately protected electronic equipment, devices or paper documents from outside secured Government premises						NIL
III	Insecure disposal of inadequately protected electronic equipment, devices or paper documents						NIL
IV	Unauthorised disclosure						5
V	Other						2

<b>Year-on-year total numbers of protected personal data related incidents prior to 2016-17</b>						
<b>Total number of protected personal data related incidents formally reported to the Information Commissioner's Office, by category number</b>						<b>Total number of other protected personal data related incidents by category number</b>
	I	II	III	IV	V	Total
2016-17	0	0	0	0	2	2
2015-16	0	0	0	0	0	0
2014-15	0	1	0	0	0	1
2013-14	0	0	0	0	0	0
2012-13	0	0	0	0	0	0
2011-12	0	0	0	0	1	1

## POLITICAL AND CHARITABLE GIFTS

In March 2017 STFC paid £5,000 to sponsor the Conference for Undergraduate Women in Physics.

## STATEMENT OF THE ACCOUNTING OFFICER'S RESPONSIBILITIES

Under Section 2(2) of the Science and Technology Act 1965, the Council is required to prepare a statement of accounts for each financial year in the form and on the basis directed by the Secretary of State for Business, Energy and Industrial Strategy with the consent of the Treasury. The accounts are prepared on an accruals basis and must show a true and fair view of the Council's state of affairs at the year end and of its income and expenditure, recognised gains and losses and cash flows for the financial year.

In preparing the accounts, the Accounting Officer is required to comply with the requirements of the *Government Financial Reporting Manual (FReM)* and in particular to:

- Observe the Accounts Direction issued by the Secretary of State for Business, Energy and Industrial Strategy, including the relevant accounting and disclosure requirements, and apply suitable accounting policies on a consistent basis.
- Make judgements and estimates on a reasonable basis.
- State whether applicable accounting standards as set out in the *FReM* have been followed and disclose and explain any material departures in the financial statements.
- Prepare the financial statements on the going concern basis.

The Secretary of State for BEIS has designated the Chief Executive of STFC as Accounting Officer of STFC. The responsibilities of an Accounting Officer, including responsibility for the propriety and regularity of the public finances for which the Accounting Officer is answerable, for the keeping of proper records and for safeguarding STFC's assets are set out in '*Managing Public Money*'.

The Accounting Officer has taken all reasonable steps to ensure that he is aware of any relevant audit information and to ensure that the Council's auditors are aware of that information. As far as the Accounting Officer is aware, there is no relevant audit information of which the Council's auditors are unaware.

The Accounting Officer has taken all reasonable steps to ensure that the annual report and accounts as a whole is fair, balanced and understandable and has taken personal responsibility for the annual report and accounts and the judgements required for determining that it is fair, balanced and understandable.

## GOVERNANCE STATEMENT

### SCOPE OF RESPONSIBILITY

As Accounting Officer, I (Brian Bowsher) have personal responsibility for maintaining a sound system of internal control that supports the achievement of STFC's policies, aims and objectives. I ensure that STFC operates effectively, to a high standard of probity and safeguards the public funds and assets.

### THE PURPOSE OF THE GOVERNANCE STATEMENT

It is fundamental to my Accounting Officer's responsibilities to manage and control the resources in my charge. This Governance Statement is informed by the critical activities that I rely upon to maintain good stewardship over STFC activities. It supplements the accounts, providing a sense of STFC's performance, and of how successfully we cope with the challenges we face, now and into the future.

### THE ORGANISATION'S GOVERNANCE FRAMEWORK

As an independent non-departmental public body of BEIS, STFC is accountable to the public through Parliament for the funds it expends. Our mission is set out in the Royal Charter granted to us by HM Queen Elizabeth II. STFC's relationship and lines of accountability with BEIS are defined through a Management Statement and Financial Memorandum, which are subject to periodic review. STFC is compliant with the *Corporate Governance in central government departments – Code of Practice (July 2011)*.

### COUNCIL

The role of Council as the most senior body is set out in the Management Statement and its terms of reference<sup>24</sup>. The Council is appointed by the Secretary of State for Business, Energy and Industrial Strategy. Council membership is reflective of our stakeholder base with representation from academia, public service and industry.

Council has a critical role in support of the CEO as Accounting Officer for all aspects of STFC's affairs, and specific responsibility for the following:

- Determining the overall strategic direction of STFC.
- Long-term financial planning including the *10-Year Financial Plan*.
- The *Annual Report & Accounts (annual)*.
- The *Corporate Risk Register*.
- Ensuring probity and efficiency of governance.
- Overseeing high impact and/or high risk decisions, including approval and monitoring of major programmes and projects.
- Overseeing key relationships with Government, partner organisations and the community.

Council meets bi-monthly and is supported by its sub-groups who are consulted and provide advice in specific areas of business:

- a. Audit Committee – governance, control and risk management.
- b. Science Board – scientific strategy.
- c. Finance Committee – major new investments and monitoring progress.
- d. Remuneration Committee – senior staff remuneration.
- e. Innovation Advisory Board – STFC's existing and future innovation programme.
- f. Skills and Engagement Advisory Board – strategic overview of skills programme.
- g. Ethics Committee – advisory committee to Executive Board on ethical standards and issues.

All committee members and staff are required to declare any potential conflicts of interests promptly and at the start of each meeting to ensure that decisions being taken have been taken on a fair and equal basis.

All committee members and staff are required to declare any potential conflicts of interests promptly and at the commencement of each meeting to ensure that decisions being taken have been concluded on a fair and equal basis. A register of Council Members' private, professional and commercial interests is maintained by the Council. The register is available on the [STFC website](#)<sup>25</sup>.

<sup>24</sup> Available at: [www.stfc.ac.uk/about-us/how-we-are-governed/council/](http://www.stfc.ac.uk/about-us/how-we-are-governed/council/)

Council members carry out an annual self-assessment exercise and continue to seek to improve their performance based on the outcome of this exercise. In the current change environment towards the development of UKRI there have been some difficulties in recruiting members and retaining an appropriate balance of experience.

#### AUDIT COMMITTEE

The STFC Audit Committee supports the Council and Chief Executive, in matters of governance, risk and control. Audit Committee undertakes periodic reviews of its performance reflected in an Annual Report to Council. The key items of discussion this year include:

- STFC Annual Report and Accounts.
- UK SBS Ltd.
- Partner Organisations and Arm's Length Bodies.
- Cyber Security.
- Risk Management.
- Safety, Health and Environment.
- The Funding Assurance Programme.
- External audit reports.
- Internal audit reports and implementation of the resulting recommendations.

Audit Committee undertakes periodic reviews of its performance reflected in an Annual Report to Council. Audit Committee hold closed sessions with auditors at each meeting. The Audit Committee chair further engages with the executive and auditors between meetings in matters of governance, risk and various review processes.

<b>Non-Executive Attendance</b>	<b>Council</b>	<b>Audit Committee</b>
Professor Sir Michael Sterling (Council Chair)	6/6	1/1
Professor John Womersley (Chief Executive) – left 31 October 2016	3/3	1/4
Dr Brian Bowsher (Chief Executive) – from 1 November 2016	3/3	1/1
Dr Brian Bowsher (Council Member / CEO-designate) – to 31 October 2016	3/3	N/A
Mrs Gill Ball (Audit Committee Chair)	6/6	4/4
Mr Gerard Connell	6/6	4/4
Professor David Price	4/6	N/A
Mr Ian Taylor	6/6	N/A
Dr Richard Worswick	6/6	N/A
Professor Carol Mundell	5/6	N/A
Professor Jordan Nash	6/6	N/A
Professor Richard Kenway	5/6	N/A
Professor Karen Holford (new) started 1 March 2017	1/1	N/A
Professor Tony Ryan (new) started 1 March 2017	0/1	N/A
Mr David Noble (Independent Advisor)	N/A	4/4
Mrs Angela Marshall (Independent Advisor)	N/A	3/4

## EXECUTIVE BOARD

Executive Board (EB) is STFC's principal strategic decision-making body with responsibility for supporting and challenging the Chief Executive on strategic planning and decision-making and for the successful implementation of the *Delivery Plan*.

EB continuously reviews its remit and performance. EB acts as a cohesive unit focused on the key issues and risks. Upon taking up post as CEO I undertook a review of EB activities and composition. As a consequence I have introduced a number of changes:

- Members of the senior leadership will routinely deputise for Executive Directors.
- Implementation of common objectives for Executive Directors.
- The Head of HR has joined EB to ensure appropriate focus on staff issues.
- Clearer definition of decisions requiring EB approval and those that can and should be best dealt with by the relevant Directorate.
- Transfer of Operations Board activities across the following groups: EB, Directorate Management meetings and the Senior Leadership forum.

## RISK AND INTERNAL CONTROL FRAMEWORK

The STFC risk management framework is a critical component of the stewardship framework. It is reflective of an organisation that operates on an international scale with novel and complex technologies, large-scale investments and major high profile facilities. The stewardship framework is built on HM Treasury's 'Three Lines of Defence' including:

- **Operational control** through clear direction on strategies, plans, policies and clear delegation of authority.
- **Management assurance** through embedded oversight and review activities that continually challenge our priorities, performance and control.
- **Independent assurance** (including internal audit and funding assurance) that reviews the first two lines of defence including performance, compliance and effectiveness of controls.

Within the management assurance processes, risk reviews are carried out on a rolling basis and reported to EB, Audit Committee and Council. Risk registers (Corporate and Departmental) are integrated within the Risk and Assurance Management System and risk assessments are embedded within key decision making processes

Executive and National Laboratory Directors are required to carry out a risk review and include a statement on significant matters within *Stewardship Statements*. *Stewardship Statements* are also required for key business processes. Outcomes from reviews of the stewardship framework are reported to Executive Board and Audit Committee.

The key risks as reflected in the STFC Corporate Risk Register are:

- |                               |   |
|-------------------------------|---|
| • Staffing                    | Ability to retain and recruit staff in Science Engineering and Technology (SET) roles.                    |
| • BREXIT                      | Assessing and managing the impact of the decision to leave the EU as a result of UK referendum June 2016. |
| • Government Reviews & Change | Impact of the ongoing change programme on current and future operations, including transition to UKRI.    |
| • Future Funding              | Securing a solid financial settlement for the STFC strategy.  |
| • Cyber Security              | Securing the confidentiality, integrity and the availability of information assets.                       |
| • Procurement                 | Procuring high value, complex and novel technologies and supplies to time, quality and cost.              |

All of these risks are assessed as high. Those risks that remain at a high level of residual risk are reflected in the significant issues later in this statement.

## REVIEW OF EFFECTIVENESS

---

As Accounting Officer I have been advised of my responsibilities and accountabilities. In the following paragraphs I describe some of conclusions from the stewardship framework described above and highlight a number of significant issues.

### INTERNAL AUDIT

The Director of Internal Audit (DIA) has provided an overall opinion of 'moderate assurance' on the overall adequacy and effectiveness of the STFC's framework of governance, risk management and control. This reflects a generally positive control environment but some improvements are required to enhance the adequacy and effectiveness of the framework of Governance, Risk Management and Control.

There were 39 (13 STFC and 26 cross-council) audits carried out, five of the cross-council audits received an overall rating of 'limited assurance':

- The overarching **RCUK Change Programme**: highlights a lack of continuity and consistency of approach and methodology adopted in taking forward the programme and its component projects.
- **RCUK Communication and Public Engagement**: highlighting issues relating to communication, engagement of a single functional model and a lack of project support to existing work streams.
- **Cyber Security – Penetration Testing**: no specific vulnerabilities were identified but a more formal approach to penetration testing is required.
- **Open Access Block Grant**: highlights gaps in reporting and assurance arrangements, and the development of Open Access Block Grant Measures.
- **Procurement**: highlights issues within contract management and procurement forecast requirements.

## FUNDING ASSURANCE

---

Across the RCUK community research funding totals £2.9 billion of which £429 million relates to STFC. The funding landscape has two major funding streams: 1. Grants administered through the Siebel system (STFC c£128 million) and awarded to eligible Research Organisations (ROs); 2. Funding distributed outside the Siebel system (STFC c£301 million) including strategic partnerships.

During the year a Funding Assurance Working Group (FAWG) was set up to review the framework and a revised Integrated Funding Assurance (IFA) has been implemented. This framework is predicated on establishing appropriate accountability within the Research Organisation in receipt of funding and collating assurance from a range of sources (additional information is available on the RCUK webpages).

### *Siebel grants*

The assurance provided through this framework indicates a very low level of current and historic errors for all Councils. In particular, in his report the Head of Funding Assurance provides 'moderate assurance' based upon the programme of work undertaken.

Going forward, through Official Development Assistance (ODA), the Global Challenges Research Fund (GCRF) and Newton grants to overseas organisations will increase and they have the potential to become a significant part of the Research Councils' expenditure. A FAWG sub-group is reviewing all aspects of international funding and sub-contracting.

In addition in December 2016 Cabinet Office officially launched a set of Minimum Grant Standards to promote effective grant making, with 2017 being viewed as a pilot year for embedding these. The Research Councils have mapped the Cabinet Office standards against current policies and procedures and have demonstrated through this assurance framework that we can clearly evidence our compliance.

### *Non-Siebel awards/funding*

STFC works closely with a number of organisations, both nationally and internationally. These partner organisations may reflect collaborative activities, subsidiaries, joint ventures or major outsourced service provision. Strategic partnerships represent the major part of STFC non-Siebel funding to third parties. Major components include:

- International subscriptions
- Joint ventures
- Institutes

Funding in these activities represents STFC international collaborations. I take assurance on these activities through the governance frameworks in place, including:

- Concordats, Treaties etc. setting out the rules and relationships for our engagement.
- Representative roles within the key organisations (e.g. Governing Bodies).
- For major projects we establish Programme Boards and/or Oversight Committees.
- We have designated leads within STFC who report periodically on issues emanating from these activities to EB, Council and Audit Committee.
- We take assurance from the Annual Accounts of these organisations and in some cases we are engaged in audit arrangements.

The assurance provided through this framework indicates a number of funding pressures and by the very nature of the activities they are complex and novel. Nevertheless, I am reassured through the mechanisms described here that they are being managed in an appropriate manner and that there are no major issues that warrant reference here.

## SIGNIFICANT ISSUES

As a consequence of the risk management and review processes described above I have concluded on an overall positive control environment. Nevertheless, I highlight the following significant issues that continue to receive close attention:

- Change Programme.
- BREXIT.
- Staffing.
- Cyber Security and Information Assurance.
- Financial Management.
- UKSBS Back office systems and Procurement.
- Contract Management and Estates.
- Major investments (business case, project management and benefits).

### Change (including the Higher Education Research Act 2017)

The ability of STFC to continue to deliver its aims and objectives must be seen in the context of the wider change agenda faced by all Research Councils, with the most significant of these being the impact of the Higher Education Research Act 2017. The anticipated creation of UK Research and Innovation on 1 April 2018 will present significant governance challenges to all of the Research Councils and the risk remains that uncertainty may affect staff and place additional demands on resource. This may in turn make it more difficult to maintain 'business as usual' in the transition leading to the new structure unless mitigations are in place. STFC is fully engaged in the UK Research and Innovation Transition Programme at both strategic and operational levels and is working collaboratively with BEIS to identify and mitigate any risks.

The UKRI Programme Audit and Assurance Board is embedded within the programme with membership drawn from the Chairs of Audit Committees of the Research Councils, BEIS, RCUK and Innovate UK. This Board provides challenge and advice throughout the UKRI change programme.

Further change in June 2016 through Machinery of Government (MoG) saw the substantial elements of BIS merge with the Department for Energy and Climate Change (DECC) to form BEIS. Work continues led by BEIS to establish a single integrated department.

As CEO I am actively engaged in the change process and maintain regular communication with staff on the impact of these changes.

## BREXIT

The result of the EU Referendum has created uncertainty around the future availability of EU Funding and the wider research and higher education institute ecosystem. This risk is currently being managed through:

- The RCUK BREXIT Co-ordination Network.
- A STFC BREXIT Working Group.

Whilst the level of the risk remains dependent on the deal negotiated by the UK, these working groups continue to assess the potential impact, including:

- Financial impact analysis across foreign currency transactions.
- Stakeholder impact assessment across key partnerships and programmes.
- Access to EU funding streams.
- Staffing impacts.

## STAFFING

We continue to struggle to attract and retain staff in Science Engineering and Technology (SET) roles due to lack of competitiveness on pay. We are working with BEIS to explore options in respect of pay flexibility, to develop a future pay strategy and to develop our skills strategy.

## CYBER SECURITY AND INFORMATION ASSURANCE

The last few years have seen growing cyber threats to and attacks on STFC. STFC recognises these ongoing and increased Cyber Security threats and the challenges to managing them. We have a commitment to continually improve our controls, training and awareness through the Security Policy Framework (SPF) and implementing best practice in line with the 'Cyber Essentials Scheme'.

During the year we notified the ICO of two data breaches (full commentary on information assurance is included in the Performance Report). As a result internal reviews have been carried out and a programme of improvements is now in place with greater awareness of the issues and training across the organisation.

We are also implementing a change to increase the profile of Information Asset Owners (IAOs). Departmental Directors are now designated IAOs for their departments. We have also initiated an external legal review of relevant STFC data policies to ensure STFC has appropriate governance, policy and management controls in place.

We are also currently restructuring in-house STFC IT governance and management through a CICT Transformation programme. These arrangements allow us to continuously assess and challenge performance including the review of cyber security threats and management of security incidents.

## FINANCIAL MANAGEMENT

Consistent with all public sector bodies STFC continues to work within tight financial constraints and maintains close scrutiny over its financial decisions and performance. It is clear that we have some significant challenges ahead in relation to our allocations that are compounded by cost base pressures (e.g. foreign exchange risks, inflation) within our programme. Through EB and Council supported by the Finance Committee, we continue to monitor and review our financial position.

## UK SBS LTD - BACK OFFICE SYSTEMS, INCLUDING PROCUREMENT

In common with other Research Councils, STFC receives IT Infrastructure services in support of common key business services from UK SBS Ltd. These are subject to governance arrangements and subject to regular audits. STFC relies upon UK SBS for processing human resources, procurement, payroll, finance and grants transactions. In 2015 BEIS announced that the UK SBS would be disbanded over 3 years, this decision has now been partially reversed and UKSBS will continue services until at least 2019-20.

We continue to experience a stabilisation of these services, although there are intermittent issues in relation to reporting and operational problems in procurement. STFC has a number of high-profile, large-scale projects and initiatives with incumbent complex procurements. Whilst adherence to regulation is managed

well, service performance for complex procurements remains inconsistent and sometimes poor, creating additional operating cost and risk to operational performance.

## CONTRACT MANAGEMENT AND ESTATES

STFC has a large and complex estate, including major facilities that require regular upkeep, development and energy supplies. We have introduced a revised estates strategy supported by a formal EB sub-committee for property. Work is in hand to develop a governance structure for new builds.

During the year, contract management issues were identified relating to significant legacy invoicing issues that arose during the (planned) contract completion cycle of a major services supplier. We have dealt with the financial implications, commissioned an external review and implemented organisational change to address these issues.

## MAJOR INITIATIVES AND INVESTMENTS

We work in an environment of high value, complex and novel technologies and facilities. We attract and continue to bid for large-scale major investments. We recognise the need for well-informed investment decisions and demonstrating a positive return on public investment.

A number of major capital initiatives are captured on our Corporate Risk Register, including Hartree 3, ESS and SKA. We have a track record of delivery, built on a comprehensive project management framework and robust governance structures around these projects.

Through the well-established ‘bid process’ we will review our approach to business case appraisal and realisation of benefits. In each case we will continue to monitor the benefits that formed the basis of the business cases and ensure that they continue to reflect stakeholder needs, including HMT, on the management of the UK investment.

## OTHER ACTIVITIES WARRANTING REGULAR OVERSIGHT

### REGULARITY AND PROPRIETY

STFC is committed to establishing and applying appropriate standards of regularity and propriety, and does not tolerate any form of fraud, bribery or corruption. It is important in this context that we guard against the perception of impropriety as well as the reality.

The Cabinet Office (CO) has been working with core departments to determine Counter Fraud Functional Standards, which will be in force from the start of the 2017/18 financial year. These standards provide a comprehensive and consistent approach across the public sector. STFC has been assessed as Amber (i.e. 60-90% compliant) against the counter fraud standards and a programme is in place to ensure future compliance. The two main areas to address relate to outcome-based metrics and improved focus on detection mechanisms.

We continue to operate structures and systems for fraud and error that include:

- Board-level counter-fraud and error accountability.
- Fraud and error capacity assessment; fraud and error risk assessment; fraud and error action plan.
- A cross-council harmonised whistleblowing policy.

The whistleblowing policy encourages and enables employees to speak out when they encounter or suspect malpractice. It guarantees whistle-blowers protection consistent with the Public Interest Disclosure Act (PIDA) and facilitates whistleblowing through a number of routes. There have been no cases of whistleblowing during the year.

## SAFETY, HEALTH AND ENVIRONMENT (SHE)

STFC SHE management system is well-established and communicated to all staff. A strong control environment continues and we are reinforcing line managers' SHE responsibilities. We remain vigilant as we operate with high risk equipment and materials. We continue to extend the scope of implementation of STFC SHE Management system into all aspects of STFC operations with increasing focus on behavioural safety and SHE leadership.

We have a low rate of historic incidents, and positive performance compared to similar organisations. We have had no major regulatory breaches, SHE incidents or learning opportunities, and SHE inspections/audits indicate good standard of application of the SHE management systems across the organisation. A fuller commentary on these SHE activities is included in the Performance Report.

## OFF-PAYROLL TAX COMPLIANCE (INCLUDING ALEXANDER TAX COMPLIANCE)

The Government announced at Budget 2016 that it will reform the intermediaries' legislation for public sector engagements. Responsibility to ensure the correct employment taxes have been paid will move from the worker's own company to the public sector body or agency/third party paying the company. STFC's arrangements for off-payroll relationships are compliant with these requirements. I can confirm that all contractors who provide services through personal services companies have been identified and contracts include the relevant clauses regarding tax compliance.

## MACPHERSON REVIEW

The review of quality assurance of Government analytical models undertaken by Sir Nicholas Macpherson and published by HM Treasury in March 2013 made a number of recommendations for government departments and their Arm's Length Bodies. To comply with this review and the BEIS requirements STFC have reviewed their use of analytical modelling in 2016-17 and have not identified any that were considered to be business critical.

## CONCLUSION

I have considered the evidence provided to support this statement. I conclude on an effective organisation and I believe that there is a sufficient range of assurances available to provide satisfactory assurance both in terms of science delivery and regularity of spend. This is founded on a strong strategic approach, a good evidence base and a strong reputation. We continue to strengthen our relations with industry, academia and other stakeholders and above all we continue to deliver science and facilities of the highest quality.

We will continue to press for improvement from within STFC and from our key partners, particularly in the areas highlighted in this statement. We go forward with a strong foundation. We have delivered and helped deliver major successes in our programme over the past year. We have secured significant additional capital investments in our campuses and facilities demonstrating confidence in our plans and the important part they play in contributing to the economy. The Government remains strong in expressing its support for science and innovation as drivers of economic recovery. Nevertheless, the scale, pace and nature of the change programme has the potential for major disruption and uncertainty. It is critical that this is taken forward in a structured and inclusive manner.

## REMUNERATION AND STAFF REPORT

---

### REMUNERATION POLICY

The Council comprises external appointees and the Chief Executive. The Chief Executive's remuneration is detailed below. The Business and Science group within BEIS advises Research Councils of the rates they are required to pay and these are reviewed annually. The standard honorarium paid to Council members remained unchanged at £6,850, effective from 1 October 2009. Council members may receive an additional honorarium for chairing advisory committees. Council members did not become members of a pension scheme and there were no superannuation payments relating to the fees paid to them.

### REMUNERATION OF SENIOR EMPLOYEES

---

#### CHIEF EXECUTIVE

The remuneration of all Research Council Chief Executives is determined by a BEIS Remuneration Committee chaired by the Director General, Business and Science (DGBS) and approved by the BEIS Permanent Secretary. Chief Executives are paid both a basic salary, reflecting the differing sizes and responsibilities of the Councils and performance pay comprising annual, RCUK and appointment term bonuses of up to 5%, 5% and 10% respectively.

At the beginning of each year, the DGBS, and the relevant Council Chairs, agree with Chief Executives a set of individual and RCUK performance objectives for the year. In addition, a set of appointment term objectives are agreed early in the appointment, which are reviewed annually. At the end of the year, the Chief Executive and Chair write an assessment of performance over the year, and the DGBS, with advice from colleagues, agrees an assessment of overall performance and specific achievements against objectives for annual and appointment term objectives. The BEIS Remuneration Committee then meets to review the Chief Executives' performance and agree its recommendations, for approval by the BEIS Permanent Secretary.

#### OTHER SENIOR EMPLOYEES

---

STFC's Remuneration Committee is a standing committee of Council, and its role is to determine the remuneration of the senior staff in STFC, both base pay and annual performance related bonus payments, based on the achievement of both corporate and individual objectives.

Membership during 2016-17 was:

Mr Gerard Connell, Chair and Council Member  
 Mrs Gill Ball, Council Member  
 Mr Marshall Davies, co-opted former Council Member

Professor John Womersley and Dr Brian Bowsher, his successor as Chief Executive, also attended as observers.

Mr Gordon Stewart was secretary to the Committee for most of the year, before handing over the role to Mrs Diana Chaloner on 1 January 2017.

The Committee considered senior basic pay rates taking account of the Government's guidance that the overall increase to the senior staff pay bill should not exceed 1%. Noting that the senior staff bonus arrangements were designed to reward high individual performance and that bonus payments fell outside the 1% basic pay limit, the Committee agreed that the job evaluation-based spot salary points, and individual salaries of senior staff, should be increased by 1%.

In determining bonus payments relating to performance in 2015-16 (but paid for in 2016-17), the Committee took account of the sponsoring department's guidance on bonus awards for senior staff and, as in 2015-16, allocated 3.3% of the senior staff pay bill for bonuses. That sum was allocated on the basis of an assessment of each individual's performance during the year, taking account of the individuals' self-assessment; the line manager's appraisal of that self-assessment; and the Committee's own moderation of these. A bonus was paid only where there was demonstrable achievement beyond what was specified in the individual's job description. The resulting individual bonus payments ranged from 2.1% to 4.5% of basic salary.

## REMUNERATION OF SENIOR EMPLOYEES (AUDITED)

The following sections provide details of the remuneration and pension interests received by senior employees in their capacity as members of Executive Board during the year.

	2016-17					2015-16			
	Salary £'000	Bonus £'000	Benefits in kind (to nearest £100)	Pension benefits (to nearest £1000)	Total £'000	Salary £'000	Bonus £,000	Pension benefits (to nearest £1000)	Total £,000
Professor John Womersley (to 31 Oct 2016)	80-85 (135-140) Full year equivalent	-	-	37,000	115-120	130-135	10-15	42,000	185-190
Dr Brian Bowsher (from 1 Oct 2016)	55-60 (135-140) Full year equivalent	-	6,600	19,000	85-90	-	-	-	-
Dr Timothy Bestwick	110-115	0-5	-	-	110-115	150-155*	0-5	-	150-155
Professor Grahame Blair	100-105	0-5	-	39,000	140-145	95-100	0-5	45,000	140-145
Mrs Diana Chaloner (from 1 Jan 2017)	20-25 (90-95) Full year equivalent	-	-	9,000	30-35	-	-	-	-
Dr Sharon Cosgrove	100-105	0-5	-	40,000	145-150	90-95	0-5	34,000	130-135
Mr Neil Phimister	100-105	0-5	-	40,000	145-150	100-105	0-5	39,000	140-145
Mr Gordon Stewart	115-120	0-5	-	47,000	165-170	115-120	0-5	40,000	155-160
Dr Andrew Taylor	105-110	0-5	-	19,000	125-130	100-105	0-5	31,000	135-140

- a. Salary includes any allowances but not employer's pension contribution or value of pension benefits.
- b. The total remuneration figure includes gross salary, allowances, bonuses and value of pension benefits (which after taking account of inflation and the employee's own pension contributions, may be negative).
- c. Due to the timing of the senior staff appraisal process, the bonuses disclosed for 2016- 17 were paid in 2016-17 and relate to performance in 2015-16; and those disclosed for 2015-16 were paid in 2015-16 and relate to performance in 2014-15.
- d. In line with previous years, an estimated figure for senior staff bonuses relating to 2016- 17 has been accrued and individual bonus payments will be reported in the 2017-18 Remuneration Report.
- e. Dr Brian Bowsher was appointed as part-time CEO-designate on 1 October 2016 before becoming CEO on 1 November 2016 (on a part-time basis). He moved to full-time working on 1 January 2017 on a salary of £137,500, although the arrears of pay (£4,375) relating to this change were not paid until April 2017 and so are excluded from his 2016-17 remuneration. Dr Bowsher's contract is for a fixed term with an expiry date of 31 October 2017 but with scope to extend the contract by up to a further 12 months.

\* This figure includes a one-off payment of £51,000 which represents back pay of basic salary and recruitment and retention allowance to the date on which Dr Bestwick was appointed to the role of Executive Director, Business and Innovation Directorate (1 April 2012).

## BENEFITS IN KIND

The monetary value of benefits in kind covers any benefits provided by the employer and treated by HMRC as a taxable emolument.

As part of his CEO employment package, Dr Brian Bowsher receives an accommodation allowance of £15,400 a year towards the cost of renting accommodation in the vicinity of the Rutherford Appleton Laboratory in

Oxfordshire. He also receives reimbursement of weekly travel costs to and from his permanent home to work or to his place of temporary residence.

No other members of the Executive Board received benefits in kind in 2016-17 (2015-16: Nil).

## PENSION ENTITLEMENTS OF SENIOR EMPLOYEES (AUDITED)

	Accrued pension at retirement age as at 31/3/17 and lump sum	Real increase /(decrease) in pension and related lump sum at pension age	CETV at 31/3/17	CETV at 31/3/16	Real increase in CETV
	£'000	£'000	£'000	£'000	£'000
Professor John Womersley (to 31 October 2016)	25-30 plus no lump sum	0-2.5 plus no lump sum	443	393	31
Dr Brian Bowsher (from 1 Oct 2016)	0-5 plus no lump sum	0-2.5 plus no lump sum	22	-	14
Dr Timothy Bestwick*	-	-	-	-	-
Professor Grahame Blair	55-60 plus no lump sum	0-2.5 plus no lump sum	795	739	24
Mrs Diana Chaloner (from 1 Jan 2017)	0-5 plus no lump sum	0-2.5 plus no lump sum	13	-	5
Dr Sharon Cosgrove	15-20 plus no lump sum	0-2.5 plus no lump sum	258	216	29
Mr Neil Phimister	5-10 plus no lump sum	0-2.5 plus no lump sum	87	58	21
Mr Gordon Stewart	25-30 plus no lump sum	2.5-5 plus no lump sum	331	289	26
Dr Andrew Taylor	50-55 plus 155-160 lump sum	0-2.5 plus 2.5-5 lump sum	1,063	1,049	15

\* Dr Timothy Bestwick is not a member of the Research Councils' Pension Scheme.

## ACCRUED PENSION

The accrued pension quoted is the pension the member is entitled to receive when they reach pension age or immediately on ceasing to be an active member of the scheme if they are already at or over pension age. Pension age is dependent on the scheme in which the individual is a member.

## CASH EQUIVALENT TRANSFER VALUES

A cash equivalent transfer value (CETV) is the actuarially-assessed capitalised value of the pension scheme benefits accrued by a member at a particular point in time. The benefits valued are the member's accrued benefits and any contingent spouse's or partner's pension payable from the scheme. A CETV is a payment made by a pension scheme or arrangement to secure pension benefits in another pension scheme or arrangement when the member leaves a scheme and chooses to transfer the benefits accrued in the former scheme. The pension figures shown relate to the benefits that the individual has accrued as a consequence of their total membership of the pension scheme, not just their service in a senior capacity to which disclosure applies.

The CETV figures include the value of any pension benefit in another pension scheme, or arrangement the individual has transferred to the Research Councils' pension arrangement, and for which the RCPS has received a transfer payment commensurate with the additional pension liabilities being taken on. They also include any additional pension benefit accrued to the member as a result of their buying additional pension benefits at their own cost.

CETVs are calculated in accordance with The Occupational Pension Schemes (Transfer values) (Amendment) Regulations 2008 and do not take any account of any actual or potential reduction to benefits resulting from Lifetime Allowance Tax which may be due when pension benefits are taken.

#### **REAL INCREASE IN CETV**

---

The real increase in the value of the CETV reflects the increase funded by the employer. It excludes increases due to inflation, contributions paid by the employee (including the value of any benefits transferred from another pension scheme or arrangement) and uses common market valuation factors for the start and end of the period.

#### **COMPENSATION FOR LOSS OF OFFICE AND EARLY RETIREMENT FOR DIRECTORS (AUDITED)**

---

There were no loss of office or early retirement cases involving directors in 2016-17.

#### **FAIR PAY DISCLOSURE (AUDITED)**

---

Reporting bodies are required to disclose the relationship between the remuneration of the highest-paid director in their organisation and the median remuneration of the organisation's workforce.

The mid-point of the banded remuneration of the highest paid director in 2016-17 was £142,500 (2015-16: £142,500 excluding Dr Timothy Bestwick's one-off payment of £51,000). This was 3.75 times (2015-16: 3.70) the median remuneration of the workforce, which was £37,983 (2015-16: £38,493).

In 2016-17 no (2015-16: 0) employee received remuneration in excess of the highest-paid director. The range of remuneration in 2016-17 was from £10,990 to £142,500 (2015-16: £10,881 to £143,113).

Remuneration includes gross salary, allowances, benefits in kind and non-consolidated performance-related pay. It does not include severance payments, employer pension contributions and the cash equivalent transfer value of pensions.

## MEMBERSHIP OF STFC COUNCIL

	<b>Annual honoraria</b>	
	<b>2016-17</b>	<b>2015-16</b>
	<b>£'000</b>	<b>£'000</b>
Mrs Gill Ball	5-10	5-10
Dr Brian Bowsher*	0-5	5-10
Mr Gerard Connell	5-10	5-10
Professor Dame Julia Goodfellow (to 31 March 2016)	0-5	5-10
Professor Karen Holford (from 1 March 2017)	0-5	0
Professor Richard Kenway (from 18 July 2016)	0-5	0
Professor Carole Mundell	5-10	5-10
Professor Jordan Nash	5-10	5-10
Professor David Price	5-10	5-10
Professor Tony Ryan (from 1 March 2017)	0-5	0
Professor Sir Michael Sterling (Chair)	20-25	20-25
Mr Ian Taylor	5-10	5-10
Dr Richard Worswick	5-10	5-10

\*Dr Brian Bowsher was appointed as CEO-designate from 1 October 2016 and as CEO from 1 November 2016, and his remuneration in both capacities is disclosed above as part of the Senior Employees' disclosure.

The Council reimburses travel and subsistence expenses necessarily incurred by Council members attending meetings or undertaking other tasks arising from their membership, in accordance with the conditions and at the rates applying to the Council's employees. The amount reimbursed for 2016-17 was £5,892 (2015-16: £5,989).

## STAFF REPORT

### NUMBER OF SENIOR CIVIL SERVICE STAFF (OR EQUIVALENT) BY BAND

The distribution of Senior Civil Service (SCS) equivalent staff by salary band at 31 March 2016 and 2017 respectively was:

<b>Salary band</b>	<b>SCS equivalent at 31 March 2017</b>		<b>SCS equivalent at 31 March 2016</b>	
	<b>Number</b>	<b>Percentage</b>	<b>Number</b>	<b>Percentage</b>
£60,000-£70,000	-	-	-	-
£70,001-£80,000	12	31.6%	14	38.9%
£80,001-£90,000	11	28.9%	10	27.8%
£90,001-£100,000	6	15.8%	6	16.7%
£100,001-£110,000	7	18.4%	4	11.1%
£110,001-£120,000	1	2.6%	1	2.8%
£120,001-£130,000	-	-	-	-
£130,001-£140,000	1	2.6%	1	2.8%

## STAFF COSTS (AUDITED)

Staff and related costs comprise:

Financial year	2016-2017	2015-2016
	£'000	£'000
<b>Staff costs</b>		
Salaries and wages:		
Permanently employed staff	78,219	72,921
Council and committee members	81	87
Students	1,123	806
Locally engaged staff overseas	1,577	1,378
Total salaries and wages	<b>81,000</b>	<b>75,192</b>
Social security costs	8,769	6,545
Superannuation	18,655	17,375
<b>Total staff costs</b>	<b>108,424</b>	<b>99,112</b>
Secondments	1,056	1,017
Agency and contractors	2,705	2,981
Capitalised pay costs	(8,098)	(4,791)
<b>Total</b>	<b>104,087</b>	<b>98,319</b>

## STAFF NUMBERS (AUDITED)

	2016-17	2015-16
<b>Average number of persons employed</b>		
Permanently employed staff	1,934	1,826
Council and committee members	3	3
Students	62	43
Locally engaged staff overseas	40	39
Total staff	2,039	1,911
Secondments	19	21
Agency and contractors	53	61
<b>Total</b>	<b>2,111</b>	<b>1,993</b>

Permanently-employed staff comprises all permanent and fixed-term staff paid as employees through the payroll.

## SUPERANNUATION

Most employees of the Council are members of the Research Councils' Pension Schemes (RCPS) including the associated Partnership Pension Account. A small number of employees retain membership of the Principal Non-Industrial Superannuation Scheme (PNISS) of the United Kingdom Atomic Energy Authority. In addition, from 2014-15 a few eligible employees have been auto-enrolled in the National Employment Savings Trust (NEST), the Government's workplace pension scheme.

The RCPS are defined benefit schemes funded from annual grant-in-aid on a pay-as-you-go basis. The benefits are by analogy to the Principal Civil Service Pension Scheme, except that, while the schemes provide retirement and related benefits based on final or average emoluments, redundancy and injury benefits are administered and funded by the Council. The scheme is administered by the Research Councils' Joint Superannuation Services, with the associated grant-in-aid managed by BBSRC (Biotechnology and Biological Sciences Research Council). The schemes' accounts are prepared by BBSRC, on behalf of the BBSRC Chief Executive as the Accounting Officer for the RCPS. Separate accounts are published for the Pension Schemes.

Employees' contributions vary between 1.5% and 8.05%. The employer's contribution is agreed by the RCPS Management Board on the recommendation of the Government Actuary's Department (GAD) and is set at 26.0% of pensionable pay.

Employees may be in one of four defined benefit scheme arrangements: either a 'final salary' scheme (classic, classic plus or premium); or a career average scheme (Nuvos). Pensions payable are increased annually in line with changes in the Consumer Prices Index (CPI). The employer's contribution for 2016-17 was £18.373 million (2015-16: £17.074 million).

The PNISS is a notionally funded, contributory, defined benefit scheme which is closed to new entrants. Employees who are members of the PNISS made pension contributions at the rate of 10.7% of pensionable pay during 2016-17. The Council makes employer's contributions at a rate determined from time to time after actuarial assessment of assets and liabilities. In 2016-17 the employer's contribution rate was 15.8% of pensionable pay. The employer contribution for 2016-17 was £0.170m (2015-16: £0.207 million).

A separate PNISS Scheme account is produced by the United Kingdom Atomic Energy Authority (UKAEA) that recognises the scheme liability in accordance with *IAS (International Accounting Standards) 19* as interpreted by the *FReM* for use in the public sector.

As an alternative to the RCPS, a Partnership Pension Account was made available to new recruits from 1 October 2002. It is based on the portable Stakeholder Pension introduced by the Government in 2001. This is a defined contribution scheme. The employers pay the RCPS 0.8% of pensionable pay to cover death in service and ill-health benefits. The employers pay an age-related contribution to the employee's private pension provider. The employer contribution for 2016-17 was £0.109m (2015-16: £0.083m).

Employer's 0.8% death in service Partnership contribution for 2016-17 was £4,075 (2015-16: £3,044).

On 1 April 2015 Civil Service Pensions launched a new pension scheme called Alpha. This scheme is similar to the Nuvos career average scheme but with the retirement age aligned to the State Pension age. RCPS cannot operate by analogy to the Alpha scheme as the legislation does not permit this. Reform plans are in progress and expected to be implemented in April 2018. In the meantime, BEIS have given permission for RCPS to continue 'as is' beyond April 2015.

Formal actuarial valuations are used to determine employer and employee contribution rates. The last actuarial valuation undertaken for the RCPS, as at 31 March 2006, was completed in 2008-09. An actuarial valuation as at 31 March 2010 was initiated but not completed due to HM Treasury suspending all public sector pension scheme valuations whilst reform policies were being developed. HM Treasury concluded their reform policy which enabled the Government Actuary Department to start the process of completing a revised scheme valuation. This valuation will be as at 31 March 2012 in accordance with HM Treasury revised scheme valuation directions. The conclusion of the scheme valuation is directly linked to the reform of the RCPS and therefore future employer contribution rates will be established once the scheme reforms are implemented; which is expected in April 2018.

Further details about the Research Councils' Pension Scheme can be found at [www.jsspensions.org.uk](http://www.jsspensions.org.uk).

## STAFF COMPOSITION

The distribution of directors, senior (SCS equivalent) staff and other employees by gender at 31 March 2016 and 2017 respectively was:

<b>Employees by gender</b>	<b>At 31 March 2017</b>			<b>At 31 March 2016</b>		
	<b>Female</b>	<b>Male</b>	<b>Total</b>	<b>Female</b>	<b>Male</b>	<b>Total</b>
Directors (Executive Board)	2	6	8	1	6	7
Other senior (SCS equivalent) staff	7	23	30	7	22	29
Other employees	510	1,532	2,042	477	1,480	1,957
<b>Total</b>	<b>519</b>	<b>1,561</b>	<b>2,080</b>	<b>485</b>	<b>1,508</b>	<b>1,993</b>

## SICKNESS ABSENCE DATA

STFC actively manages sickness absence to minimise the effects on its work programme and also minimise the costs related to these absences. Sick absence information is regularly made available to managers and senior managers so that absences can be managed effectively. The production of annual sickness absence data allows STFC to benchmark performance against appropriate comparable organisations.

The data provided have been extracted from our absence records for all main-grade STFC employees for the period 1 April 2016 to 31 March 2017. The main findings are summarised below:

- The total number of days lost to sickness absence over the period by all employees covered by the sickness absence arrangements was 12,556. The average number of staff (persons) employed over the period and covered by the sickness absence arrangements was 2,048; the average full time equivalent (FTE) count was 1,990.
- The derived absence rate (days lost per person) was 6.13; the headline absence rate (days lost per FTE) was 6.31.
- Overall, there has been an increase in the derived absence rate from 5.7 days in 2015-16 to 6.13 in 2016-17. The CIPD 2016 Absence Management Survey reported that the average level of employee absence is 6.3 days per employee per year. Therefore, according to this survey, STFC's absence rate is slightly less than the national average.

STFC remains committed to keeping sickness absence levels as low as practically possible through the monitoring of absence statistics for significant trends and the active management of individual cases.

## STAFF POLICIES APPLIED DURING THE FINANCIAL YEAR

---

### RECRUITMENT AND CONTRACTS OF EMPLOYMENT

All appointments to permanent roles in STFC are made on the basis of merit and through fair and open competition. The Chief Executive allocates responsibilities to senior employees. Unless otherwise stated below, the staff covered by this report hold appointments which are open-ended. Senior employees are required to give a notice period of three months. As with all employees, senior employees no longer have a contractual retirement age, in accordance with legislation, but are eligible to draw their pension from the age of 60 or 65 in accordance with the rules of the relevant pension scheme.

Early termination of employment, other than for misconduct, would result in the individual receiving compensation by analogy with the provisions of the Civil Service Compensation Scheme or as specified in individual contracts of employment.

### EQUALITY AND DIVERSITY

STFC has maintained its strong commitment to equality, diversity and inclusion, recognising the benefits that a truly diverse and inclusive workforce can bring. It is an active member of the RCUK Equality and Diversity Group, which is delivering on the RCUK Equality and Diversity Action Plan, launched in May 2016. The RCUK Action Plan aims to improve diversity and fair decision making in all areas of its work, including for those in receipt of our grant funding. STFC also has its own Equality and Diversity Strategy, published on its website.

STFC is a member of Athena Swan and is working towards Athena Swan accreditation. The Chief Executive, Brian Bowsher and Equality and Diversity Champion, John Collier have committed STFC to the principles of the charter and to achieving the accreditation.

STFC has also achieved 'Disability Confident' accreditation and has made a commitment to recruit, retain and develop the careers of disabled staff. STFC will be participating in the Change 100 initiative to provide internship opportunities for disabled graduates in 2017.

STFC continue to support its established support networks for women, black and minority ethnic (BME) staff and its dyslexia support group. These groups continue to raise awareness and provide practical support, such as the provision of specific training opportunities, as well as providing advice to STFC as an employer on how to ensure that all of its staff have the opportunity to develop and work effectively.

At 31 March 2017 for main-grade employees:

- The average age of employees in STFC was 44.3, slightly lower than last year's average of 44.5.
- 5.8% of employees were non-white, unchanged from the previous year.
- 25.3% of all staff were female, a percentage point increase from last year's figure of 24.3%; of the 2017 female total, 33% were in STEM subjects.
- 2.8% of staff were known to be disabled, a small increase on the 2.5% reported last year.

## EMPLOYEE ENGAGEMENT

Formal consultation with the recognised Trade Unions has continued through regular central and local Joint Consultation Council meetings, including an annual meeting at which the Chief Executive provides a report on relevant organisational developments and reviews STFC's past and future programme. At these meetings, representatives have an opportunity to raise other topical issues directly with the Chief Executive and other senior staff members.

This year STFC, together with the other Research Councils, took part in the Civil Service Employee Engagement Survey. Responses to this show that STFC staff are very interested in their work and feel a sense of accomplishment. They have a clear understanding of how their work contributes to the success of the organisation and feel that they are treated fairly and with respect. They were particularly positive about how well they thought teams worked together, with high degrees of trust and affinity in the overall work of STFC and with their colleagues.

Less positive responses demonstrated dissatisfaction with pay and cuts to budgets affecting development activities. Leadership and management were also areas that could be improved.

In response to this STFC has prepared an action plan to address these concerns that is in the process of being endorsed by the Executive Board.

## LEARNING AND DEVELOPMENT

STFC depends on a highly-skilled workforce to deliver its future agenda of world-class research, world-class innovation and world-class skills. Staff take part in a broad range of technical, management and soft skills training courses, conferences, online learning, coaching and mentoring.

More than 1000 members of staff attended core soft skills training courses during 2016-17. New programmes were launched during the year with the objective of raising standards of skill and competence across STFC. As part of the management and personal development programme, we introduced a psychometric tool to improve communications and relationships within teams to support STFC's culture of team-based working and collaboration.

Other learning and development highlights included learning days at Rutherford Appleton Laboratory where 536 members of staff took part in 53 bite-sized courses. We also launched courses to upskill managers in good management practice.

STFC has an increasing focus on apprentices, students and graduates as an integral part of the talent pipeline. In 2016-17 there were 47 apprentices, 55 graduates, 48 sandwich students and 48 vacation students working at STFC.

A programme of formal and informal learning opportunities for graduates and students saw the second early careers conference and an integrated leadership programme. All graduates are supported to achieve chartered status with the relevant professional institution.

The STFC Apprentice Scheme is accredited by the Institution of Engineering and Technology (IET), and the STFC Graduate Scheme is accredited by the Institution of Mechanical Engineers (IMechE), the IET and the Institute of Physics (IoP).

## EXPENDITURE ON CONSULTANCY

Expenditure on external consultancy in 2016-17 was £208,000 (2015-16: £266,000)

## OFF-PAYROLL ENGAGEMENTS

For all off-payroll engagements as of 31 March 2017, for more than £220 per day and that last longer than six months:

	Number
Number of existing engagements as of 31 March 2017	23
Of which, the number that have existed:	
For less than one year at the time of reporting	2
For between one and two years at the time of reporting	14
For between 2 and 3 years at the time of reporting	7
For between 3 and 4 years at the time of reporting	0
For 4 or more years at the time of reporting	0

For all new off-payroll engagements between 1 April 2016 and 31 March 2017, for more than £220 per day and that last longer than six months:

	Number
Number of new engagements, or those that reached six months in duration between 1 April 2016 and 31 March 2017	11
Number of new engagements which include contractual clauses giving STFC the right to request assurance in relation to income tax and National Insurance obligations	11
Number for whom assurance has been requested*	0
Of which:	
assurance has been received	0
assurance has not been received	0
Engagements terminated as a result of assurance not being received	0

\*All of the existing off-payroll engagements reported above have been subject to contractual clauses giving STFC the right to request assurance in relation to income tax and national insurance obligations. In these cases the agency workers/contractors concerned have been engaged via national call-off contracts under the Crown Commercial Services Contingent Labour One (CL1) arrangements with the individuals being subject to a risk-based assessment via the suppliers (Capita Business Services, Rullion and Brook Street Ltd.).

As a result of STFC implementing the reform of the intermediaries legislation, from 1 April 2017, all off payroll workers at STFC have been moved to arrangements in which the supplier agencies process their payments through PAYE to ensure full tax compliance except where the HMRC tool has shown that their engagement arrangements fall outside of the scope of the intermediaries legislation IR35.

For any off-payroll engagements of board members, and/or, senior officials with significant financial responsibility, between 1 April 2016 and 31 March 2017:

	Number
Number of off-payroll engagements of board members, and/or senior officials with significant financial responsibility, during the financial year	0
Total no. of individuals on payroll and off-payroll that have been deemed "board members, and/or, senior officials with significant financial responsibility" during the financial year	23

## EXIT PACKAGES (AUDITED)

	Number of compulsory redundancies		Number of other departures agreed		Total number of exit packages by cost band	
Exit package cost band	2016-17	2015-16	2016-17	2015-16	2016-17	2015-16
Less than £10,000	-	-	8	2	8	2
£10,000 - £25,000	-	-	-	-	-	-
£25,000 - £50,000	-	-	-	-	-	-
£50,000 - £100,000	-	-	-	-	-	-
£150,000-£200,000	-	-	1	-	1	-
<b>Total number of exit packages</b>	-	-	<b>9</b>	<b>2</b>	<b>9</b>	<b>2</b>
<b>Total cost (£)</b>	-	-	<b>216,887</b>	<b>13,104</b>	<b>£216,887</b>	<b>13,104</b>

Redundancy and other departure costs have been paid in accordance with either the provisions of the Research Councils' Compensation Scheme, which mirrors the terms of the Principal Civil Service Compensation Scheme, a statutory scheme made under the Superannuation Act 1972; or, in relevant cases, with the terms of the (closed) UKAEA Principal Non-Industrial Superannuation Scheme, of which some STFC staff remain members. Exit costs are accounted for in full in the year agreed. Where STFC has agreed early retirements, the additional costs are met by STFC and are not a charge to the pension scheme. Ill-health retirement costs are met by the pension scheme and are not included in the table.

## PARLIMENTARY ACCOUNTABILITY AND AUDIT REPORT

### REGULARITY OF EXPENDITURE (AUDITED)

I can confirm that for the financial year ended 31 March 2017, neither I nor my staff authorised a course of action, the financial impact of which is that transactions infringe the requirements of regularity as set out in Managing Public Money, and that Treasury approval has been obtained for all novel, contentious or repercussive transactions relating to 2016-2017.

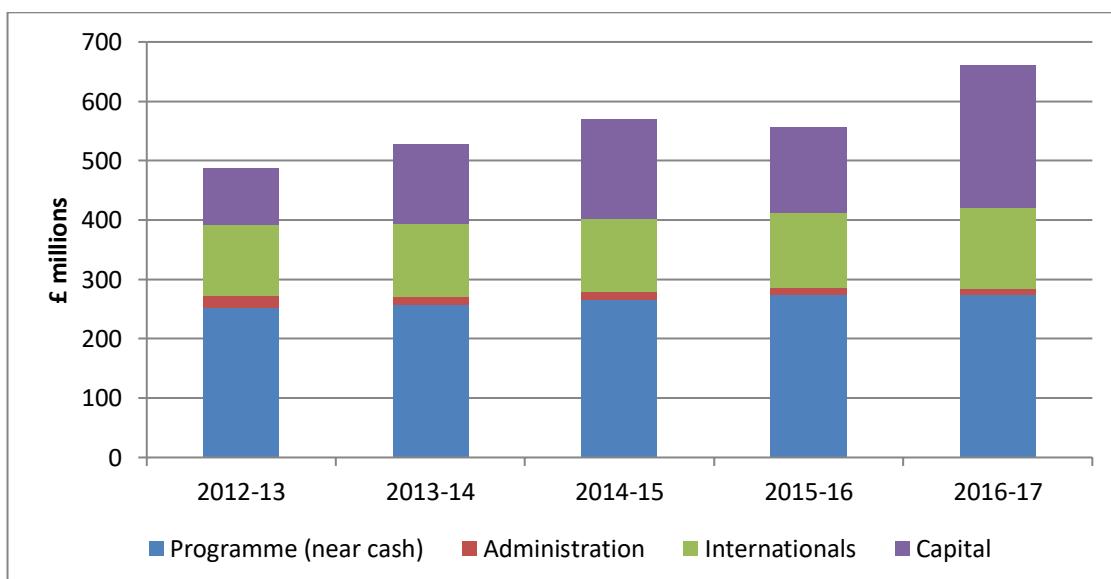
### LONG-TERM EXPENDITURE TRENDS

STFC's resource near-cash funding over the last five years has increased by £28.6 million (7.3%). It should be noted that much of this increase is due to expenditure on International Subscriptions which has risen by £16.3 million in line with the UK's agreed contribution. The increase in resource funding is therefore £12.3m (4.5%) excluding Internationals Subscriptions. The funding profile has enabled us to meet the operating costs of our world-class facilities (ISIS, DLS and CLF), including new beamlines and instruments, as well as meeting our obligations on research grants as part of our agreed scientific programme.

Administration expenditure has decreased significantly over the period. The decrease of £9.5m (46.7%) reflects the on-going reduction in administration budgets due to public sector efficiency measures.

STFC's capital expenditure profile is varied as it is comprised of investment in our world-class facilities; operational requirements and specific projects. Projects funded over the period include Hartree Centre £115.5m, High Performance Computing £47m, Campus Development £30m, Space Science Building £25m, Energy Efficient Computing £19m, and the Higgs Innovation Centre £10.7m. STFC has also contributed £197m over the last five years to the construction and operation of International Facilities; European Spallation Source, European X-ray Free Electron Laser, and Square Kilometre Array.

**STFC's Long term funding trend over 5 years**



£ million	2012-13	2013-14	2014-15	2015-16	2016-17
<b>Programme (near cash)</b>	252	258	266	274	274
<b>Administration</b>	20	13	12	12	11
<b>International Subscriptions</b>	120	124	123	126	136
<b>Total Resource (near cash)</b>	<b>392</b>	<b>395</b>	<b>402</b>	<b>412</b>	<b>420</b>
<b>Capital</b>	96	133	167	145	239
<b>Total Allocation</b>	<b>488</b>	<b>528</b>	<b>569</b>	<b>557</b>	<b>660</b>

## FEES AND CHARGES (AUDITED)

Fees are set to comply with the cost allocation and charging requirements set out in HM Treasury and Office of Public Sector Information guidance.

Facilities are offered to European Union users, commercial users and external users. Users are charged a unit cost based on direct operating costs and annual quantity of access with an allowance for overheads.

## REMOTE CONTINGENT LIABILITIES (AUDITED)

In addition to contingent liabilities reported within the meaning of IAS 37, STFC also reports liabilities for which the likelihood of a transfer of economic benefit in settlement is too remote to meet the definition of contingent liability.

STFC had the following remote unquantifiable contingent liability as at 31 March 2017:

The Council collaborates with a number of other international partners in the funding, management and operation of technical facilities which are not owned by STFC. In the event of a decision to withdraw from any of these arrangements, it is likely that STFC would assist in the search for a replacement partner to ensure that technical commitments were met. The most significant international collaborations are in respect of CERN and ESO. For both of these facilities there is the possibility that STFC would be obliged to contribute to decommissioning costs arising from a decision taken to discontinue operations. The decisions to decommission are not wholly within STFC's control.

Signed:



Dr Brian Bowsher

Chief Executive  
28 June 2017

## THE CERTIFICATE AND REPORT OF THE COMPTROLLER AND AUDITOR GENERAL OF THE HOUSES OF PARLIAMENT

I certify that I have audited the financial statements of the Science and Technology Facilities Council for the year ended 31 March 2017 under the Science and Technology Act 1965. The financial statements comprise: the Statements of Comprehensive Net Expenditure, Financial Position, Cash Flows, Changes in Taxpayers' Equity; and the related notes. These financial statements have been prepared under the accounting policies set out within them. I have also audited the information in the Remuneration and Staff Report and the Parliamentary Accountability disclosures that is described as having been audited.

### **Respective responsibilities of the Council, Accounting Officer and auditor**

As explained more fully in the Statement of Accounting Officer's Responsibilities, the Council and the Accounting Officer are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. My responsibility is to audit, certify and report on the financial statements in accordance with the Science and Technology Act 1965. I conducted my audit in accordance with International Standards on Auditing (UK and Ireland). Those standards require me and my staff 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 Science and Technology Facilities Council's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the Science and Technology Facilities Council; and the overall presentation of the financial statements. In addition I read all the financial and non-financial information in the Performance Report and Accountability 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 me in the course of performing the audit. If I become aware of any apparent material misstatements or inconsistencies I consider the implications for my certificate and report.

I am required to obtain evidence sufficient to give reasonable assurance that the expenditure and income recorded in the financial statements have been applied to the purposes intended by Parliament and the financial transactions recorded in the financial statements conform to the authorities which govern them.

### **Opinion on regularity**

In my opinion, in all material respects the expenditure and income recorded in the financial statements have been applied to the purposes intended by Parliament and the financial transactions recorded in the financial statements conform to the authorities which govern them.

### **Opinion on financial statements**

In my opinion:

- the financial statements give a true and fair view of the state of the Science and Technology Facilities Council's affairs as at 31 March 2017 and of net expenditure for the year then ended; and
- the financial statements have been properly prepared in accordance with the Science and Technology Act 1965 and Secretary of State directions issued thereunder.

### **Opinion on other matters**

In my opinion:

- the parts of the Remuneration and Staff Report and the Parliamentary Accountability disclosures to be audited have been properly prepared in accordance with Secretary of State directions made under the Science and Technology Act 1965; and
- the information given in the Performance Report and Accountability Report for the financial year for which the financial statements are prepared is consistent with the financial statements.

**Matters on which I report by exception**

I have nothing to report in respect of the following matters which I report to you if, in my opinion:

- adequate accounting records have not been kept or returns adequate for my audit have not been received from branches not visited by my staff; or
- the financial statements and the parts of the Remuneration and Staff Report and the Parliamentary Accountability disclosures to be audited are not in agreement with the accounting records and returns; or
- I have not received all of the information and explanations I require for my audit; or
- the Governance Statement does not reflect compliance with HM Treasury's guidance.

**Report**

I have no observations to make on these financial statements.

**Sir Amyas C E Morse**                   **Date 07 July 2017**  
**Comptroller and Auditor General**

National Audit Office  
157-197 Buckingham Palace Road  
Victoria  
London  
SW1W 9SP

## FINANCIAL STATEMENTS

### STATEMENT OF COMPREHENSIVE NET EXPENDITURE FOR THE YEAR ENDED 31 MARCH 2017

	Note	2016-17		2015-16	
		£000	£000	£000	£000
		STFC	Consolidated	STFC	Consolidated
<b>Total operating income</b>	4	(77,286)	(77,286)	(66,687)	(66,687)
Staff costs	3	104,087	104,087	98,319	98,319
Purchase of goods and services	5.1	252,504	252,504	235,522	235,522
Research grants and other research support	5.2	259,875	259,875	201,238	201,238
Other operating expenditure	5.3	4	31,283	22	30,645
Depreciation and impairment charges	5.4	95,518	95,518	63,965	63,965
Provision expense	5.5	3,606	3,606	62,761	62,761
Notional charge for UK SBS services			4,292	4,292	3,780
<b>Total operating expenditure</b>		<b>719,886</b>	<b>751,165</b>	<b>665,607</b>	<b>696,230</b>
<b>Net operating expenditure</b>		<b>642,600</b>	<b>673,879</b>	<b>598,920</b>	<b>629,543</b>
Finance income		(339)	(339)	(355)	(355)
Finance expense		1,205	1,205	933	933
<b>Net expenditure for the year</b>		<b>643,466</b>	<b>674,745</b>	<b>599,498</b>	<b>630,121</b>
Less notional charge for UKSBS services		(4,292)	(4,292)	(3,780)	(3,780)
<b>Net expenditure for the year after reversal of notional charge</b>		<b>639,174</b>	<b>670,453</b>	<b>595,718</b>	<b>626,341</b>
<b>Other comprehensive net expenditure</b>					
Items which will not be reclassified to net operating costs:					
Net gain on revaluation of property, plant and equipment	6	(103,967)	(103,967)	(12,059)	(12,059)
Net gain on revaluation of intangible assets	7	(70)	(70)	(31)	(31)
Items which may be reclassified to net operating costs:					
Net loss / (gain) on revaluation of investments	9.1	-	1,501	-	(7,852)
Net movement in cash flow hedges		(1,058)	(1,058)	(1,913)	(1,913)
<b>Total Comprehensive net expenditure for the year</b>		<b>534,079</b>	<b>566,859</b>	<b>581,715</b>	<b>604,486</b>

The notes on pages 52 to 78 form part of these financial statements.

## STATEMENT OF FINANCIAL POSITION AS AT 31 MARCH 2017

		31 March 2017		31 March 2016	
	Note	£000	£000	£000	£000
	STFC	Consolidated	STFC	Consolidated	
<b>Non-current assets:</b>					
Property, plant and equipment	6	821,261	821,261	728,139	728,139
Intangible assets	7	29,476	29,476	17,383	17,383
Financial assets	9, 10	560,599	416,647	534,627	423,455
Trade and other receivables	11	4,246	4,246	4,485	4,485
<b>Total non-current assets</b>		<b>1,415,582</b>	<b>1,271,630</b>	<b>1,284,634</b>	<b>1,173,462</b>
<b>Current assets:</b>					
Trade and other receivables	11	70,747	70,747	41,268	41,268
Derivative financial instruments	8	5,138	5,138	-	-
Cash and cash equivalents	12	246	246	433	433
<b>Total current assets</b>		<b>76,131</b>	<b>76,131</b>	<b>41,701</b>	<b>41,701</b>
<b>Total assets</b>		<b>1,491,713</b>	<b>1,347,761</b>	<b>1,326,335</b>	<b>1,215,163</b>
<b>Current liabilities:</b>					
Trade and other payables	13	(95,525)	(95,525)	(64,783)	(64,783)
Provisions	14	(6,400)	(6,400)	(6,600)	(6,600)
<b>Total current liabilities</b>		<b>(101,925)</b>	<b>(101,925)</b>	<b>(71,383)</b>	<b>(71,383)</b>
<b>Total assets less current liabilities</b>		<b>1,389,788</b>	<b>1,245,836</b>	<b>1,254,952</b>	<b>1,143,780</b>
<b>Non-current liabilities:</b>					
Trade and other payables	13	(649)	(649)	(1,104)	(1,104)
Derivative financial instruments	8	(4,080)	(4,080)	-	-
Provisions	14	(95,833)	(95,833)	(90,254)	(90,254)
<b>Total non-current liabilities</b>		<b>(100,562)</b>	<b>(100,562)</b>	<b>(91,358)</b>	<b>(91,358)</b>
<b>Total assets less total liabilities</b>		<b>1,289,226</b>	<b>1,145,274</b>	<b>1,163,594</b>	<b>1,052,422</b>
<b>Taxpayers' equity and other reserves:</b>					
General reserve		1,032,270	800,994	989,733	789,736
Revaluation reserve		256,956	344,280	173,861	262,686
<b>Total equity</b>		<b>1,289,226</b>	<b>1,145,274</b>	<b>1,163,594</b>	<b>1,052,422</b>

*Brian Bowsher*

Dr Brian Bowsher

Chief Executive  
28 June 2017

The notes on pages 52 to 78 form part of these financial statements.

## STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 MARCH 2017

		2016-17		2015-16	
		£000	£000	£000	£000
	Note	STFC	Consolidated	STFC	Consolidated
<b>Cash flows from operating activities</b>					
Net operating expenditure (after reversal of notional charge)		(639,174)	(670,453)	(595,718)	(626,341)
Adjustments for non-cash transactions		105,890	137,169	125,335	155,958
(Increase)/decrease in trade and other receivables	11	(29,229)	(29,229)	14,693	14,693
Increase/(decrease) in trade and other payables	13	30,287	30,287	(8,438)	(8,438)
<b>Net cash outflow from operating activities</b>		<b>(532,226)</b>	<b>(532,226)</b>	<b>(464,128)</b>	<b>(464,128)</b>
<b>Cash flows from investing activities</b>					
Purchase of property, plant and equipment	6	(81,668)	(81,668)	(52,196)	(52,196)
Purchase of intangible assets	7	(18,941)	(18,941)	(12,140)	(12,140)
Proceeds of disposal of property, plant and equipment		176	176	7	7
Proceeds of disposal of assets held for sale		-	-	671	671
Investment in joint ventures	9.1	(27,239)	(27,239)	(30,434)	(30,434)
Other investments	10	-	-	(1)	(1)
<b>Net cash outflow from investing activities</b>		<b>(127,672)</b>	<b>(127,672)</b>	<b>(94,093)</b>	<b>(94,093)</b>
<b>Cash flows from financing activities</b>					
Grant-in-aid received from BEIS		659,711	659,711	560,926	560,926
<b>Net cash inflow from financing activities</b>		<b>659,711</b>	<b>659,711</b>	<b>560,926</b>	<b>560,926</b>
<b>Net (decrease)/increase in cash and cash equivalents in the period</b>		<b>(187)</b>	<b>(187)</b>	<b>2,705</b>	<b>2,705</b>
<b>Cash and cash equivalents at the beginning of the period</b>	12	<b>433</b>	<b>433</b>	<b>(2,272)</b>	<b>(2,272)</b>
<b>Cash and cash equivalents at the end of the period</b>	12	<b>246</b>	<b>246</b>	<b>433</b>	<b>433</b>

**Note:**

In accordance with IAS7: *Statement of Cash Flows*, cash flows between STFC and joint ventures are included under the appropriate heading but other joint venture cash flows are excluded.

The notes on pages 52 to 78 form part of these financial statements

## STATEMENT OF CHANGES IN TAXPAYERS' EQUITY FOR THE YEAR ENDED 31 MARCH 2017

	General Reserve £000	Revaluation Reserve £000	STFC £000	General Reserve £000	Revaluation Reserve £000	Consolidated £000
<b>Balance at 1 April 2015</b>	<b>1,012,001</b>	<b>172,382</b>	<b>1,184,383</b>	<b>842,627</b>	<b>253,355</b>	<b>1,095,982</b>
Grant in aid from BEIS	560,926	-	560,926	560,926	-	560,926
Net expenditure for the year	(595,718)	-	(595,718)	(626,341)	-	(626,341)
<b>Movements in reserves:</b>						
Cashflow hedge	1,913	-	1,913	1,913	-	1,913
Net gain on revaluation of PPE and intangible assets	-	12,090	12,090	-	12,090	12,090
Transfers between reserves	10,611	(10,611)	-	10,611	(10,611)	-
Net gain on revaluation of investments	-	-	-	-	7,852	7,852
<b>Balance at 31 March 2016</b>	<b>989,733</b>	<b>173,861</b>	<b>1,163,594</b>	<b>789,736</b>	<b>262,686</b>	<b>1,052,422</b>
Grant in aid from BEIS	659,711	-	659,711	659,711	-	659,711
Net expenditure for the year	(639,174)	-	(639,174)	(670,453)	-	(670,453)
<b>Movements in reserves:</b>						
Cashflow hedge	1,058	-	1,058	1,058	-	1,058
Net gain on revaluation of PPE and intangible assets	-	104,037	104,037	-	104,037	104,037
Transfers between reserves	20,942	(20,942)	-	20,942	(20,942)	-
Net loss on revaluation of investments	-	-	-	-	(1,501)	(1,501)
<b>Balance at 31 March 2017</b>	<b>1,032,270</b>	<b>256,956</b>	<b>1,289,226</b>	<b>800,994</b>	<b>344,280</b>	<b>1,145,274</b>

The notes on pages 52 to 78 form part of these financial statements.

## NOTES TO THE ACCOUNTS

---

### 1. STATEMENT OF ACCOUNTING POLICIES

---

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

#### 1.1 BASIS OF ACCOUNTING

---

The financial statements have been prepared in accordance with the Accounts Direction issued by the Secretary of State for the Department for BEIS in pursuance of Section 2(2) of the Science and Technology Act 1965.

These financial statements have been prepared in accordance with the *2016-17 Government Financial Reporting Manual (FReM)*. The accounting policies contained in the *FReM* apply International Financial Reporting Standards (*IFRS*) as adapted or interpreted for the public sector context.

Where the *FReM* permits a choice of accounting policy, the accounting policy judged to be most appropriate to the particular circumstances of STFC for the purpose of giving a true and fair view has been selected. The particular policies adopted by STFC are described below. They have been applied consistently in dealing with items that are considered material to the accounts.

The financial statements are presented in pounds sterling and all values are rounded to the nearest thousand pounds (£'000), except where indicated otherwise.

#### GOING CONCERN

STFC is dependent on funding from BEIS to meet liabilities falling due within future years. In March 2016 BEIS published The Allocation of Science and Research Funding 2016-17 to 2019-20, which shows continued funding for STFC for this period. On the basis of this publication, STFC has no reason to believe that future funding will not be forthcoming and therefore the accounts are produced on a going concern basis. Confirmation of the 2017-18 allocation was received from BEIS in March 2017 detailing the STFC ring-fenced budgets.

The Higher Education & Research Bill received its first reading in May 2016 setting out the government's intention regarding the research council's future, with the creation of a single executive non-department public body operating at arm's length from Government – UK Research and Innovation (UKRI). The Bill states the Government will ensure the seven research discipline areas continue to have strong and autonomous leadership, and that UKRI will incorporate the assets, liabilities and functions of the seven Research Councils, Innovate UK, and HEFCE's research funding. The names and brands of the Research Councils and Innovate UK will be retained amongst a number of other protections. The bill received royal assent on the 27th April 2017. On the strength of this information, the accounts have been prepared on a going concern basis..

#### 1.2 ACCOUNTING CONVENTION

---

These accounts have been prepared under the historical cost convention modified to include the fair value of property, plant and equipment, intangible assets and financial instruments to the extent required or permitted under *IFRS* as set out in the relevant accounting policies.

#### 1.3 BASIS OF CONSOLIDATION

---

STFC's wholly-owned subsidiary undertaking, STFC Innovations Limited (SIL), is consolidated in accordance with *IFRS 10: Consolidated Financial Statements*, to form the STFC Group. There is no material difference between STFC and the STFC Group. On this basis, STFC's financial statements as reported are the consolidation of the STFC parent and STFC Innovations Limited. The STFC parent holds the investment in joint ventures at cost, less any provision for impairment.

The consolidated financial statements are the STFC financial statements, as above, consolidated with the value of the investment in joint ventures being carried at cost plus post-acquisition changes in STFC's share of net assets of the joint venture, in accordance with the equity method of accounting.

Where there is no difference between the STFC and consolidated position in the notes to the financial statements, only the consolidated position is shown.

## 1.4 TANGIBLE NON-CURRENT ASSETS

---

### PROPERTY, PLANT AND EQUIPMENT (PPE)

PPE held for its service potential and in use or that is surplus with restrictions on sale, is carried at current value in existing use. PPE that is surplus, without any restrictions on sale, is carried at fair value using *IFRS 13: Fair Value Measurement*. For specialised assets current value in existing use is taken to be depreciated replacement cost.

Freehold land and buildings are revalued on an existing use basis or on a depreciated replacement cost basis for specialist properties using professional valuations.

The capitalisation threshold for PPE is £10,000.

For furniture, fixtures and fittings where an asset pool is maintained replacements on a one-to-one basis are charged directly to the Statement of Comprehensive Net Expenditure in the year of replacement. Major enhancements or additions to the pool are capitalised as assets.

### DEPRECIATION

Assets under construction are not depreciated until the asset is brought into use.

PPE is depreciated at rates calculated to write it down to the estimated residual value on a straight line basis over the estimated useful lives.

Freehold land is not depreciated and other property, plant and equipment assets are normally depreciated over the following periods:

- Freehold buildings                    60 years
- Long leasehold properties        60 years or term of lease
- Plant and machinery                20 years
- Scientific equipment                15 years
- Electronic scientific equipment    10 years
- Computer equipment                5 years
- Vehicles                              4 years

### ASSET IMPAIRMENT

PPE and intangible assets are reviewed for impairment whenever events or circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised in the Statement of Comprehensive Net Expenditure (SoCNE) for the amount by which the carrying amount exceeds the recoverable amount.

The recoverable amount is the higher of fair value less costs to sell, and value in use. Value in use is assumed to equal the cost of replacing the service potential provided by the asset.

Any reversal of an impairment charge is recognised in the SoCNE to the extent that the original charge, adjusted for subsequent depreciation, was previously recognised, with any remaining amount recognised in the revaluation reserve.

## 1.5 INTANGIBLE NON-CURRENT ASSETS

---

Intangible assets are recognised for items costing £10,000 or more. They are carried at current value in existing use which is taken to be depreciated replacement cost.

Intangible assets are normally amortised over the following periods:

- Software and software licences        5-10 years

## 1.6 FINANCIAL ASSETS

---

### INVESTMENTS IN JOINT VENTURES AND ASSOCIATES

Investments in joint ventures and associates are accounted for using the equity method of accounting; the investment in an associate or joint venture is initially recorded at cost and is subsequently adjusted to reflect STFC's share of the net profit or loss of the associate or joint venture.

## 1.7 FINANCIAL INSTRUMENTS

---

STFC recognises and measures financial instruments in accordance with *IAS39: Financial Instruments: Recognition and Measurement* as interpreted by the FReM.

### TRADE AND OTHER RECEIVABLES

Trade and other receivables are classified as loans and receivables; they are initially recognised and carried at original invoice amount. Subsequently, an estimate for doubtful debts is made when collection of the full amount is no longer probable and is offset against the original invoice amount.

Bad debts are written off when identified.

### TRADE AND OTHER PAYABLES

Trade and other payables are recognised in the period in which related money, goods or services are received or when a legally enforceable claim against STFC is established or when the corresponding assets or expenses are recognised.

### DERIVATIVE FINANCIAL INSTRUMENTS

Derivative financial instruments comprise forward contracts held to hedge STFC's exposure to foreign currency risk relating to payments due for membership to international research collaborations. The forward contract is designated as a cash flow hedge against the related membership commitment. Amounts accumulated in equity are recycled to the SoCNE in the periods when the hedged item affects the SoCNE.

## 1.8 CASH AND CASH EQUIVALENTS

---

Cash and cash equivalents comprise cash in hand and current balances with banks and other financial institutions.

### 1.9 EMPLOYEE BENEFITS

---

In accordance with *IAS19: Employee Benefits*, an entity is required to recognise short term employee benefits when an employee has rendered service in exchange for those benefits. Included in the financial statements is an accrual for the outstanding employee holiday entitlement at the year end (undiscounted).

### 1.10 PENSIONS

---

Contributions to the UKAEA Pension Scheme and the Research Councils Pension Scheme (RCPS) are charged to the Statement of Comprehensive Net Expenditure (SCNE) in accordance with actuarial recommendations so as to spread the cost of the pensions over the employees' expected working lives.

Liabilities for the payment of future benefits are the responsibility of the UKAEA Pension Scheme and the RCPS. Accordingly, these are not included in the financial statements.

Both the UKAEA Pension Scheme and the RCPS are multi-employer schemes and STFC is unable to identify its share of the underlying assets and liabilities.

## 1.11 EARLY DEPARTURE COSTS

STFC is required to meet the additional cost of benefits beyond the normal PCSPS benefits in respect of employees who retire early. In accordance with *IAS19: Employee Benefits*, STFC provides in full for this cost when an early retirement programme has been announced and is binding. Early departure costs are discounted using HM Treasury's current pension rate.

## 1.12 PROVISIONS

Provisions are recognised and measured in accordance with *IAS37: Provisions, Contingent Liabilities and Contingent Assets*. Where the time value of money is material, provisions are discounted to present value using HM Treasury's real discount rates.

## 1.13 GRANT-IN-AID AND OTHER INCOME

Grant-in-aid provided by BEIS is credited to the income and expenditure reserve.

Grant Income receivable and funding for collaborative projects is recognised as income over the period in which STFC recognises the related costs for which the grant or funding is intended to compensate. Grant income can only be deferred if the contract or agreement includes key conditions relating to the repayment of surplus funds.

Other operating income is shown net of trade discounts; value added tax and other taxes. Revenue is recognised when goods are delivered and title has passed, and services in the accounting period in which the service is rendered.

## 1.14 RESEARCH AND DEVELOPMENT

As a research organisation the majority of STFC's expenditure on research and development does not meet the capitalisation criteria of *IAS38: Intangible Assets*, and is therefore charged to the SoCNE when incurred.

## 1.15 RESEARCH GRANTS PAYABLE

The majority of research grants and fellowships are paid by STFC on an instalment basis in accordance with an agreed payment profile. Where the profile indicates an unclaimed and/or unpaid amount exists at the Statement of Financial Position date, such sums are accrued in the financial statements.

The majority of studentship grants are paid on an instalment basis in advance. Stipends are paid directly to the student on a quarterly basis and fee payments are made in two equal payments to the institutions.

## 1.16 OWNERSHIP OF EQUIPMENT PURCHASED WITH STFC RESEARCH GRANTS

Through the Conditions of Grant applied to funded institutions, STFC reserves the right to determine how equipment purchased by an institution with research grant funds is disposed of, and how any disposal proceeds are to be utilised during the period of the research. Once the research has been completed the institution is free to use such equipment without reference to STFC. Such equipment is excluded from these financial statements.

## 1.17 INSURANCE

As a public body, STFC does not generally insure. However, STFC has decided, with the agreement of BEIS, that risks relating to certain commercial contracts entered into by the Council should be commercially insured. Insurance premiums are charged to the SoCNE.

## 1.18 FOREIGN CURRENCY

STFC applies *IAS21: The Effects of Changes in Foreign Exchange Rates*, and transactions that are denominated in a foreign currency are translated into sterling at the rate of exchange ruling on the date of each transaction, except where rates do not fluctuate significantly, in which case an average rate for a period is used. Monetary assets and liabilities denominated in foreign currencies at the Statement of Financial Position date are retranslated at the rates of exchange ruling at that date. The translation differences are recognised in the SoCNE.

## 1.19 VAT

Value Added Tax (VAT) is accounted for in the accounts, in that amounts are shown net of VAT except:

- Irrecoverable VAT is charged to the SoCNE, and included under the relevant expenditure heading
- Irrecoverable VAT on the purchase of an asset is included in additions.

The net amount due to, or from, HM Revenue and Customs in respect of VAT is included within other receivables and payables on the Statement of Financial Position.

## 1.20 NOTIONAL CHARGE FOR UK SBS LIMITED SERVICES

When the ownership of the UK SBS transferred from the Research Councils to BEIS, the cost of the UK SBS's services to STFC ceased to be a direct charge and instead was deducted from STFC's allocation. In order to accurately reflect the cost of using UK SBS's services in the annual accounts, the charge has been shown as a notional cost (and then written back) on the statement of comprehensive expenditure.

## 1.21 ACCOUNTING ESTIMATES AND JUDGEMENTS

The preparation of financial statements requires management to make judgements, estimates and assumptions. These affect the reported amounts of assets and liabilities; the disclosure of contingent assets and liabilities at the date of the financial statements; and the reported amounts of revenues and expenses for the reporting period.

Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

The estimates and judgements that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are:

- Valuation of property, plant and equipment (PPE). PPE are revalued every five years and are revised in the intervening years by use of appropriate indices
- Calculation of the decommissioning costs for STFC facilities. The calculations are based on estimates, provided by professional valuation, of the current cost of the work to be undertaken, the timing of the decommissioning, the profiling of the expenditure and assumptions regarding inflation rates. To reduce the risk of material misstatement, the estimates and assumptions are reviewed annually

Calculation of the decommissioning provision for the ILL. STFC's share of the ILL decommissioning provision is taken from the ILL financial statements. The provision was revalued by the Commissariat à l'Énergie Atomique (CEA) in February 2017, based on information provided by ILL management.

## 1.22 CHANGES TO *IFRS* AND THE *FREM*

### CHANGES TO *IFRS*

In accordance with the *FReM*, these financial statements apply EU-adopted *IFRS* as adapted or interpreted for application to the public sector. These financial statements have not applied the new *IFRS 9: Financial Instruments*, *IFRS 15: Revenue from Contracts with Customers* or *IFRS 16: Leases*, *Financial Reporting Standards* which have been issued but are not yet endorsed by the EU. These are not yet effective (*IFRS 9* and *IFRS 15* are anticipated to be adopted in the 2018-19 *FReM* and *IFRS 16* in 2019-20).

*IFRS 9: Financial Instruments* is being introduced to replace *IAS39: Financial Instruments: Recognition and Measurement*. The new standard simplifies the classification and measurement of financial assets as well as amending when and how impairments are calculated and reported, moving from an incurred loss to an expected loss model. This will result in impairments being recognised earlier than under *IAS39*.

*IFRS 15: Revenue from Contracts with Customers* will replace *IAS18: Revenue* and *IAS11: Construction Contracts*, unifying the concepts in these two standards into a single model to recognise revenue as a performance obligation under a contract is satisfied.

*IFRS 16: Leases* will replace *IAS17: Leases*. The new standard amends the accounting for lessees, removing the distinction between recognising an operating lease (off-balance sheet financing) and a finance lease (on-balance sheet financing). The new standard requires recognition of all leases (which last over 12 months) to be recognised as a finance lease (on-balance sheet).

The interpretation of these standards into the *FReM* is currently being determined and the outcome of this work is not yet known. *IFRS 9* is not expected to have a material impact on STFC's financial statements. The potential impact if *IFRS 15* and *IFRS 16* is still to be determined and is dependent upon any *FReM* interpretations or adaptations applied.

### CHANGES TO *FReM*

There have been no changes to the *FReM*.

## 2. REPORTING BY OPERATING SEGMENT

STFC reports its expenditure by operating segment in accordance with *IFRS 8: Operating Segments*.

### SEGMENTAL ANALYSIS OF NET OPERATING EXPENDITURE BY BUSINESS UNIT

FOR THE YEAR TO 31 MARCH 2017

	Programmes £000	National Laboratories £000	Business & innovation £000	Corporate services £000	Finance £000	SPC £000	Total £000
<b>Expenditure</b>							
Staff costs	5,104	76,985	3,537	11,443	3,170	3,848	104,087
Purchase of goods and services	172,549	53,922	4,382	20,420	(416)	1,647	252,504
Research grants and other research support	219,614	38,740	1,321	10	-	190	259,875
Other operating expenditure	-	-	-	-	31,283	-	31,283
Depreciation and impairment charges	-	-	308	-	95,210	-	95,518
Provision expense	-	-	(11)	-	3,617	-	3,606
Notional charge for UK SBS Ltd services	-	-	-	-	4,292	-	4,292
<b>Total operating expenditure</b>	<b>397,267</b>	<b>169,647</b>	<b>9,537</b>	<b>31,873</b>	<b>137,156</b>	<b>5,685</b>	<b>751,165</b>
<i>Income</i>							
Income from operating activities	(2,848)	(63,526)	(3,178)	(6,848)	(505)	(381)	(77,286)
<b>Net operating expenditure</b>	<b>394,419</b>	<b>106,121</b>	<b>6,359</b>	<b>25,025</b>	<b>136,651</b>	<b>5,304</b>	<b>673,879</b>

**FOR THE YEAR TO 31 MARCH 2016**

	<b>Programmes</b>	<b>National Laboratories</b>	<b>Business &amp; innovation</b>	<b>Corporate services</b>	<b>Finance</b>	<b>SPC</b>	<b>Total</b>
	<b>£000</b>	<b>£000</b>	<b>£000</b>	<b>£000</b>	<b>£000</b>	<b>£000</b>	<b>£000</b>
<b>Expenditure</b>							
Staff costs	4,778	72,167	3,663	11,584	2,750	3,377	98,319
Purchase of goods and services	155,473	53,824	4,135	21,511	(1,003)	1,582	235,522
Research grants and other research support	187,726	11,578	1,830	47	-	57	201,238
Other operating expenditure	-	-	-	-	30,645	-	30,645
Depreciation and impairment charges	-	-	-	-	63,965	-	63,965
Provision expense	-	-	-	-	62,761	-	62,761
Notional charge for UK SBS Ltd services	-	-	-	-	3,780	-	3,780
<b>Total operating expenditure</b>	<b>347,977</b>	<b>137,569</b>	<b>9,628</b>	<b>33,142</b>	<b>162,898</b>	<b>5,016</b>	<b>696,230</b>
<b>Income</b>							
Income from operating activities	(2,793)	(53,904)	(2,339)	(7,746)	358	(263)	(66,687)
<b>Net operating expenditure</b>	<b>345,184</b>	<b>83,665</b>	<b>7,289</b>	<b>25,396</b>	<b>163,256</b>	<b>4,753</b>	<b>629,543</b>

STFC's assets and liabilities are shared across all parts of the organisation and therefore not separately identified and disclosed.

	<b>Revenue by location of customers</b>		<b>Non-current assets by location of assets</b>	
	<b>2016-17 £000</b>	<b>2015-16 £000</b>	<b>2016-17 £000</b>	<b>2015-16 £000</b>
UK	43,814	43,170	1,226,256	1,134,704
The rest of the world	33,472	23,517	45,374	38,758
<b>Total</b>	<b>77,286</b>	<b>66,687</b>	<b>1,271,630</b>	<b>1,173,462</b>

**SUMMARY OF THE SEGMENTS:****PROGRAMMES**

This segment covers STFC's science and technology strategy, science operations and planning (including STFC's processes for peer review), world-class research training programme and management, including UK membership of and access to international facilities of CERN, European Southern Observatory (ESO), ILL and ESRF and those being developed (CTA, DUNE, ESS, FAIR, SKA and XFEL), as well as programmes in education, training and public engagement. It also covers the Isaac Newton Group of Telescopes on La Palma, Canary Islands.

**NATIONAL LABORATORIES**

This segment covers the management and operation of STFC's world class national laboratories located at Rutherford Appleton Laboratory, Daresbury Laboratory, the Chilbolton Observatory and United Kingdom Astronomy Technology Centre (UK ATC), plus the provision of access to world-class experimental facilities and technologies. The laboratories are home to the science, facility and technology departments of accelerator science and technology, particle physics and space, scientific computing, technology, ISIS and CLF.

## BUSINESS AND INNOVATION

This segment covers the delivery and development of the impact potential of STFC's expertise and facilities, through business development, innovation and campus development, the protection and exploitation of the intellectual property arising from the work of STFC laboratories through spin-out companies and the effective transfer of knowledge between STFC, universities and other organisations.

## CORPORATE SERVICES

This segment covers STFC's support and operational functions covering CICT infrastructure and support at Rutherford Appleton Laboratory and Daresbury Laboratory, estates management, health, safety and environment, human resources and security. It also covers the legal and commercial services for the whole organisation.

## FINANCE

This segment covers STFC's overall budgeting and associated financial planning, financial management, financial support and financial accounting processes within the Council. It also covers key governance activities across the Council, including risk management.

## STRATEGY, PLANNING AND COMMUNICATIONS (SPC)

This segment covers the delivery of STFC's national and international strategic agenda, stakeholder management, performance and impact reporting, international relations, effective internal and external communications which encompasses STFC's activities in marketing, public affairs, media relations, events management, corporate web services and corporate publication.

### 3. STAFF COSTS

	2016-17 £000	2015-16 £000
Wages and salaries	76,663	74,399
Social security costs	8,769	6,545
Other pension costs	18,655	17,375
<b>Total staff costs</b>	<b>104,087</b>	<b>98,319</b>

For further information on staff costs and numbers, please see the Remuneration and Staff Report.

### 4. INCOME

	2016-17 £000	2015-16 £000
<b>Operating income</b>		
Facilities access and development	(62,971)	(53,905)
Science programme and project work	(2,848)	(2,792)
Other services	(11,467)	(9,990)
<b>Total Operating income</b>	<b>(77,286)</b>	<b>(66,687)</b>

Operating income includes £3,187k (2015-16: £2,147k) received from the European Commission and £20,052k (2015-16: £19,384k) from BEIS and its partner organisations.

There are no external customers accounting for 10% or more of total revenue.

## 5. OPERATING EXPENDITURE

### 5.1 PURCHASE OF GOODS AND SERVICES

	Note	2016-17 £000	2015-16 £000
International subscriptions	5.1.1	169,466	152,532
Rentals under operating leases		1,371	1,740
Accommodation		33,392	32,570
Consultancy		3,501	3,428
Finance and HR services		80	827
IT costs / support costs		9,626	8,883
Training and other staff costs		2,774	2,566
Restructuring costs		76	(37)
UK travel and subsistence		4,666	4,595
Overseas travel and subsistence		2,518	2,307
Telecommunications cost		526	702
Advertising and publicity		268	234
Media and design services		2	86
Audit fees	5.1.2	144	168
Professional subscriptions		164	104
Postage and freight		596	801
Catering services		4,186	4,380
Miscellaneous other costs		18,733	19,378
Losses and compensation		139	(4)
Other audit costs		276	262
<b>Total</b>		<b>252,504</b>	<b>235,522</b>

#### 5.1.1 INTERNATIONAL SUBSCRIPTIONS

	2016-17 £000	2015-16 £000
European Organisation for Nuclear Research (CERN)	121,869	107,585
European Southern Observatory (ESO)	23,078	20,381
Institut Laue-Langevin (ILL)	16,610	16,720
European Synchrotron Radiation Facility (ESRF)	7,909	7,846
<b>Total</b>	<b>169,466</b>	<b>152,532</b>

#### 5.1.2 AUDIT FEES

Audit fees include £130k (2015-16: £130k) for the statutory audit of STFC and £14k (2015-16: £14k) for the statutory audit of SIL.

## 5.2 RESEARCH GRANTS AND OTHER RESEARCH SUPPORT

	2016-17 £000	2015-16 £000
<b>Research grants</b>		
Astronomy	42,761	41,160
Particle physics	46,500	46,411
Other	11,505	12,120
<b>Total research grants</b>	<b>100,766</b>	<b>99,691</b>
Post graduate training awards and fellowships	23,183	23,407
Other research costs	35,837	24,018
Joint venture funding	48,951	46,708
Contribution to construction of facilities	51,138	7,414
<b>Total</b>	<b>259,875</b>	<b>201,238</b>

Contribution to construction of facilities is comprised of STFC funding for the development of: XFEL £20,074k (2015-16: £2,000k), ESS £17,469k (2015-16: £2,000), EELT £9,085k (2015-16: £3,414k) and SKA £4,510k (2015-16: nil).

## 5.3 OTHER OPERATING EXPENDITURE

	2016-17		2015-16	
	£000		£000	
	STFC	Consolidated	STFC	Consolidated
Loss on disposal - assets held for sale	-	-	7	7
Loss on disposal – PPE	4	4	15	15
Share of losses of joint ventures	-	31,279	-	30,623
<b>Total</b>	<b>4</b>	<b>31,283</b>	<b>22</b>	<b>30,645</b>

## 5.4 DEPRECIATION AND IMPAIRMENT CHARGES

	2016-17		2015-16	
	£000		£000	
Depreciation		69,587		62,528
Amortisation of intangible assets		10,639		1,370
Impairment of PPE		14,025		67
Impairment of financial assets		1,267		-
<b>Total</b>		<b>95,518</b>		<b>63,965</b>

## 5.5 PROVISION EXPENSE

	2016-17		2015-16	
	£000		£000	
(Decrease)/increase in bad debt provision		(11)		24
Increase in decommissioning provision		3,617		62,737
<b>Total</b>		<b>3,606</b>		<b>62,761</b>

## 6. PROPERTY PLANT AND EQUIPMENT

2016-17	Land	Buildings	Plant and equipment	Information technology	Assets under construction	Total
	£000	£000	£000	£000	£000	£000
<b>Cost or valuation</b>						
<b>At 1 April 2016</b>	<b>34,972</b>	<b>495,890</b>	<b>850,595</b>	<b>97,085</b>	<b>76,586</b>	<b>1,555,128</b>
Additions	-	-	14,126	-	67,542	81,668
Disposals	(177)	(530)	(2,236)	(20,488)	-	(23,431)
Impairments	-	(2)	(4,907)	(8,832)	-	(13,741)
Reclassifications		9,393	24,954	10,766	(49,118)	(4,005)
Revaluations	1,207	19,646	69,042	(2,372)	-	87,523
<b>At 31 March 2017</b>	<b>36,002</b>	<b>524,397</b>	<b>951,574</b>	<b>76,159</b>	<b>95,010</b>	<b>1,683,142</b>
<b>Depreciation</b>						
<b>Balance at 1 April 2016</b>	<b>-</b>	<b>(221,987)</b>	<b>(549,281)</b>	<b>(55,721)</b>	<b>-</b>	<b>(826,989)</b>
Charged in year	-	(13,943)	(41,888)	(13,756)	-	(69,587)
Disposals	-	530	2,235	15,486	-	18,251
Reclassifications	-	-	20	(20)	-	-
Revaluations	-	(9,227)	16,986	8,685	-	16,444
<b>At 31 March 2017</b>	<b>-</b>	<b>(244,627)</b>	<b>(571,928)</b>	<b>(45,326)</b>	<b>-</b>	<b>(861,881)</b>
<b>Carrying amount at 31 March 2017</b>	<b>36,002</b>	<b>279,770</b>	<b>379,646</b>	<b>30,833</b>	<b>95,010</b>	<b>821,261</b>
<b>Carrying amount at 31 March 2016</b>	<b>34,972</b>	<b>273,903</b>	<b>301,314</b>	<b>41,364</b>	<b>76,586</b>	<b>728,139</b>

2015-16	Land	Buildings	Plant and equipment	Information technology	Assets under construction	Total
	£000	£000	£000	£000	£000	£000
<b>Cost or valuation</b>						
<b>At 1 April 2015</b>	<b>33,731</b>	<b>479,665</b>	<b>837,557</b>	<b>91,687</b>	<b>125,989</b>	<b>1,568,629</b>
Additions	-	-	10,267	24	41,905	52,196
Disposals	-	(53,665)	(35,456)	(632)	-	(89,753)
Impairments	-	-	(67)	-	-	(67)
Reclassifications	-	48,520	32,534	5,222	(91,308)	(5,032)
Revaluations	1,241	21,370	5,760	784	-	29,155
<b>At 31 March 2016</b>	<b>34,972</b>	<b>495,890</b>	<b>850,595</b>	<b>97,085</b>	<b>76,586</b>	<b>1,555,128</b>
<b>Depreciation</b>						
<b>Balance at 1 April 2015</b>	<b>-</b>	<b>(250,282)</b>	<b>(547,461)</b>	<b>(39,495)</b>	<b>-</b>	<b>(837,238)</b>
Charged in year	-	(12,720)	(33,596)	(16,212)	-	(62,528)
Disposals	-	53,665	35,438	628	-	89,731
Reclassifications	-	-	-	142	-	142
Revaluations	-	(12,650)	(3,662)	(784)	-	(17,096)
<b>At 31 March 2016</b>	<b>-</b>	<b>(221,987)</b>	<b>(549,281)</b>	<b>(55,721)</b>	<b>-</b>	<b>(826,989)</b>
<b>Carrying amount at 31 March 2016</b>	<b>34,972</b>	<b>273,903</b>	<b>301,314</b>	<b>41,364</b>	<b>76,586</b>	<b>728,139</b>
<b>Carrying amount at 31 March 2015</b>	<b>33,731</b>	<b>229,383</b>	<b>290,096</b>	<b>52,192</b>	<b>125,989</b>	<b>731,391</b>

- a. The net carrying amount of PPE held under finance lease was nil.
- b. Reclassifications are transfers between the asset categories. When assets under construction (AUC) are brought into use, they are reclassified from AUC to the appropriate category of property, plant and equipment or intangible assets.
- c. Disposals include £5,000 net book value for computer equipment donated to DiRAC at Durham University.
- d. AUC comprises projects to build and improve site infrastructure, and to construct scientific facilities and instruments. Total AUC at 31 March 2017 includes ISIS TS2 instruments £22,683k, ISIS projects £24,427k and the supercomputer £13,500k.
- e. Plant and equipment net book value at 31 March 2017 includes £9,717k (31 March 2016: £10,060k) for science facility decommissioning costs.
- f. Independent qualified professional valuations are obtained for all property, plant and equipment every five years and are revised in the intervening years by the use of appropriate indices.

Polaris House is owned jointly by a number of the Research Councils and is professionally valued every five years and modified in the intervening years by the use of appropriate indices. The interest in the Polaris House property was valued at existing use value (EUV) as at 31 December 2015 by commercial property agent GVA.

Land and buildings at Daresbury Laboratory, Chilbolton Observatory and the UK ATC were professionally valued by GVA James Barr as at 31 January 2014 with no change confirmed at 31 March 2014. Land and buildings at Rutherford Appleton Laboratory were professionally valued by GVA James Barr on 31 March 2013. The building assets have been valued on a depreciated replacement cost basis due to the specialist nature of the assets. The land assets have been valued at EUV with the exception of farmland which is assessed at market value.

A professional valuation was undertaken of plant and machinery assets in 2016-17 by Hickman Shearer Ltd. The assets were valued at their current value in existing use as at 31 December 2016. As the majority of STFC assets are specialised in nature depreciated replacement cost was taken as the current value in existing use.

All valuations were undertaken by Royal Institute of Chartered Surveyors-qualified quantity surveyors in accordance with the *Valuation Standards of the Royal Institute of Chartered Surveyors*, IFRS and guidelines in HM Treasury's *FReM*.

## 7. INTANGIBLE ASSETS

**2016-17**

	Information technology	Software licences	Assets under construction	Total
	£000	£000	£000	£000
<b>Cost or valuation</b>				
<b>Balance at 1 April 2016</b>	<b>9,003</b>	<b>859</b>	<b>12,140</b>	<b>22,002</b>
Additions	4,576	14,365	-	18,941
Impairment	(275)	(9)	-	(284)
Reclassifications	2,445	13,351	(11,791)	4,005
Revaluations	84	2	-	86
<b>At 31 March 2017</b>	<b>15,833</b>	<b>28,568</b>	<b>349</b>	<b>44,750</b>
<b>Amortisation</b>				
<b>Balance at 1 April 2016</b>	<b>(3,927)</b>	<b>(692)</b>	<b>-</b>	<b>(4,619)</b>
Charged in year	(2,607)	(8,032)	-	(10,639)
Revaluations	(43)	27	-	(16)
<b>At 31 March 2017</b>	<b>(6,577)</b>	<b>(8,697)</b>	<b>-</b>	<b>(15,274)</b>
<b>Carrying amount at 31 March 2017</b>	<b>9,256</b>	<b>19,871</b>	<b>349</b>	<b>29,476</b>
<b>Carrying amount at 31 March 2016</b>	<b>5,076</b>	<b>167</b>	<b>12,140</b>	<b>17,383</b>

**2015-16**

	Information Technology	Software Licences	Assets under construction	Total
	£000	£000	£000	£000
<b>Cost or valuation</b>				
<b>Balance at 1 April 2015</b>	<b>3,884</b>	<b>865</b>	<b>-</b>	<b>4,749</b>
Additions	-	-	12,140	12,140
Disposals	(8)	-	-	(8)
Reclassifications	5,032	-	-	5,032
Revaluations	95	(6)	-	89
<b>At 31 March 2016</b>	<b>9,003</b>	<b>859</b>	<b>12,140</b>	<b>22,002</b>
<b>Amortisation</b>				
<b>Balance at 1 April 2015</b>	<b>(2,526)</b>	<b>(531)</b>	<b>-</b>	<b>(3,057)</b>
Charged in year	(1,214)	(156)	-	(1,370)
Disposals	8	-	-	8
Reclassifications	(142)	-	-	(142)
Revaluations	(53)	(5)	-	(58)
<b>At 31 March 2016</b>	<b>(3,927)</b>	<b>(692)</b>	<b>-</b>	<b>(4,619)</b>
<b>Carrying amount at 31 March 2016</b>	<b>5,076</b>	<b>167</b>	<b>12,140</b>	<b>17,383</b>
<b>Carrying amount at 31 March 2015</b>	<b>1,358</b>	<b>334</b>	<b>-</b>	<b>1,692</b>

a. Independent qualified professional valuations are obtained for all intangible assets every five years and are revised in the intervening years by use of appropriate indices.

b. Intangible assets were professionally re-valued on a depreciated replacement cost basis during 2016-17 by Hickman-Shearer, in accordance with the *Royal Institute of Chartered Surveyors Appraisal and Valuation* manual. The valuation was as at 31 December 2016.

## 8. DERIVATIVE FINANCIAL INSTRUMENTS

### DERIVATIVE FINANCIAL ASSETS

	31 March 2017 £000	31 March 2016 £000
Foreign exchange contracts designated as cash flow hedges: current	5,138	-

### DERIVATIVE FINANCIAL LIABILITIES

	31 March 2017 £000	31 March 2016 £000
Foreign exchange contracts designated as cash flow hedges: non-current	4,080	-

The amount of outstanding forward foreign exchange contracts at 31 March 2017 was £518,782k (2016: nil). Their fair value was £1,058k (2016: nil).

The hedged forecast transactions denominated in foreign currency are expected to occur at various dates over the next three years. Gains and losses recognised in the general reserve on forward foreign exchange contracts as at 31 March 2017 are recognised in the SoCNE when the hedged forecast transaction affects the SoCNE.

## 9. INTERESTS IN JOINT VENTURES AND OTHER INVESTMENTS

### 9.1 INTERESTS IN JOINT VENTURES

#### Consolidated

	DLSL £000	ILL £000	HSIC £000	DSIC £000	Total £000
<b>At 1 April 2015</b>	<b>363,160</b>	<b>31,308</b>	<b>8,269</b>	<b>979</b>	<b>403,716</b>
Investment additions	30,434	-	-	-	30,434
Revaluation	1,269	6,583	-	-	7,852
Share of joint venture losses	(30,040)	-	(572)	(11)	(30,623)
<b>At 31 March 2016</b>	<b>364,823</b>	<b>37,891</b>	<b>7,697</b>	<b>968</b>	<b>411,379</b>
Investment additions	22,239	-	5,000	-	27,239
Revaluation / impairment	(8,086)	6,585	-	-	(1,501)
Share of joint venture profit / losses	(33,315)	-	2,041	(5)	(31,279)
<b>At 31 March 2017</b>	<b>345,661</b>	<b>44,476</b>	<b>14,738</b>	<b>963</b>	<b>405,838</b>

#### STFC

<b>At 1 April 2015</b>	<b>482,963</b>	<b>1</b>	<b>8,099</b>	<b>1,054</b>	<b>492,117</b>
Investment additions	30,434	-	-	-	30,434
<b>At 31 March 2016</b>	<b>513,397</b>	<b>1</b>	<b>8,099</b>	<b>1,054</b>	<b>522,551</b>
Investment additions	22,239	-	5,000	-	27,239

#### At 31 March 2017

<b>At 31 March 2017</b>	<b>535,636</b>	<b>1</b>	<b>13,099</b>	<b>1,054</b>	<b>549,790</b>
-------------------------	----------------	----------	---------------	--------------	----------------

The revaluation of investment in ILL relates to the movement in STFC share of the ILL capital investment reserve. The adjustment is taken to revaluation reserve.

The revaluation of investment in Diamond Light Source Limited (DLSL) relates to the adjustment required to take account of a difference in accounting policy between STFC and DLSL. The adjustment is taken to revaluation reserve.

## DDSL

STFC has an 87.6% (31 March 2016: 87.6%) interest in DDSL, a company incorporated and operating in England. DDSL was established for the construction and operation of a synchrotron facility.

DDSL is a separate structured vehicle under the joint control of STFC and the Wellcome Trust (WT). STFC has a residual interest in its net assets. Accordingly STFC has classified its interest in DDSL as a joint venture that is equity accounted.

STFC holds 86% (31 March 2016: 86%) of DDSL ordinary share capital and 100% (31 March 2016: 100%) non-voting redeemable shares. The purpose of the redeemable shares is to provide for the funding of irrecoverable VAT incurred during the construction and operation of the synchrotron facility.

STFC investment in DDSL is equity accounted after adjusting DDSL financial statements for differences in accounting policy. STFC share of DDSL is based on its ordinary and redeemable shares held at the year end. A shareholder funding allocation letter is sent to DDSL each financial year detailing the funding from STFC and the WT.

The following is summarised financial information for DDSL taken from its financial statements:

	31 March 2017	31 March 2016 (re-stated)
	£'000	£'000
Current assets	20,944	20,761
Non-current assets	392,004	401,844
Current liabilities	16,401	15,313
Non-current liabilities	54,182	52,744
<b>Net assets</b>	<b>342,365</b>	<b>354,548</b>
 Included in the above amounts are:		
Cash and cash equivalents	9,918	10,586
Revenues	60,266	56,894
Loss from continuing operations	38,016	34,310
 Included in the above amounts are:		
Depreciation and amortisation	37,657	34,672

STFC's share of DDSL capital commitments is £4,725k (31 March 2016: £7,599k)

## INSTITUT LAUE-LANGEVIN (ILL)

STFC has a 33% shareholding and 27.5% net interest (31 March 2016: 27.5% net interest) in the ILL; an international research centre for neutron science, incorporated and operating in France. STFC is the UK representative and, along with the French and German Foreign Ministries, jointly controls the ILL. The ILL is a separate structured vehicle and STFC has a residual interest in its net assets. Accordingly STFC has classified its interest in ILL as a joint venture that is equity accounted.

ILL prepares accounts to 31 December (in euros). The ILL's annual accounts are produced in accordance with the methods and principles of the French standard chart of accounts, as ratified by the ministerial order of 22 June 1999, and amended and supplemented subsequent to this ratification by various regulations issued by the French accounting regulatory committee.

The following table is summarised financial information for ILL taken from its financial statements and converted to sterling (STFC incorporates the most recent ILL annual accounts):

	31 December 2016 (STFC accounts 2016-17 £'000)	31 December 2015 (STFC accounts 2015-16 £'000)
Current assets	256,155	189,493
Non-current assets	133,207	118,645
Current liabilities	53,616	44,021
Non-current liabilities	173,782	126,131
<b>Net assets</b>	<b>161,964</b>	<b>137,986</b>

Included in the above amounts are:

Cash and cash equivalents	52,345	39,903
Revenues	116,337	71,185
Profit from continuing operations	-	-

Included in the above amounts are:

Depreciation and amortisation	9,014	8,059
-------------------------------	-------	-------

## HARWELL SCIENCE AND INNOVATION CAMPUS PUBLIC SECTOR LIMITED PARTNERSHIP (HSIC PUBSP)

STFC holds a 51% (31 March 2016: 34%) interest in HSIC PubSP, a company registered in Scotland. Management and control of PubSP is jointly shared by STFC and the UKAEA, with financial interests reflecting the relative contributions of the partners; it is classified as a joint venture that is equity accounted. The principal activity of the joint venture is to manage and realise or dispose of, a limited partnership in the Harwell Science and Innovation Campus Limited Partnership (HSIC LP)

HSIC LP was created for the purpose of developing the Harwell Oxford Campus. The partners in HSIC LP are Harwell Oxford Developments Limited – a joint venture comprising Development Securities plc and Harwell Oxford Partners – and HSIC PubSP. HSIC LP is a 50:50, public: private partnership.

The following is summarised financial information for HSIC PubSP taken from its financial statements:

	31 March 2017 £'000	31 March 2016 (re-stated) £'000
Current assets	12,459	12,944
Non-current assets	16,438	5,240
Current liabilities	16	19
Non-current liabilities	-	244
<b>Net assets</b>	<b>28,881</b>	<b>17,921</b>
Included in the above amounts are:		
Cash and cash equivalents	12,198	12,910
Revenues	-	-
(Profit) / loss from continuing operations	(3,962)	1,974
Included in the above amounts are:		
Share of profit in joint venture	3,746	47
Interest income	269	49

## DARESBURY SIC (PUBSEC) LLP

STFC holds a 50% (31 March 2016: 50%) interest in Daresbury SIC (Pubsec) LLP a company registered in England. Daresbury SIC (Pubsec) LLP is a partnership between STFC and Halton Borough Council in which management and control is shared equally between the partners; it is classified as a joint venture that is equity accounted. The principal activity of the joint venture is to promote and develop the International Science Park at Daresbury, as a partner in the Daresbury Science and Innovation Campus Limited Liability Partnership (DSIC LLP). The other partner in DSIC LLP is Langtree, a commercial property development company.

The following is summarised financial information for Daresbury SIC (Pubsec) LLP taken from its financial statements:

	31 March 2017 £'000	31 March 2016 £'000
Current assets	807	797
Non-current assets	1,055	1,055
Current liabilities	997	980
Non-current liabilities	-	-
<b>Net assets</b>	<b>865</b>	<b>872</b>
Included in the above amounts are:		
Cash and cash equivalents	807	797
Revenues	-	-
Loss from continuing operations	7	23
Included in the above amounts are:		
Interest income	1	1

## 9.2 OTHER INVESTMENTS

### UK SHARED BUSINESS SERVICES LIMITED (REGISTERED IN ENGLAND)

STFC holds one Non-Government Department (NGD) £1 share in UK Shared Business Services Ltd (UK SBS Ltd) as do eight other NGD shareholders. The NGD shares together carry 49% of the votes in UK SBS. BEIS holds one Government department (GD) £1 share carrying 51% of the votes. BEIS also owns 100% of the non-voting shares in UK SBS Ltd which entitles it to 100% of the profits of that company.

### INTERNATIONAL COLLABORATIONS

In addition to the ILL, STFC is a member of CERN, ESO, and ESRF and has voting powers in each of these organisations. STFC also holds 14% of the common shares in ESRF but following its signing of the ESRF Protocol in June 2014, pays a contribution of 10.5% with a corresponding level of facility access. Once the new Protocol has been ratified by all Member countries, 3.5% of the UK shareholding (350 shares) will be legally transferred to Russia.

STFC does not have the ability or power to exercise significant influence over CERN, ESO or ESRF. The financial results of these organisations are not reflected in STFC's financial statements and the contributions to these organisations are included as expenditure through the Statement of Comprehensive Net Expenditure.

### SPECTRUM (GENERAL PARTNER) LIMITED

STFC holds 21.9% (31 March 2016: 21.9%) of the ordinary shares in Spectrum (General Partner) Limited (registered in England). This company was set up to act as the Advisory Board for the Rainbow Seed Fund (RSF) and its purpose is to ensure that the RSF operates within the parameters set out by BEIS and to monitor the performance of the fund and the fund manager.

The RSF is a limited partnership comprised of four core partners (STFC, BBSRC, the Natural Environment Research Council (NERC) and the Defence Science and Technology Laboratory (DSTL)) and six associate partners (UKAEA, The Food and Environment Research Laboratory (FERA), The Health Protection Agency (HPA), The Animal Health Veterinary Laboratories Agency (AHVLA), The National Physical Laboratory (NPL) and The James Hutton Institute). The fund provides seed capital investment to commercialise the outcomes of science research in the publicly funded partner organisations' Government facilities. Midven Limited manages the fund under contract. No entry is made in the Statement of Financial Position as the value of the holdings and the trading position of this company is not material to the accounts.

## NEOS INTERACTIVE LIMITED

STFC is a minority shareholder (<1%) in Neos Interactive Limited (registered in England). No entry is made in the Statement of Financial Position as the value of the holdings and the trading position of this company is not material to the financial statements.

### 10. OTHER FINANCIAL ASSETS

	Private sector loans	Private equities	Total
	£000	£000	£000
<b>Balance at 1 April 2015</b>	<b>9,771</b>	<b>680</b>	<b>10,451</b>
Additions	-	1	1
Accrued loan interest	1,624	-	1,624
<b>Balance at 31 March 2016</b>	<b>11,395</b>	<b>681</b>	<b>12,076</b>
Impairment	(1,267)	-	(1,267)
<b>Balance at 31 March 2017</b>	<b>10,128</b>	<b>681</b>	<b>10,809</b>

#### Analysed between current and non-current assets:

	31 March 2017	31 March 2016
	£000	£000
Due within 12 months	-	-
Due after 12 months	10,809	12,076
<b>Total</b>	<b>10,809</b>	<b>12,076</b>

Private sector loans £10,128k (31 March 2016: £11,087k) is due from Daresbury SIC LLP. This is comprised of £9,463k loan notes and £665k accrued interest; the loan notes carry interest at a rate of 3% per annum. The loan notes were impaired by £959k because interest was over accrued in prior years. It has been agreed that new loan notes will be issued to include the accrued interest, thereafter interest will be paid to STFC annually in March.

The secured convertible loan stock held in Oxsensis Limited was impaired from £308k to nil.

## STFC INNOVATIONS LIMITED (SIL)

STFC Innovations Limited (registered in England) is a wholly owned subsidiary of STFC; STFC's current shareholding in SIL is one ordinary share of £1. SIL was established to manage and commercially exploit intellectual property owned by STFC for the benefit of the United Kingdom economy in accordance with HM Government policy.

In 2016-17, SIL incurred a trading deficit of £552k (2015-16: £245k). The trading deficit is underwritten in full by STFC.

STFC investment in SIL is accounted in STFC's financial statements in accordance with *IFRS 10: Consolidated Financial Statements*. SIL's accounting year end is 31 March. The aggregate deficit of capital and reserves at 31 March 2017 was £9,059k (31 March 2016: £8,566k).

## UNLISTED INVESTMENTS HELD BY SIL

At 31 March 2017, SIL held interests in the following undertakings:

	Country of incorporation	Class of shares held	Proportion held	Aggregate of capital & reserves £000	Profit/(loss) for the year £000
			%	£000	£000
Oxsensis Limited	England and Wales	Ordinary	3	(7,416)	(3,037)
Microvisk Limited	England and Wales	Ordinary	1	(482)	(1,332)
Cobalt Light Systems Limited	England and Wales	Ordinary	20	4,173	28
Quantum Detectors Limited	England and Wales	Ordinary	90	208	(193)
The Electrospinning Company Limited	England and Wales	Ordinary	17	412	(225)
Scitech Precision Limited	England and Wales	Ordinary	100	297	61
Teratech Components Limited	England and Wales	Ordinary	50	460	157
KEIT Limited	England and Wales	Ordinary	16	926	(1,009)
L3 Technology Limited	England and Wales	Ordinary	1	(125)	(125)
Exa Informatic	England and Wales	Ordinary	22	(3)	(3)
Mirico	England and Wales	Ordinary	30	944	(56)
VivaMOS	England and Wales	Ordinary	63	(117)	(118)

After the year end SIL entered into an agreement to sell its interest Cobalt Light Systems Limited. As part of this transaction STFC, as the parent organisation, will receive its share of the sales proceeds.

At 31 March 2016, SIL held interests in the following undertakings:

	Country of incorporation	Class of shares held	Proportion held	Aggregate of capital & reserves £000	Profit/(loss) for the year £000
			%	£000	£000
Oxsensis Limited	England and Wales	Ordinary	3	(4,380)	(1,576)
Microvisk Limited	England and Wales	Ordinary	1	651	(4,833)
Cobalt Light Systems Limited	England and Wales	Ordinary	20	3,888	(512)
Quantum Detectors Limited	England and Wales	Ordinary	90	402	290
The Electrospinning Company Limited	England and Wales	Ordinary	24	238	(75)
Scitech Precision Limited	England and Wales	Ordinary	100	236	26
Teratech Components Limited	England and Wales	Ordinary	50	309	88
KEIT Limited	England and Wales	Ordinary	25	504	(667)
L3 Technology Limited	England and Wales	Ordinary	1	(170)	(53)
Exa Informatic	England and Wales	Ordinary	22	-	-
Mirico	England and Wales	Ordinary	30	-	(103)
VivaMOS	England and Wales	Ordinary	63	(212)	(120)

All other unlisted investments are held at £nil.

## 11. TRADE AND OTHER RECEIVABLES

	31 March 2017 £'000	31 March 2016 £'000
<b>Amounts falling due within one year:</b>		
Trade receivables	11,287	10,854
Other receivables	675	651
Prepayments	34,798	14,336
Accrued income	23,987	15,427
<b>Total</b>	<b>70,747</b>	<b>41,268</b>
<b>Amounts falling due after more than one year:</b>		
Other receivables	531	935
Prepayments	3,715	3,550
<b>Total</b>	<b>4,246</b>	<b>4,485</b>
<b>Total Receivables</b>	<b>74,993</b>	<b>45,753</b>

Included within Trade receivables is £3,880k for amounts due from related parties (2016: £1,409k).

Included within accrued income is £1,544k (2016: £1,172k) of income relating to EU funding.

Trade receivables are net of a provision for impairment:

	31 March 2017 £'000	31 March 2016 £'000
<b>Provision at 1 April</b>	<b>575</b>	<b>551</b>
Charged to SCNE	487	357
Utilised during the period	(139)	(4)
Released during the period	(359)	(329)
<b>Provision at 31 March</b>	<b>564</b>	<b>575</b>

At 31 March 2017 trade receivables of £2,669k (31 March 2016: £2,819k) were past due but not impaired. The ageing analysis of these receivables is as follows:

	31 March 2017 £'000	31 March 2016 £'000
0 – 60 days past due	2,577	1,166
61 – 360 days past due	92	1,653
	<b>2,669</b>	<b>2,819</b>

There are no indicators that debtors will not meet their payment obligations in respect of the net amount of trade receivables recognised in the Statement of Financial Position.

## 12. CASH AND CASH EQUIVALENTS

	31 March 2017 £000	31 March 2016 £000
<b>Balance at 1 April</b>	<b>433</b>	<b>(2,272)</b>
Net change in cash and cash equivalent balances	(187)	2,705
<b>Balance as 31 March</b>	<b>246</b>	<b>433</b>
<b>The following balances were held at 31 March:</b>		
The Government Banking Service (GBS)	(290)	(458)
Commercial banks and cash in hand	536	891
<b>Total</b>	<b>246</b>	<b>433</b>

## 13. TRADE PAYABLES AND OTHER CURRENT LIABILITIES

	31 March 2017 £000	31 March 2016 £000
<b>Amounts falling due within one year:</b>		
VAT	470	881
Other taxation and social security	2,204	2,753
Trade payables	23,536	4,758
Other payables	7,876	3,336
Accruals	44,734	36,629
Deferred income	16,705	16,426
<b>Total</b>	<b>95,525</b>	<b>64,783</b>
<b>Amounts falling due after more than one year:</b>		
Other payables	649	1,104
<b>Total</b>	<b>649</b>	<b>1,104</b>
<b>Total payables</b>	<b>96,174</b>	<b>65,887</b>

## 14. PROVISIONS FOR LIABILITIES AND CHARGES

	31 March 2017 £000	31 March 2016 £000
<b>Balance at 1 April</b>	<b>96,854</b>	<b>33,882</b>
Provided in the year	3,617	29,634
Changes in price level	-	33,103
Unwinding of discount	1,762	235
<b>Balance at 31 March</b>	<b>102,233</b>	<b>96,854</b>

## ANALYSIS OF EXPECTED TIMING OF DISCOUNTED CASH FLOWS

	31 March 2017 £000	31 March 2016 £000
Due within one year	6,400	6,600
<b>Non-current liabilities:</b>		
Due later than one year and not later than five years	7,804	12,399
Due later than five years	88,029	77,855
<b>Total non-current liabilities</b>	<b>95,833</b>	<b>90,254</b>
<b>Total</b>	<b>102,233</b>	<b>96,854</b>

	31 March 2017 £000	31 March 2016 £000
<b>Analysis of provisions:</b>		
<b>Decommissioning:</b>		
ISIS	46,246	47,077
ILL	36,192	23,954
Other	916	1,429
<b>Total Decommissioning provision</b>	<b>83,354</b>	<b>72,460</b>
Removal of ISIS legacy waste	18,879	24,394
<b>Total provisions</b>	<b>102,233</b>	<b>96,854</b>

## DECOMMISSIONING COSTS

The decommissioning provision represents the estimated costs of decommissioning STFC science facilities and STFC's share of the estimated decommissioning costs for the joint venture ILL. For STFC-owned facilities, the best estimate of the cost of the liabilities is discounted based on HM Treasury's real discount rates which range from -2.7% to -0.8%, depending on the term of the provision.

STFC has plans to decommission the ISIS pulsed neutron source and the associated Second Target Station at Rutherford Appleton Laboratory at the end of its anticipated operating life in 2040. In preparing the best estimate of the provision required to settle the decommissioning obligation, it is recognised that there remains a significant degree of inherent uncertainty in the future cost estimates. Given the long-term nature of the provision, even small changes to timing or costs could significantly impact the value of the provision. There are currently three main areas of uncertainty:

- When the facility might reach the end of its anticipated operating life – although the most likely estimate is 2040, it is possible that the life of the facility could be extended were future investment to be made, or brought forward if the demand for the facility falls against current expectations.
- The length of time over which the necessary programme of work will be delivered – we have estimated the full process will take 55 years from 2040 to 2095 but this estimate could be revised over coming years as the certainty increases over the exact decommissioning work which needs to take place.
- Potential regulatory or technological changes that could impact the work to be undertaken to decommission and clean up the site – these could require a different approach to be taken from the planned route of decommissioning. More onerous regulatory requirements could result in higher than expected costs being incurred, whilst technological efficiencies could decrease the anticipated costs.

ISIS decommissioning includes a provision for the disposal of legacy waste (including ISIS and other STFC radioactive waste) now required after a change in Environment Agency guidance in relation to re-classification of legacy stored radioactive materials as waste. This provision covers a 12 year period from 2017 to 2029 and has been calculated based on STFC's long experience of radioactive waste disposal, contracts in place at present, and advice taken from a professional quantity surveyor in relation to the building of a new storage and waste

processing facility. There is uncertainty relating to the requirements of the EA licence, timing of activities and exact level of waste characterisation at time of disposal. The main sensitivity is around the level of radioactivity of the waste at the time of the disposal and the cost of disposal varies between categories of waste. The estimate is based on currently expected levels of radioactivity, the best and worst case scenarios for the waste disposal range between £16 million and £22 million.

The ILL decommissioning provision is taken as STFC share (33%) of the total decommissioning provision disclosed in the latest available ILL annual accounts. A revised valuation of the provision by the Commissariat à l'énergie atomique (CEA) was received in February 2017, based on information provided by ILL management; it assumes a cessation of operations in 2031 with demolition in 2037.

## 15. CAPITAL AND OTHER COMMITMENTS

### 15.1 CAPITAL COMMITMENTS

	31 March 2017 £'000	31 March 2016 £'000
Contracted capital commitments not otherwise included in these financial statements:		
Property, plant and equipment	36,985	9,964
Intangible assets	38,984	53,308
<b>Total</b>	<b>75,969</b>	<b>63,272</b>

### 15.2 OPERATING LEASES: LESSOR

The minimum rent receivables under non-cancellable operating leases are as follows:

	31 March 2017 £'000	31 March 2016 £'000
Not later than one year		
	1,855	1,037
Later than one year and not later than five years	1,610	1,047
Later than five years	520	-
<b>Total</b>	<b>3,985</b>	<b>2,084</b>

The operating leases relate to tenancy agreements. The standard termination clause is three months.

### 15.3 INTERNATIONAL SUBSCRIPTIONS

STFC had the following commitments in respect of its membership to international collaborations:

Organisation	Within one year £'000	Later than one year and not later than five years £'000	Later than five years £'000	Total 31 March 2017 £'000	Total 31 March 2016 £'000
	£'000	£'000	£'000	£'000	£'000
CERN	132,364	82,224	-	214,588	203,246
ESO	23,245	12,031	-	35,276	32,673
ESRF	8,295	35,153	6,890	50,338	29,388
ILL	17,922	76,101	34,974	128,997	128,805
<b>Total</b>	<b>181,826</b>	<b>205,509</b>	<b>41,864</b>	<b>429,199</b>	<b>394,112</b>

International collaborations are established to share the cost of building and running major research facilities. The management, regulation and governance of a collaboration being set down in an agreement signed up to by all members. This will include a period of notice of withdrawal from the collaboration. The political nature of these

arrangements is such that any withdrawal would be negotiated at government level. STFC has no current intention to withdraw from its membership of CERN, ESO, ESRF and ILL and in all cases would wish to honour research commitments made.

CERN and ESO require a minimum notice period of 12 months from the end of the current calendar year.

In the case of ESRF and ILL the UK has signed up to international conventions which are periodically reviewed. The current ESRF Convention runs until the end of 2022. Notice can be given up to 31 December 2019 for withdrawal after 31 December 2022. For ILL, the fifth protocol of the Intergovernmental Convention was signed on 1 July 2013 and will remain in force until 31 December 2023. Thereafter it shall be tacitly extended from year to year unless any of the Governments gives written notification to the other Governments of its intention to withdraw from the Convention. Any such withdrawal will take effect upon the expiry of two years from the date of receipt of the notification by any of the other members or on such later date as may be specified in the notification.

#### 15.4 GRANT COMMITMENTS

STFC had the following grant commitments at the balance sheet date:

	Within one year £000	Within two to five years £000	Later than five years £000	Total 31 March 2017 £000	Total 31 March 2016 £000
Research and post-graduate awards	96,636	104,533	-	201,169	217,041

Grant commitments exclude grants that are paid by STFC on behalf of the UK Space Agency as they are reimbursed.

#### 16. CONTINGENT LIABILITIES

##### 16.1 CONTINGENT LIABILITIES DISCLOSED UNDER IAS37 - QUANTIFIABLE

STFC had the following quantifiable contingent liabilities as at 31 March 2017:

- £14,060k (31 March 2016: £12,169k) in respect of STFC share of ILL unfunded provisions for staff related costs (e.g. early retirement) and costs associated with reprocessing irradiated fuel elements. As there has been no past obligating event these costs are treated as a contingent liability in accordance with IAS37.
- £2,187k (31 March 2016: £2,009k) in respect of ESRF decommissioning costs associated with the dismantling of the facility and infrastructures. Decommissioning occurs on winding up of ESRF. If exit by the UK (or any other member) results in ESRF being wound up, the members are required to arrange for decommissioning of ESRF's plant and buildings and to meet the costs of doing so in proportion to their share of capital at the time of dissolution. As there has been no past obligating event these costs are treated as a contingent liability in accordance with IAS37.

##### 16.2 CONTINGENT LIABILITIES – UNQUANTIFIABLE

There were no unquantifiable contingent liabilities as at 31 March 2017.

#### 17. FINANCIAL INSTRUMENTS AND RISK

STFC has very limited powers to borrow or invest surplus funds and, except for forward purchases of foreign currency, financial instruments are generated by day-to-day operational activities and are not held to change the risks facing STFC in undertaking its activities.

The carrying value of all financial instruments approximates to their fair value.

##### LIQUIDITY RISK

STFC's net expenditure requirements are financed by resources voted annually by Parliament, and administered as grant-in-aid through BEIS. STFC is not therefore exposed to material liquidity risk.

## CREDIT RISK

Credit risk is the risk of financial loss if a customer or counterparty to a financial instrument fails to meet its contractual obligations. STFC is mainly exposed to credit risk from credit sales. The credit risk associated with trade receivables is not considered to be significant.

## FOREIGN CURRENCY RISK

Foreign currency risk arises when STFC enters into transactions denominated in a foreign currency. STFC pays a material amount in Euros and Swiss Francs for membership fees to the international collaborations of CERN, ESO, ESRF and ILL. To minimise currency risk STFC policy is to take out forward contracts arranged by the Bank of England to cover up to 90% of its annual international subscriptions due over the course of the current spending review period.

Execution of this policy is subject to BEIS approval. BEIS may consider other aspects beyond STFC's immediate financial considerations in evaluating the business case for hedging e.g. sector reform and related budgetary uncertainty, and potential to manage risks across the department.

## 18. RELATED-PARTY TRANSACTIONS

STFC is a NDPB sponsored by BEIS. BEIS is regarded as a related party. During the year, the STFC has had various material transactions with BEIS and with other entities for which BEIS is regarded as the parent department: Biotechnology and Biological Sciences Research Council, Engineering and Physical Sciences Research Council, Medical Research Council, Natural Environment Research Council, Innovate UK, UK Space Agency, United Kingdom Atomic Energy Authority and UK Shared Business Services Limited.

During the year, STFC made grants and awards to and purchased goods and services from institutions or other bodies where Council members hold senior positions or hold honorary or part-time teaching positions. The aggregate values are disclosed in the following table:

Organisation	Council Member	Number of grants	Value of grants £'000	Value of goods and services £'000
Imperial College London	Professor Jordan Nash	46	8,672	559
University College London	Professor David Price FGS	68	7,314	243
University of Bath	Professor Carole Mundell	4	71	21
University of Cardiff	Professor Karen Holford	23	2,924	139
University of Edinburgh	Professor Richard Kenway	43	6,413	244
University of Oxford	Professor John Womersley	58	12,067	924
University of Sheffield	Professor Tony Ryan	39	2,749	461

None of the above named persons were involved in the authorisation of grants or awards or was involved in the placing of contracts with their related organisations.

The STFC also provided time on its scientific facilities, either paid for directly by users, or funded by grant-giving bodies (principally the other UK Research Councils) to researchers, some of whom may be associated with the organisations listed in the table above.

Transactions between STFC and its joint ventures and balances outstanding are disclosed in the following table:

Joint Venture	Type of transaction	Transaction amount		Balance	
		Expense / (income)		Debtor / (Creditor)	
		2016-17 £'000	2015-16 £'000	2016-17 £'000	2015-16 £'000
DLSL	Services provided	(1,847)	(1,961)	225	408
	Purchases	93	105	(16)	-
	Funding operations	48,951	46,708	(1,164)	(1,199)
	Purchase of shares	22,239	30,434	(1,153)	(2,011)
Daresbury SIC LLP	Purchases	38	-	(42)	-
HSIC (PubSP)	Capital injection	5,000	-	-	-
HSIC LP	Admin service charge	(8)	(32)	-	8
	Rent and service charge	744	412	(200)	-

Professor John Womersley was STFC CEO until 31 Oct 2016, leaving to become Director-General of the European Spallation Source (ESS). Whilst at STFC he was also Chair of the Square Kilometre Array (SKA) Board of Directors. STFC contributed £2,078k to SKA in 2016-17 (2015-16: £1,654k) and £17,035k to ESS (2015-16: £2,000k) in line with government commitments to these international activities.

No board or Council member has undertaken any material transactions with the STFC during the year.

## 19. THIRD-PARTY ASSETS

STFC held £7,517k of third party assets at 31 March 2017 (31 March 2016: £2,031k). This is cash held relating to EU projects to be paid to third parties, where STFC acts as a co-ordinator on European Union framework agreements.

## 20. EVENTS AFTER THE REPORTING PERIOD DATE

In accordance with the requirements of *IAS10: Events After the Reporting Period*, post Statement of Financial Position, events are considered up to the date on which the accounts are authorised for issue; this is interpreted as the same date as the date of the Certificate and Report of the Comptroller and Auditor General.

On the 27th April 2017 the Higher Education Research Act received royal assent. This forms the basis of the formation of UKRI.



**Science and Technology Facilities Council**  
Polaris House, North Star Avenue, Swindon SN2 1SZ, UK  
T: +44(0)1793 442000 F: +44(0)1793 442002 E: publications@stfc.ac.uk

**www.stfc.ac.uk**