



The
Geological
Society

Serving science,
profession and society

Annual Review 2016



The Society's aims

The Geological Society of London was instituted in 1807 for the purpose of “investigating the mineral structure of the Earth”.

In 2007, Council adopted a 10-year strategy, the principal objectives of which are:

- To be the respected public voice of geosciences in the UK
- To provide lifelong professional support to geoscientists
- To recognise and foster innovation in the geosciences
- To show leadership in the geosciences community nationally and internationally
- To promote geoscience education
- To communicate geoscience research and practice
- To assure high professional standards for the benefit of society.

From January 2016 the Society's Council had, as specific aims for the year, to:

- Organise science, education and outreach activities to mark our Year of Water
- Launch the new Bryan Lovell and Janet Watson flagship meeting series
- Develop our careers information resources and school support
- Grow Fellowship and Chartership, and explore options to broaden membership
- Redevelop the Lyell Collection online publishing platform
- Develop a Dan McKenzie archive website, in preparation for a 2017 launch.

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Serving science, profession and society

From the President



'Serving science and profession' has been the Society's strapline since 1997, reflecting the functions of the former Institution of Geologists being taken on by the Geological Society. After decades of coexisting, the professional and academic geological communities unified under one banner, promoting both aspects of our work.

As you will see from this Annual Review's title, the time has come to revisit our strapline, and with it the Society's strategy. Our 2016 Year of Water highlighted the wide ranging impact the geosciences have on society, from mitigation of flood risk, to finding new sources of energy, to the search for water on Mars. Geoscience affects every area of our lives, and we hope our new strapline, 'Serving science, profession and society', reflects this.

If you are receiving this Review as an enclosure with your Geoscientist magazine, you should also have received a copy of the Society's new ten year strategy, setting out our aims for the decade to come. Supporting our ever-growing Fellowship, whether in academia, industry or the wider geoscience community, is at the heart of everything we do, and over the next ten years we hope to strengthen our links with members all over the world. Through providing professional support, career advice, Chartership and networking opportunities, we hope that the next ten years will see an even stronger geoscience community, which in turn will benefit society through its work.

Much of what you will see in the coming pages reflects these aims. 2016 saw the launch of 'Geology Career Pathways', a website offering studying and careers advice to students interested in pursuing geology from GCSE level onwards, produced in partnership with University Geoscience UK. We also continue to build on our outreach work with schools and members of the public, through initiatives such as the Lyme Regis Fossil Festival and Earth Science Week.

The Year of Water has been an opportunity to facilitate discussion between science, policy and industry, something which we hope to build on in future years. In particular, the first Bryan Lovell Meeting, 'Water, hazards and risk', highlighted the importance of applying geoscience knowledge to policy decisions, and the value of cross-fertilisation of ideas across traditional disciplinary boundaries. 2017's Year of Risk should provide even greater opportunities to engage with different sectors in addressing some of the most pressing concerns facing society today.

Whilst these collaborations have taken place on a larger scale, we have also enjoyed working more closely with our colleagues in the Burlington House Courtyard this year. Meanwhile, the Society itself has seen increasingly effective

communication amongst staff, Fellows and committee members. All have had the opportunity to share their thoughts on where they think our Society is headed, and how we might get there; a great opportunity for more and better discussion amongst us all. I look forward to working with colleagues across the organisation as we begin to implement the new strategy and set our sights on the next ten years to come.

Malcolm Brown

Council membership

President: Mr Malcolm Brown

Vice Presidents: Mr Chris Eccles; Mr Keith Seymour

Secretaries: Miss Liv Carroll; Dr Marie Edmonds;
Dr Colin North

Secretary, Foreign & External Affairs: Mr Michael Young

Treasurer: Mr Graham Goffey

~Mrs Natalyn Ala^{1,3,4}; Mr Rick Brassington⁴; Mr Malcolm Brown¹;
*Dr Jason Canning⁴; Miss Liv Carroll^{1,3,4}; Dr Nigel Cassidy⁶; ~Dr Angela
Coe^{5,6}; ~Mr Jim Coppard⁴; ~Mrs Jane Dottridge⁵; Mr Chris Eccles^{1,4};
4; Dr Marie Edmonds^{1,2,6}; Mr Graham Goffey^{1,3}; *Dr Sarah Gordon²;
Mrs Tricia Henton⁴; Mr David Hopkins⁴; *Ms Naomi Jordan²; ~Mr David
Jones^{1,4}; Dr Jennifer McKinley²; *Dr Rob Larter²; ~Prof David Manning¹;
Prof David Norbury²; Dr Colin North^{1,3,5}; *Dr Sheila Peacock^{5,6};
Prof Christine Peirce^{1,6}; *Mr Nicholas Reynolds; Dr Katherine Royse⁴;
Mr Keith Seymour^{1,4}; ~Dr Lucy Slater⁶; *Dr Alexander Whittaker⁶;
Mr Michael Young^{1,2,3,6}

* New Council members elected at the AGM on 8 June 2016

~ Council members who retired at the AGM on 8 June 2016

Standing Committee Membership

¹ Elections; ² External Relations; ³ Finance and Planning;

⁴ Professional; ⁵ Publications & Information; ⁶ Science.

Method of Election of Trustees

Trustees are elected by the Fellowship in Annual General Meeting by ballot of Fellows present on a list of candidates. New trustees are annually invited to an induction day in order to obtain an understanding of the Society's affairs and what tasks they will undertake as a member of Council. They also receive written guidance on their responsibilities as trustees.

Audit Committee

The Audit Committee reports directly to Council. Members of the Audit Committee are: Mr Chris Bulley, Mr Roger Dunshea, Mr Doug Fenwick (Chair), Mr Nick Hardy, Prof John Mather and Dr Tim Palmer.

Delivering our objectives

From the Senior Leadership Team



As we look forward to welcoming our new Executive Secretary in May 2017, the Directors thought it would be useful to offer Fellows an ‘inside view’ of the Society, from a staff perspective.

The Finance and Operations directorate covers a range of support services as well as the Fellowship Team and Conference Office. Focusing upon some of those areas that Fellows may be less directly aware of, in March the Society appointed its first HR Manager. With a staff base of over 50 and against a background of increasingly complex regulation, it was considered timely to bring in-house professional expertise that previously we have had to seek from external advisors.

Across the summer we undertook a review of the Society's funds and reserves which resulted in a much better understanding of each of the individual pots that are reflected upon the Society's balance sheet. This will lead to more effective use of the Society's funds in future.

Throughout the year the project to replace the Society's aged Fellowship database system has also been progressing, from a tendering and selection process in early summer, through to the commencement of implementation towards the end of the year. This will bring about a much-needed and welcome update both to back-office systems for handling membership records and to the web-based front-end for Fellows. We plan to go live with these new systems in 2017.

We continue to look at ways of improving our usage of Burlington House, whether that be through facilities provided to Fellows and attendees at events, or accommodation of staff. Whilst minor improvements have continued to be made, however, the overshadowing cloud of lease uncertainty frustrates investment in any significant changes or major upgrades.

The Publishing House and Library provide valued information services not just to our Fellows, but to a wide range of users internationally.

These services are increasingly available online and the Library has seen markedly increased numbers of registrations for the Athens system for remote access to our subscribed content. The online availability of our new Library Catalogue has also made it easier to find and request access to rarer and previously little used parts of our collections, and we have seen a notable increase in usage. The Society's Burlington House centred activities also continue apace, with work in-hand to preserve and make available papers from Dan McKenzie's archive documenting the development of the

theory of plate tectonics. In-house Library events were held throughout the year and were always fully booked.

The Publishing House continues publishing a wide range of peer-reviewed books and journals, with ongoing success in selling subscriptions to corporations and academic institutions worldwide. Considerable work is also ongoing in moving to an upgraded online platform to ensure that the Lyell Collection conforms to user and customer expectations. Although the Society is a small publisher in relation to the commercial giants, it is an important and respected publisher of Earth science literature.

The Society recognises the importance of our publishing, library and information services in supporting the professional activities and development of the Earth science community and remains committed to investing widely in this area.

The Policy and Communications team is the smallest in terms of staff numbers, with eight people responsible for taking forward our policy-related work, our education programme, communications through traditional and social media, public engagement, oversight of website content and Society newsletters, development of our science programme, and links with international bodies. The President's report refers to some of the highlights of this diverse programme of activities, and many more are reported in the subsequent pages of the Annual Review.

Our policy, education, outreach and strategic science activities have been more wide-ranging than ever, and none of this would be possible without the involvement of many of the Society's Fellows. Their input, working alongside the staff, both underpins the scientific quality of what we do across these areas, and allows us to achieve a great deal more than the staff would be able to do alone.

Indeed, right across the Society's activities, we are dependent on the support, engagement and hard work of you, the Society's membership – from sustaining our publishing programme to ensuring that high professional standards are maintained through the validation of Chartered Geologists and accreditation of degree programmes and company training schemes. Over the past year, we have been more conscious than ever of the importance of the partnership between the Society's staff and its Fellows, especially through Council and its committees, and we have been pleased to see this relationship strengthen and develop. It is an invaluable asset for the Society as it looks to the years ahead.

Jonathan Silk, Neal Marriott and Nic Bilham

Advancing our science

The Geological Society is committed to disseminating high-quality research to the professional geoscience community, through its meetings, publications and library.

Following the success of our Year of Mud in 2015, 2016 was the Society's Year of Water. This stimulated several innovative conferences, as well as shaping our education and outreach activities. Many of our Specialist and Regional Groups also took part.

2016 was the Society's second themed year, the Year of Water



Conferences marking the Year of Water covered a wide range of topics. The inaugural Bryan Lovell Meeting, referred to elsewhere in this review, addressed the role of our science in tackling the societal challenges of Water, Hazards and Risk. In Edinburgh, Rain, Rivers and Reservoirs brought together geoscientists and civil engineers to explore interdisciplinary approaches. A meeting on Martian Gullies and their Earth Analogues allowed geoscientists from a wide range of specialisms to share their insights into the evidence provided by gullies on Mars and Earth, and to discuss their implications for understanding Mars' climate and history, planning future missions and advancing the use of remote sensing. The Society's Northern Ireland Regional Group worked with the Hydrogeological Group, the Institution of Geologists of Ireland, the Geological Survey of Northern Ireland, and others to discuss Groundwater in Fractured Bedrock Environments, and implications for catchment management and subsurface resources. The Society also hosted the 5th UK Deep Geothermal Symposium.

Other highlights in the 2016 conference programme included the first Janet Watson

meeting – an early career symposium on the Future of Hydrocarbons Exploration. The 2016 William Smith meeting was on the topic of Glaciated Margins, and the Arthur Holmes meeting marked the 50th anniversary of the Wilson Cycle, setting the scene for our celebrations of 50 years of Plate Tectonics in 2017. A conference on the history of the European oil and gas industry, organised jointly by the Petroleum Group and the History of Geology Group, was one among many innovative events held by the Specialist and Regional Groups throughout the year, many of them collaborative.

The library offered a growing collection of remotely accessible resources, with over 100 e-journals and 46 e-books now available. A new online library catalogue was launched in 2016, offering improved searching capabilities as well as services including loan renewal, favourite lists, item requests and the facility to view loan history. Behind the scenes, work on a full audit of the Society's library holdings continued, which will help to improve access to the collections. A third library open day for Corporate Affiliates was held in November, and the library was represented at the History Day held at Senate House, London, to reach a new audience of undergraduate and postgraduate students.

The library continued its successful series of public outreach events drawing on materials from its collections – these are described later in this review. Displays in the Lower Library showcased materials illustrating the birth of hydrogeology and its role in securing clean water supplies for London, the specimens of pioneering female geologist Etheldred Benett, the tectonic mapping of the USSR, and the story of the 'Three-month Isle' Graham Island.

2016 was another very successful year for our Publishing House. We welcomed Andrew

7,707

Library and archive enquiries

2,856

Visitors to the library

837,000

full-text downloads from the Lyell Collection in 2016



Specimens collected by Etheldred Benett, 'the first female geologist', on display in our Lower Library. Photo credit: Caroline Lam.

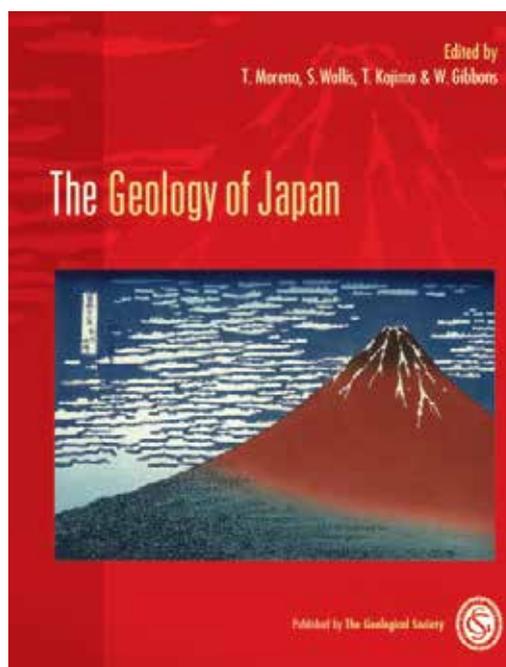
Carter (Birkbeck University of London) as Chief Editor of the Journal of the Geological Society, succeeding Quentin Crowley. Among many Special Publications, Memoirs and other book volumes, highlights in 2016 included the publication of the Atlas of Submarine Glacial Landforms (Memoir 46), which we celebrated with a launch event in January 2017 attended by the Chilean Ambassador to the UK. We also published *The Geology of Japan*, the first state-of-the-art English language volume on this topic for 25 years, in collaboration with the Geological Society of Japan.

Many papers published in our books and journals attracted media interest – none more so than the Open Access paper on 'Remarkable preservation of brain tissues in an Early Cretaceous iguanodontian dinosaur' (Brasier et al), which will feature in a 2017 Special Publication to celebrate the work of Martin Brasier. The discovery of the first example of fossilised brain tissue from a dinosaur, reported in this paper, received worldwide coverage.

Several new or upgraded services for authors and readers were launched in 2016. A new portal for data and other material supplementary to book and journal papers came online, in collaboration with Figshare, making these materials easier to view and cite, and improving discoverability and use of published content. We also partnered with ReadCube to enhance visibility and use of our publications. Our new online manuscript submission and workflow system, Editorial Manager, was successively rolled out to our journals and book series, greatly improving the working experience of our editors, authors and reviewers.

The new GSL Collections service was launched on the Lyell Collection, allowing us to pull together thematic sets of papers from across our journals and book series. We compiled a collection to mark the Year of Water, and another on the Tectonics of Central Italy in response to the earthquake near Perugia in August.

A great deal of work has gone into preparing for the launch of the redeveloped Lyell Collection platform. Its launch in 2017 will improve services to readers, and will position the Society to remain at the forefront of scholarly geoscience publishing in the coming years.



The Geology of Japan – published March 2016.

Geology beyond borders

Our aim is to raise awareness of policy-related geoscience for the benefit of science, profession and society and to seek out and maintain relationships with national, international and cross-border organisations in the UK and worldwide.

The policy landscape of 2017 was dominated by the run up to and the impacts of the EU Referendum, held on 23 June. The resulting leave vote has shaped much of the conversation around geoscience policy in the UK over the last 12 months.

One of the Society's aims over recent years has been to raise awareness of the importance of geology and understanding of the subsurface to policymakers both from the UK and the EU. We achieve this through responding to inquiries and consultations, liaising with colleagues in Westminster and the EU, attending parliamentary events in Edinburgh, Cardiff and Belfast, and also through our membership of other bodies working in science policy such as the Campaign for Science and Engineering (CaSE) and the Science Council.

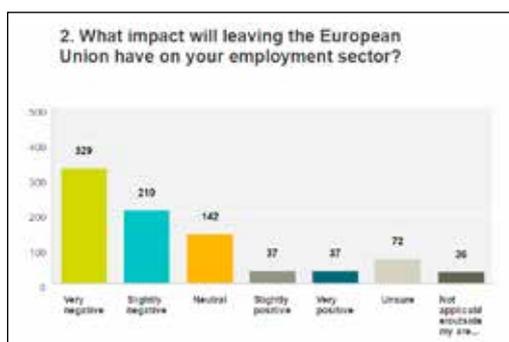
In the weeks before the country went to the ballot box to decide on the UK's membership of the EU, the Society surveyed the geoscience community on how the outcome might impact the geoscience industry and research sector. Over 1,100 geoscientists responded from a broad spread of sectors, with a majority responding that leaving the EU

would have a negative impact on their sector of work. During 2016 we responded to a number of inquiries examining the impacts of Brexit. Our membership of the EU has shaped many different aspects of UK policy in the 43 years since accession and it was on these varied topics that much of the second half of 2016's policy inquiries and consultations were focused. The Society prepared responses on topics ranging from science and research, climate change, the future of the natural environment, higher education and energy policy. You can keep up to date with our work around the EU Referendum on the Society webpage: <https://www.geolsoc.org.uk/EuRef>.

A number of policy developments during the year resulted in part from coordinated awareness-raising on behalf of the science community. The Minister of State for Universities and Science made a number of statements around the status of EU students, staff, Erasmus and Horizon 2020 research funding in the wake of the EU Referendum result and in the Autumn Statement, the Chancellor announced a £4.7 billion additional investment in science and innovation over four years.

Alongside work related to the EU Referendum, we engaged in a number of activities around themes of geoconservation and environmental protection during 2016. In April we published a 'Statement on the Value of Museums and Collections' highlighting the benefits that museums and collections bring to society through their contribution to research, education, the preservation of UK heritage and public outreach. We raised themes from the statement in a number of other activities in 2016 including responses to parliamentary inquiries on Rural Tourism and the Review of Museums in England.

Responses to our survey ahead of the EU referendum in June.



At the tail end of 2015, UNESCO ratified the creation of UNESCO Global Geoparks, giving a new UNESCO status to the seven Global Geoparks around the UK. In September 2016 Torquay – part of the English Riviera Global Geopark – was host to the 7th International Conference on UNESCO Global Geoparks. The Society was represented at the conference which had a very international audience, and the Chair of our Geoconservation Committee gave a presentation on the Society's 100 Great Geosites project. The Geoconservation Committee also held their third Annual Gathering in October, this time in Edinburgh, on the theme of Local Geosites for People and Conservation which featured a reception hosted by the Lord Provost.

In late November we launched the inaugural Bryan Lovell Meeting on the theme of water, hazards and risk, tying together the annual themes for 2016 (Water) and 2017 (Risk). The meeting focused on the geoscientific aspects of water and risk and how they intersect in the context of societal challenges. The meeting opened with a policy briefing session and a talk from Professor Ian Boyd, Defra Chief Scientific Adviser.

Another major policy initiative launched by the government in 2016 was the Higher Education and Research Bill. It includes a wide-ranging set of proposed policies covering the structure of the research councils, the implementation of the Teaching Excellence Framework (TEF), and improving the diversity of the higher education sector and student choice. Through our partnership with University Geoscience UK, we responded to a number



Joel Gill speaking at the 4th annual Geology for Global Development conference in November.

of government consultations and inquiries on Higher Education reform. These included the Higher Education white paper, the TEF year 2 technical consultations and the Lord Stern Review of the Research Excellence Framework.

The Society has continued to build links with external organisations in the UK and around the world and engage in international activities. In September 2016, Society Fellows and staff attended the 35th International Geological Congress in Cape Town, South Africa. The Society was involved in sessions on groundwater sustainability and geoethics at EGU in April, and participated in the Geological Society of America conference in Denver and the American Geoscience Institute's working group on harassment, bullying and discrimination in the geosciences. In late November, the Society was host to the 4th annual Geology for Global Development conference which focused on the Sustainable Development Goals.



Policy Officer Florence Bullough at the 7th International Conference on UNESCO Global Geoparks.

1,101
Survey respondents to the survey on the EU Referendum

20
Responses to policy consultations

7
UNESCO Global Geoparks in the UK

Pathways into geology

From exciting careers to new travel destinations, geology offers a huge range of opportunities for students and the interested public alike.

The new Geology Career Pathways web pages.



2016 saw the launch of 'Geology Career Pathways', a new web resource launched in collaboration with University Geoscience UK, offering an in-depth and uniquely tailored guide to the diverse array of careers in geology. Aimed at GCSE level upwards, the site offers advice to anyone considering studying geology, as well as those embarking on geoscience careers.

The launch of the site reflects the theme of much of our outreach and education work this year. Earth Science Week 2016 took for its theme 'Earth Science in Action', with the aim of highlighting the huge range of career options open to geology students, as well as the wealth of geological sites and visitor centres which can be accessed in the UK and Ireland by anyone interested in finding out more about the Earth. Events were held by a wide range of organisations, from the North West Highlands to Lyme Regis, celebrating the geology all around us – from geology walks to open days to craft workshops. We also celebrated with our second annual Earth Science Week photography competition, the winners of which were featured on the Daily Mail website, as well as in an exhibition at Burlington House and in a 2017 calendar.

43,891
Facebook 'likes' and
Twitter followers

1,312
visitors for Open
House

51
Earth Science Week
events

As part of the week, we once again welcomed a group of A level students at Burlington House, this time in collaboration with scientists from the British Geological Survey, who offered insights into their work as hydrogeologists. This event, and many others held during Earth Science Week, were an opportunity to highlight another major theme of 2016 – our Year of Water, which formed a major part of our science and outreach programmes.

Water provided the theme for many of our London Lectures this year, from Alok Jha's 'The Water Book' to Matt Balme discussing evidence for water on Mars, to Bethan Davies on climate change and Antarctica. It also led to a collaboration with the BBC on a new project, 'Terrific Scientific', promoting science to primary school students, for which the Society provided resources as part of the 'Water' investigation. We also took part in an Imperial College Fringe event, 'Water, water, everywhere', with visitors finding out about our Year of Water activities, policy work and outreach – as well as viewing our Year of Water rock samples, which were on display at Burlington House throughout 2016.

We continued to welcome a wide range of audiences to Burlington House throughout 2016. As well as our regular programme of public London Lectures, July saw our participation in the first ever Burlington House Courtyard Summer Lates – a collaboration between all five Courtyard Societies and the Royal Academy. The Geological Society Library organised 'Maps, Meteorites, Mary Anning and the Missing Link', a series of talks based throughout the building. We also collaborated with the Royal Academy and courtyard Societies in a series of tours marking International Women's Day on

8 March, celebrating the early female pioneers associated with each organisation. As well as this, the library organised two further evening events, 'Siberia! Geological Adventures in 19th century Imperial Russia!', and 'Cross-Channel invasion! Military Geology in 1940 & 1944'. In September, we opened the doors as usual for Open House London, welcoming 1,312 visitors to the building.

In September, we were thrilled to host the launch of Lego City Volcano. Volcanologist Andrés Ruzo introduced an audience of adults and children to his work, and shared some photographs he took of the new Lego products in the field. As well as launching the new Lego line, the event was an opportunity to achieve a long held ambition – the first ever Geobakeoff Live! After three successful years on our social media channels, the Geobakeoff finally came to Burlington House, with five entrants offering us volcano themed cakes, displaying a wide range of skills as well as geological knowledge. Meanwhile, the online version attracted record numbers of entrants, as well as finally providing an answer to the question, 'how do you make a mosasaur out of sponge cake?'

Elsewhere, the Society continued its participation in a number of festivals and events across the country, including the Lyme Regis Fossil Festival, the Yorkshire Fossil Festival, the GA Festival of Geology and our two annual careers days, held at Edinburgh and Keyworth. In addition, Burlington House again hosted the annual National Schools



Just some of the many entries to the 2016 Great Geobakeoff

Geology Challenge and Early Career award finals, following a series of heats organised by our Regional Groups across the country.

Once again, BP generously sponsored our Geoscience Education Academy, providing training for science and geography teachers who deliver geoscience content in the classroom. We are also pleased to have been able to take an active role, thanks to the expertise within our Education Committee, in securing the continued availability of A Level and GCSE geology and improving the specifications for these qualifications.

In Higher Education, our partnership with University Geoscience UK has continued to strengthen, with meetings during 2016 held focusing on employability and fieldwork, as well as collaboration on the Geology Career Pathways website.



Earth Science Week 2016 at Dynamic Earth, Edinburgh

Supporting the geoscience community

The Geological Society provides support to its Fellows and the wider professional geoscience community, for the public benefit.



The Science Council and Royal Academy of Engineering launch their Diversity and Inclusion Framework (Photo credit: Pat Langford Photography).

A new Specialist Group was launched in 2016 – the Contaminated Land Group. This is a growth area in our Fellowship, and especially among those applying for Chartership.

The formation of the group follows a successful meeting on land contamination held in Cardiff in March 2016. This demonstrated the appetite among our members to continue and grow the Society's activities in this area, and to promote the crucial role of geoscience in addressing the challenges it presents, complementing the work of other bodies concerned with land contamination and remediation. An inaugural event is planned for early 2017.

When we signed up to the Science Council's declaration on diversity, equality and inclusion in October 2014, we recognised that we were embarking on a cultural change that would take many years to become fully embedded in our organisation and our community. The commitment we made then is enshrined in our new strategy. During 2016, the Geological Society was one of seven organisations to pilot a new diversity and inclusion framework for professional bodies, developed by the Science Council and the Royal Academy of Engineering. Other scientific and engineering bodies will be encouraged to use the framework, which provides a structure for members and staff to discuss and identify actions to improve diversity and inclusion across a wide range of areas, from governance, grants and awards to events and education. It will also allow organisations to benchmark their progress against others'.

Work to improve our engagement with students and recent graduates has continued. Candidate Fellowship, the membership grade available to undergraduate students, is now being offered for a full year following graduation, to encourage more graduates to take up full Fellowship. Improving our support for students and early career professionals will be a priority as we start to implement our new strategy.

The Society puts great value on its links with academia and with the many industries which depend on geoscience. Our ever-strengthening relationship with University Geoscience UK is referred to elsewhere in this review, and we continue to benefit from working with our network of Corporate Affiliates, for whose support we are most grateful. The City of London Geoscience Forum, through which we build links with the financial sector and others, thrived in 2016, holding events on the future of North Sea oil and gas, reform of the energy sector in Mexico and the use of drones and visualisation technologies in the extractive industries.

The Society continues to grow as a membership organisation, with the number of Fellows up 2.5% and the number of Chartered Geologists up 3.0% following the removal of non-payers in July 2016, compared with the previous year.

12,289
Fellows in mid-2016

2,669
Chartered Geologists
in mid-2016

19
accredited company
training schemes

Securing our future

From the Treasurer



A large net income surplus of £1,122k in 2016 is mostly derived from unrealised or accounting value changes, as opposed to actual cash earnings. Some £411k of the £427k gains on investments and £426k of other gains are unrealised 'paper' gains. These arise respectively from late 2016 stock market movements and from foreign exchange gains on the Society's US Dollar holdings following the Brexit vote. By contrast, the Society's investments showed an unrealised loss of £181k in 2015, underlining the inherent market volatility that lies behind the investment gains which will remain largely unrealized. The Society will, however, review its cash holdings in 2017 to determine whether there is scope to crystallise some of the foreign exchange gains.

If the exceptional unrealised gains are removed, net income surplus was slightly higher in 2016 than 2015 helped in part by the unanticipated but most welcome receipt of a further £88k from the estate of the late Stephen Mills. The targeted 2017 surplus of £126k is below the modest 2016 outcome before this additional bequest and is a long way below the (restated) surplus of £694k achieved in 2014. The continuing impact of the depressed natural resources industries is seen particularly in further reduced Corporate Affiliate subscriptions. Notwithstanding this impact, income (excluding investment and foreign exchange gains/losses) has been gently increasing over the last several years (£5.4mm – 2014, £5.5mm – 2015 and £5.75mm – 2016).

The Society's overall budgetary objective is to generate a modest surplus, reflecting anticipated expenditure of the majority of revenues in line with its charitable objectives. However the budgeted surplus acts as a cushion against unexpected changes in cost or income during the year and as such, a higher net surplus would be desirable. However rising costs and historic under-investment mean that the Society has to work harder each year simply to undertake the same activities. In order to broaden its activities in line with the new 10 year strategy the Society will need to develop and expand income streams. To this end, the Society has recently engaged advisors to assist in evaluating the scope to seek philanthropic support for its present and future activities.

Gratifyingly, Fellowship numbers continued to increase during 2016, albeit at levels slightly below expectations, and the Publishing House continues to perform extremely well in a challenging environment. We continue to see a downward trend in sales of physical copy whilst electronic access via the Lyell Collection continues to grow ahead of expectations. The hard work of Neal Marriott and his publishing team in maintaining strong revenues from the Publishing House are very much appreciated.

As noted last year, the Society's ageing accounting and Fellowship services IT systems are no longer fit for purpose. These deficiencies have regrettably impacted Fellows during 2016 and have also affected Publishing House book sales. A substantial project to replace these ageing systems is now well advanced and implementation is expected in Q2 2017.

A review of funds and reserves was undertaken during 2016 and the Society's Reserves Policy revised with a new free reserves target set at 75% of core operational expenditure. As of year-end 2016, free reserves had reached c. 96% of this target. The Society continues to set aside funds to mitigate future costs regarding its Burlington House premises and continues to pursue routes to secure its long term tenure in Burlington House.

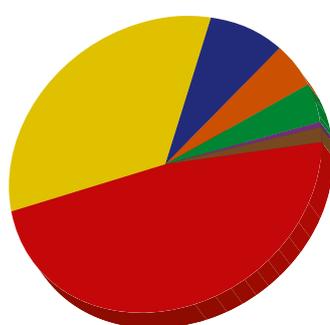
Finally, Fellows will be aware that during the course of 2016, the relatively newly recruited Executive Secretary left the Society and, as discussed in their section of this report, the Senior Leadership Team have, with the President and Treasurer, ensured the ongoing running of the Society's activities. I should like to record here my appreciation for the role played by the Senior Leadership Team, by Stephanie Jones the Society's Administrative Secretary, and by all the Society's staff in ensuring the continued smooth-running of the Society whilst a new Executive Secretary has been sought.

A handwritten signature in black ink, appearing to read 'Graham Goffey', written over a light blue horizontal line.

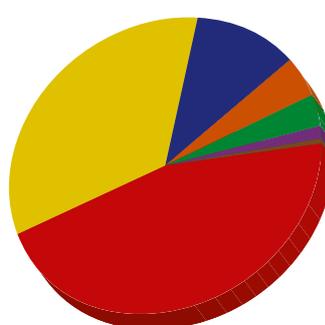
Graham Goffey

Society finances 2016

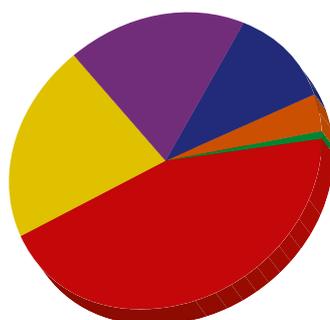
The full financial report and accounts, and a PDF of this Review, may be downloaded at www.geolsoc.org.uk/annualreview2016



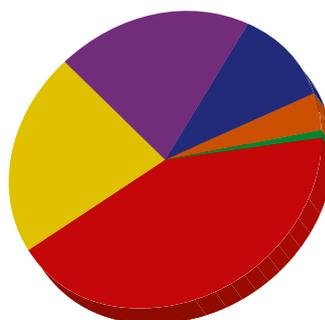
| Income sources 2016 | | £000's |
|---------------------|--|--------------|
| Publishing | | 2,719 |
| Membership fees | | 1,872 |
| Events | | 483 |
| Trading | | 300 |
| Investments | | 257 |
| Library | | 25 |
| Donations | | 94 |
| Total income | | 5,750 |



| Income sources 2015 | | £000's |
|---------------------|--|--------------|
| Publishing | | 2,473 |
| Membership fees | | 1,840 |
| Events | | 622 |
| Trading | | 261 |
| Investments | | 206 |
| Library | | 78 |
| Donations | | 18 |
| Total income | | 5,498 |



| Expenditure by activity 2016 | | £000's |
|------------------------------|--|--------------|
| Publishing | | 2,414 |
| Science | | 1,158 |
| Library | | 1,001 |
| Standards | | 641 |
| Trading | | 222 |
| Investments | | 45 |
| Total expenditure | | 5,481 |



| Expenditure by activity 2015 | | £000's |
|------------------------------|--|--------------|
| Publishing | | 2,209 |
| Science | | 1,141 |
| Library | | 1,060 |
| Standards | | 583 |
| Trading | | 214 |
| Investments | | 35 |
| Total expenditure | | 5,241 |

| 2016 funds | | £000's |
|---------------------|--|--------|
| Endowment funds | | 1,908 |
| Restricted income | | 848 |
| Unrestricted income | | 7,546 |



2016 funds

| 2015 funds | | £000's |
|---------------------|--|--------|
| Endowment funds | | 1,802 |
| Restricted income | | 864 |
| Unrestricted income | | 6,513 |



2015 funds

(NB 2015 is re-stated following reassignment of funds between Restricted and Unrestricted headings)

Corporate Affiliates

The Society extends its sincere thanks to all its Corporate Affiliates

Platinum



Gold



Silver



Bronze

Anadarko Petroleum Corporation (UK); Anglo American Plc; C & C Reservoirs Ltd; Centrica Energy Upstream; Dong E&P Services (UK) Ltd; ENI UK Ltd; EOG Resources United Kingdom Ltd; ERC Equipoise Ltd; Ernst & Young; Geospatial Research Ltd; GETECH; Hannon Westwood Associates; Heritage Oil (UK) Ltd; Ikon Science Ltd; INEOS Upstream Ltd; John Wiley & Sons Ltd; J X Nippon E&P (UK) Ltd; Maersk Oil North Sea UK Ltd; Nexen Petroleum UK Ltd; Norton Rose Fulbright; NPA-CGG Services UK Ltd; OMV (UK) Ltd; Ophir Energy Company Ltd; Petrofac Energy Developments UK Ltd; PGS Exploration (UK) Ltd; Premier Oil Plc; Ramboll UK Ltd; Robertson (UK) Ltd; RPS Energy; Sasol UK Ltd; Tarmac Ltd; Tullow Oil Plc; Wood Mackenzie.

If your organisation would like to find out more about the benefits of becoming an Affiliate, please contact georgina.worrall@geolsoc.org.uk

In addition to the companies listed above, the Society wishes to record its sincere thanks to all the companies, universities and other organisations that allowed their staff the time and resources to participate in voluntary Society activities.



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