Science: tackling global challenges

Trustees' report and financial statements for the year ended 31 March 2022

THE ROYAL SOCIETY



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About us

The Royal Society's fundamental purpose, reflected in its founding Charters of the 1660s, is to recognise, promote and support excellence in science and to encourage the development and use of science for the benefit of humanity.

The Society is a self-governing Fellowship of distinguished scientists drawn from all areas of science, technology, engineering, mathematics and medicine.

The Society has played a part in some of the most fundamental, significant and life-changing discoveries in history and Royal Society scientists – our Fellows and those people we fund – continue to make outstanding contributions to science and help to shape the world we live in.

What we do



Recognise scientific excellence



Promote science education and communication

C



Above: Royal Society funded research looking into the environmental and genetic basis of migratory insects, led by Research Fellow, Dr Karl Wotton (not pictured). Photo courtesy of Will Hawkes



Fund scientific research



Publish scientific research



Support scientific collaboration



Provide scientific advice for policy



Read more about the Royal Society online at royalsociety.org

The Society's heritage

The Society has played a part in some of the most fundamental, significant and life-changing discoveries in scientific history.

1662

The Royal Society publishes its first book, John Evelyn's *Sylva*. This recognised the impact of humans on the natural world and the need for sustainability.

1956

The Society establishes a research base at Halley Bay, Antarctica. Here in 1985, dramatic losses in the ozone layer are observed and the base remains an important location for climate research.

2020

The Data and Evaluation Learning for Viral Epidemics (DELVE) group is convened by the Society in response to the COVID-19 pandemic.

2010

Royal Society University Research Fellow, Kostya Novoselov, shares the Nobel Prize in Physics with Andre Geim for their work on graphene. This new form of carbon is only one atom thick but could lead to the manufacture of innovative electronics.

1872

The launch of the HMS Challenger expedition, heralds the creation of a new scientific discipline – oceanography. Organised by the Royal Society and the Admiralty the voyage vastly increased knowledge of ocean ecosystems and identified over 4,000 new marine species.

2001

Sir Tim Berners-Lee FRS is elected to the Fellowship. His proposal of a global hypertext project in 1989 resulted in the creation of the World Wide Web.



Francis Crick and James Watson determined the structure of DNA, detailing their breakthrough in a paper to the Royal Society.

2011

The Society publishes *Open Biology*, its first fully open access journal.

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For 1. For June 1669, and 1686.

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Find out more about our history at <u>royalsociety.</u> org/about-us/history

1673

Dutch microscopist Antoni van Leeuwenhoek FRS writes to the Royal Society for the first time. His letter begins a 50-year correspondence vital in establishing the new discipline of microbiology, including the first observation of bacteria.

1660

The Royal Society is founded, following a lecture by Christopher Wren.

1736

The Copley Medal is established from an endowment of £100 received from the estate of Sir Godfrey Copley in 1709. It is the world's oldest scientific honour, a prestigious forerunner of the Nobel Prize.

1964

Royal Society Wolfson Research Professor Dorothy Hodgkin FRS becomes the UK's only female Nobel Prize-winning scientist. She used X-ray crystallography to solve the structure of penicillin.

1851

The UK Government awards the Society its first annual Government grant of £1,000 to be distributed for 'private individual scientific research'.

1665

The world's first science journal was launched – *Philosophical Transactions*. It is still published today.

Science in a changing world

As the world emerges from a period of rapid change, it faces a number of pressing challenges, and science is key to unlocking the solutions.

Science is a critical requirement for innovation and advancing our knowledge. It enables the creation of new technologies and products and is the foundation to the efforts of creating a sustainable world.

Complex scientific problems

Globally, decision-makers are confronted by a range of exceptionally complex issues that cut across national borders. Many of the collective challenges faced by the world today have significant scientific dimensions, including climate change, the degradation of the biosphere, food insecurity and the prospect of further public health emergencies.

Academic freedom and the culture of science

There are widespread challenges in the culture of science, including potential threats to academic freedom, concerns about rising bureaucracy and the presence of perverse incentives that are working against real quality in research.

Value of UK science

International collaboration is critical to excellent science. In the wake of Brexit and the recent reduction in ODA commitments, the UK's position in the world has shifted, along with perceptions of the value of the UK as a science partner. There have been a number of high-profile initiatives to attract talent to the UK, but these need to be complemented by a recognition of the importance of mobility from within the UK to other countries and clear commitments to strengthen the pipeline of domestic talent.

Funding landscape

Within the UK, we are seeing the emergence of new models of science and innovation funding, and there have been rapid and frequent changes in the policy landscape, both with respect to science itself and areas affected by it. More certainty regarding long-term plans for the research environment is critical for the research community.

Mistrust and misinformation

The global rise in populism and nationalism presents a unique threat to the principles that underpin scientific discourse and endeavour. Isolationist, inward-looking policies endanger the networks and investment that are necessary for international collaboration. Growing levels of mistrust and misinformation serve to erode the openness and freedom upon which decades of extraordinary scientific discovery have depended.

Digital technology

Research is becoming increasingly digital, with more reliance on online resources, specialised programs and machinery. In some respects, these developments have accelerated innovation and increased access to scientific knowledge. However, the benefits of technological progress are not always distributed equally and there are instances where our increased reliance on digital technology has also served to centralise power, polarise opinion and entrench existing inequalities.

Challenges in the scientific landscape.

GOVERNANCE



Meeting these challenges at the Royal Society

The Royal Society funds excellent researchers in a way that supports stability and inventiveness, enabling them to follow the science wherever it leads. The Society's independence, stature and reach means it is uniquely placed to support scientific discovery in a changing global context.

Our new strategy sets out our ambitions for the Royal Society over the next five years and beyond. It highlights areas where the Royal Society can make the most difference and sets out our vision for developing and sustaining a pool of scientific talent that is fit for the challenges of the future.

Read more about the new strategy on page <u>21</u>

The Society at a glance

The Royal Society has three roles that are key to fulfilling its purpose:

Highlights 2021/22



£127.7m

Our purpose

The Society's mission is to recognise, promote and support excellence in science and to encourage the development and use of science for the benefit of humanity.

Scientific research and innovation advance our economic, social and cultural well-being, provide health benefits and are key to sustainable long-term economic growth.

How we are governed

The governing body of the Society is its Council, whose members are elected by and from the Fellowship. Council is responsible for determining the strategic direction of the Society and approving specific charitable programmes.

What we do

The Society recognises scientific excellence, funds scientific research, publishes scientific research, promotes science education and communication, supports scientific collaboration and provides scientific advice for policy.

Charity

As a registered charity, the Royal Society undertakes a range of activities that provide public benefit either directly or indirectly. These include providing financial support for scientists at various stages of their careers, funding programmes that advance understanding of our world, organising scientific conferences to foster discussion and collaboration, and publishing scientific journals.

Fellowship

As a Fellowship of outstanding scientists embracing the entire scientific landscape, the Society recognises excellence and elects Fellows and Foreign Members from all over the world.

National academy

As a national academy, the Society represents the UK research community and collaborates with international partners to advocate for science and its benefits. It provides authoritative and independent advice on matters of science that support the public good, including policies that promote excellent science and scientific issues that inform public policy.







53% of published papers were open access. compared to 45% in 2020/21



986

researchers currently supported by the Royal Society through its research fellowships



new Fellows and Foreign Members elected, including 20 women

62



23

Commonwealth science academies, including the Royal Society, called on their leaders to address the interlinked challenges of climate change, biodiversity loss and health.







$_{\text{over}}40m$

downloads of articles from Royal Society journals



205

staff organised into programmes, services and trading sections as at 31 March 2022



over 7,000

downloads of the Society's policy briefings on science and technology areas that are key for accelerating progress towards 'net zero'



Over

450,000

views of Summer Science content across the Society's YouTube channel.



1.1m

views of the Society's videos in partnership with BBC Ideas on the BBC website and the Society's YouTube channel with over 600,000 additional views on social media



President of the **Royal Society**

The role of science in shaping our lives has continued to be highlighted over the past year by the ebb and flow of the COVID-19 pandemic. The Royal Society's mission 'to recognise, promote and support excellence in science and to encourage the development and use of science for the benefit of humanity' has continued to be made real, on a daily basis, with vaccines fundamentally changing the course of the pandemic.

Every life lost to COVID-19 is a tragedy but every life saved by vaccine programmes and treatments is a reminder of the power of science. The Fellows of the Royal Society, the people we fund, the science we publish and the policy

We are living in difficult times but over the last year the Royal Society has been at the forefront of a science community that is focused on enhancing our knowledge and using that for the benefit of humanity." advice provided have continued to make a significant contribution to the UK and international response over the last year.

Another major issue to the fore last year was climate change and biodiversity loss. Global attention focused on the UK with COP26 being hosted in Glasgow. In March 2021 the Royal Society and its sister academies in the other G7 countries, launched three statements aimed at the G7 leadership. The statements included policy recommendations on the three inter-related crises of climate change, biodiversity loss and health.

These statements formed the basis of our influencing work around COP26 and the UK's presidency. The Royal Society also launched a series of briefings on science and technology areas that are key for accelerating progress towards net zero greenhouse gas emissions and increased resilience to climate change. This work drew on the expertise of over 120 scientists from more than 20 countries. While the outcomes

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Recent years have shown the value of science in very stark terms, but investment in a knowledge and innovation-based economy is also crucial to the UK's long-term economic well-being."

of COP fell short of what is required to limit warming to 1.5C, some progress has been made and the Society will continue to work with the science community to ensure that policymakers are informed by the strongest evidence.

Recent years have shown the value of science in very stark terms, but investment in a knowledge and innovation-based economy is also crucial to the UK's long-term economic well-being. The Royal Society has continued to advocate for increased public investment and last year's spending review was a crucial moment. The Society worked behind the scenes and with a high-profile media campaign, bringing together the science and business communities.

The Spending Review saw the Chancellor commit to increase funding to £20 billion a year by the end of this parliament, with a clear plan to reach £22 billion by 2026/27. The budget in 2021/22 was £14.7 billion. While reaching the £22 billion target has been delayed from previous commitments, in these difficult times this commitment is a positive signal about the Government's ambition to grow the full potential of the UK as a leader in science and innovation.

In last year's Trustees' Report, I celebrated the achievement of one of the Royal Society's goals – a post-Brexit Government commitment to associating to the EU research funding programme, Horizon Europe. This formed part of the joint Brexit agreement with the EU, announced on Christmas Eve 2020. That commitment has still not been delivered upon. The Royal Society has continued to press London and Brussels to prioritise science and conclude the agreement. The delay has damaged both UK and EU science.

This year, the Society has been working with the Government and the rest of the science community to prepare for a plan B if association does not become a reality. This could have major implications for the funding of UK science and for the Society's own funding programmes.

As we entered the second year of my Presidency, the Society has launched a new five-year strategy. The world in which we are operating is one where rapid change is presenting a set of challenges and opportunities. We face exceptionally complex issues with significant scientific dimensions, including climate change and biodiversity loss and the prospect of further public health emergencies. There are threats to the openness on which science thrives to do it.

issues.



Sir Adrian Smith President of the Royal Society

GOVERNANCE

from populism and nationalism. The UK's strength as a global partner is under question and the science community itself needs to look at how research is done and who is getting

Through all of this the Society's work will be guided by some key principles: independence; a role as a partner and convener; equality, diversity and inclusion; and an international focus. The plan will focus on five broad areas of work: the Fellowship and Foreign Membership; influencing; the research system and culture; science and society; and work relating to the Society's corporate and governance

While science has a part to play in tackling many global challenges, there are others where there is a less obvious role. Such is the case with the Russian attack on Ukraine. However, the Royal Society did join with the national science academies of the G7 nations to condemn the unprovoked attack as a clear violation of international law and of humanity's core values.

We are living in difficult times but over the last year the Royal Society has been at the forefront of a science community that is focused on enhancing our knowledge and using that for the benefit of humanity. That work continues.

Executive Director's statement

Dr Julie Maxton **Executive Director of the Royal Society**

The last few years have, of course, been dominated by the pandemic but with a year of working remotely under our belt, the Society adapted well and our outputs extended far beyond those relating to the pandemic.

The Society welcomed 51 Fellows, 10 Foreign Members and 1 Honorary Fellow into the Fellowship this year with 20 women in this year's intake. Their achievements and research range from the detection of a new type of neuron in the human brain and the design and development of new vaccines for globally important infectious diseases to a new way of looking at Einstein's theory of general relativity. You can read more on page 13.

Through our grants programmes the Society supported over 900 researchers at different points in their careers, as well as hundreds of PhD students, postdoctoral research assistants and technicians, both in the UK and around the world."

The Royal Society's grant expenditure, in the last financial year, was more than £101.6 million. Through our grants programmes, the Society supported over 900 researchers at different points in their careers, as well as hundreds of PhD students, postdoctoral research assistants and technicians, both in the UK and around the world. You can find out more on page 12.

The Entrepreneurs in Residence scheme continued to provide opportunities for industrial scientists and entrepreneurs to work in a UK university on a bespoke project. Linking universities and industry is important to maintain the strength of universities in translating leading research discoveries into new businesses and commercial products.

This year, there were more virtual and in-person Transforming our Future (ToF) events, including 'The Science of COVID' with speakers including Sir Patrick Vallance FRS and Professor Chris Whitty. The ToF meetings are unique, high-level events that address scientific and technical challenges of the next

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A substantial amount of the Society's work is internationally focused, reflecting the global nature of science."

decade and bring together leading experts from the wider scientific community, industry, government and charities.

Creating Connections are regional and national meetings which bring together experts from academia, industry and government to share their perspectives on supporting R&D. Scientific research and innovation can often stimulate local and regional development and opportunities. In the last year, conferences have taken place in Edinburgh and Coventry.

The move to a sustainable open access publishing model for journals carried on and 53% of our articles are now published as open access. We remain committed to moving the journals Biology Letters, Interface, Proceedings A, and Proceedings B to a fully open access model when 75% of articles are being published open access.

A substantial amount of the Society's work is internationally focused, reflecting the global nature of science.

Last year the UK hosted the G7 leaders' summit and in response the Society, together with the national science academies of the G7 members, proposed a science agenda for the event. The Society then published The Climate Change: science and solutions briefings prior to the 2021 United Nations Climate Change Conference (COP26). You can read more on page 17.

The Society issued a joint statement with the G7 science academies to condemn Russia's invasion of Ukraine.

The programme of scientific meetings continued to bring together world-leading experts to advance their fields of research. In the latter half of the year, more of the meetings changed to hybrid and in-person formats.

An important part of the Society's work is producing scientific advice for policy-makers and this year reports covered issues including students' subject choices at A level and scientific misinformation. The themes of climate change, net zero policies and technology also shaped many of our reports over the past year. Thirty schools took part in the Tomorrow's climate scientists programme and you can read more about this scheme on page 20.

The Royal Society Book Prize, which is generously supported by Insight Investment, was won by Entangled Life: How Fungi Make Our Worlds, Change Our Minds and Shape Our Futures by biologist and writer Merlin Sheldrake.

The Society's partnership with educational video platform BBC Ideas went from strength to strength. The series of seven films has now been viewed over 1.1 million times on the BBC Ideas website and the Society's YouTube channel.

Our archives are rich with history and this year the Society was grateful to receive archival donations such as fine paintings of marine life by Thomas Alan Stephenson FRS (1898-1961) amongst others.

Science and the Law continued with an in-person seminar on Sex, Gender and the Law in November 2021 and the publication of two primers published on Collision Investigation Analysis and Forensic Anthropology. In June 2021 at Creating Connections, a Science and the Law roundtable took place where delegates gave feedback on the utility of the primer and made suggestions for future topics.

staff.

Under Adrian Smith the Society will be working to a new five-year strategy while our overarching purpose remains unchanged. The Society will continue to promote and support excellence in science and encourage the use of science to benefit humanity. With the UN Biodiversity Conference (COP 15) and the third International Summit on Human Genome Editing taking place in 2023, there is much to look forward to.



IAm a Book. IAm a Portal to the Universe by Miriam Quick and Stefanie Posavec was selected by over 11,500 school children as the 2021 winner of the Royal Society Young People's Books Prize.

The Summer Science Exhibition continued in an online format this year with an estimated 60,000 users to the digital hub and over 450,000 views on YouTube. The inaugural David Attenborough prize lecture by Professor Alice Roberts was popular with over 115,000 views. In 2022, Summer Science returns as a hybrid event with activities and exhibits at Carlton House Terrace.

It has still been a very busy and rewarding year for the Society and I am grateful for the hard work and commitment of our

Dr Julie Maxton **Executive Director of the Royal Society**

Fulfilling the Society's purpose for public benefit

The Society's purpose is to recognise, promote and support excellence in science and to encourage the development and use of science for the benefit of humanity.

Research and innovation advance our economic, social and cultural well-being, provide health benefits and are key to sustainable long-term economic growth. The Society is concerned with excellent science, wherever and by whomever it is done, and is committed to increasing diversity in science, technology, engineering and mathematics (STEM).

The Society carries out several activities to fulfil its purpose:

Recognising scientific excellence	Funding scientific research	Supporting scientific collaboration	Promoting science education and communication	Providing scientific advice for policy	Publish
 Activities include: Electing exceptional scientists to the Fellowship; Promoting scientific achievements; and Demonstrating the economic impact of science investment. 	 Activities include: Providing financial support for excellent scientists at various stages of their careers in the UK and internationally. Funding research that advances understanding of our world; and Working for greater equality, diversity and inclusion in the scientific workforce. 	 Activities include: Organising discussion meetings to advance scientific collaboration and discovery; and Promoting the importance of science internationally. 	 Activities include: Promoting excellence in the teaching of STEM subjects and supporting teachers to be part of the scientific community; and Staging programmes to engage the public with science. 	 Activities include: Providing expert scientific advice to policy-makers; and Ongoing emphasis on the importance of evidence-based policy. 	 Activiti Pub edg Sup thro pub Tran reviv auth regi
 Value created For researchers: Rewarding outstanding contributions to the public good. Wider society: Increased public and private investment in research. 	 Value created For researchers: Opportunity to build and develop an independent research career. Financial support and mentorship. Support to collaborate across different disciplines. Wider society: Novel scientific research. Insight into solving global challenges. Developing scientific leaders. Developing greater diversity in the scientific workforce. 	 Value created For researchers: Opportunity to work with other scientists to expand knowledge and insights. Wider society: Knowledge sharing between institutions and countries ensures continued scientific advancement. 	 Value created Wider society: Improved scientific literacy in general public. Public is inspired to explore and engage with science in all its forms Inspiring the next generation of researchers. 	 Value created For policy-makers: Ability to make more informed decisions in key areas of science. Policy-makers have access to independent, impartial and expert advice. Wider society: Better policy decisions will lead to better outcomes. 	 Value of For res Oppand thei Increase Wider s Expqua Coll shall inno Increase
62 new Fellows and Foreign Members were elected to the Fellowship in 2021/22	986 active researchers currently supported by the Royal Society	£9.8m spent on fostering international and global cooperation	155,000 subscribers to the Society's YouTube channel (95% increase from 2020/21)	30 publications produced to influence policy-makers	53 of pape open ac





The Society has a number of attributes that mean it is uniquely placed to fulfil its charitable purpose:

- the expertise of its Fellowship, which includes world leaders across all scientific fields;
- the breadth of its scientific disciplines; this removes barriers and enables leading scientists in different fields to come together;
- its independence from Government and other organisations allows the Society to provide science advice that is unfettered by other interests;
- its ability to convene groups of individuals in key roles and with relevant expertise to address major issues in science and wider society; and
- its history and the successes of the Society's Fellows act as a source of inspiration for what science can achieve.

ing scientific research

ies include:

- olishing high-quality, cuttingge research;
- oporting open science ough open access
- lishing and open data; and
- nsparent approach to peer iew, funder identification, horship statements and
- istered reports.

created

earchers:

- portunity to publish findings I get recognition for ir work.
- easing the reliability of earch for others to build on

society:

- banded access to highality, cutting-edge research
- laboration and knowledgering accelerates scientific ovation.
- reasing trust in science.



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The Society's 2017 – 22 strategy at a glance

This year marks the final year of our current strategic plan. As it draws to a close, we reflect on its three priority areas and highlight some of the key achievements of the last five years.

	Priorities	Progress on the strategy in 2021/22	Progress at end of 2017 – 22 Strategy
Promoting excellence in science	 Elect exceptional scientists to the Fellowship Advise on the research landscape Demonstrate the economic impact of science investment Fund outstanding researchers Recognise scientific achievements Encourage and support innovation Publish scientific research 	 Over the last 12 months the Royal Society has funded 986 research Fellowships, helping to attract and retain early career researchers in the UK science system. Continued recognition of scientific excellence through the election of 62 new Fellows and the Royal Society's ongoing reward and medals programmes. Played an influential role in holding the Government to account on its research and development budget commitments, during a year which saw the Government pledge an additional £250 million of funding for science research. 	 The Royal Society has funded over £477 million in graindividuals, enabling scientists to conduct ground-brewide range of subjects across the natural sciences an Played a key role in accelerating the peer-review proce COVID-19 research papers and made them freely ava access basis. Delivered scientific events remotely throughout the paresearchers, scientists and academics with inspiring a content. Since the Entrepreneurs in Residence scheme launch eighty-one business leaders and senior industry scient successfully placed within academic institutions, strent between cutting edge research and its commercial approximation.
Supporting international scientific collaboration	 Proactive engagement on major issues Address global challenges Partner with leading scientific nations on new technologies Implement Commonwealth programmes Convene leading international meetings to advance science 	 Delivered a programme of, primarily virtual, international meetings including Europe, the Americas and Asia and on a wide range of themes, including AI and biodiversity. As part of its role within the Science 7 (S7), the Royal Society led three working groups on biodiversity, climate resilience and improving the use of data in pandemics. The S7 brings together a wide range of expertise from a grouping of the science academies from the G7 nations to help solve some of the critical challenges countries face. Funded 362 new International Exchanges grants to stimulate collaborations between UK scientists and leading scientists overseas through one-off visits or bilateral travel. 	 Following the Brexit vote in 2016, the Society has concase for protecting investment in scientific research, a policy and ensuring that scientists can freely collaborate. Between 2017 and 2022, the Society distributed £24.12 the Newton Fund, developing science and innovation promote the economic development and welfare of period between the economic development and welfare of period between a science and provide input to multilateral period between the first virtual Commonwealth Sconference with over 350 participants from 32 counter Summit on Human Genome Editing, which will take planta.
Demonstrating the importance of science to everyone	 Increase scientific advice for policy-makers New programme of public dialogue and engagement Integrate science into public debate and culture Promote the value of STEM education Inspire through historic collections 	 The Society's second virtual Summer Science Exhibition reached a larger audience than ever, bringing research to life through games, quizzes and interactive activities. Released a report calling on the Government to accelerate investment in STEM teaching, ahead of the 2021 Autumn Budget and spending review. Built on the success of our Tomorrow's Climate Scientists programme, providing schools with £85,000 to run investigative STEM projects in partnership with professionals from academia and industry. The Royal Society has published a series of stand-out reports on scientific topics of national and international significance, including climate change, machine learning and biodiversity. 	 Played a key role in the response to the COVID-19 partimely access to expert advice via the RAMP (Rapid As Modelling the Pandemic), DELVE (Data Evaluation and Epidemics) and SET-C (Science in Emergencies Taskir Published a range of reports on issues such as climate mitigation and human health, science education and p technologies. Partnered with BBC Ideas to produce a popular series The switch to remote events programming in respons pandemic has enabled us to reach new audiences.

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pandemic, providing and engaging

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Science tries.

Third International blace in 2023.

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es of science films. use to the COVID-19

Momentum into our next strategic period

In spring 2022 the Royal Society launched its new strategy, which sets out how it will build on these achievements over the next five years and beyond. As well as continuing our work to promote, support and inspire through science, we'll be looking at how we can maximise our impact and reach a broader, more diverse audience than ever before. We'll also be introducing new initiatives to help achieve net zero emissions across the Society's activities, better engage with key stakeholders and improve our offer to Fellows and Foreign Members. Go to pages 21 – 22 for more detail on our ambitious plans for the future.



Read more about the Society's strategy in action on pages 13 – 20.

Measuring the Society's impact

Sometimes the best ideas come from the most unlikely places.

That is why we believe in funding talented individuals, regardless of background or specialism, giving them freedom to follow the science wherever it leads. This radical exploratory approach, twinned with our ability to spot and invest in potential, is part of what makes the Royal Society's grants programme

We know that by providing more substantial, longer-term support we can maximise our overall impact, so in recent years we have focused on providing fewer, larger grants. As a result, the average size of a Royal Society grant increased 57% between 2017 and 2022. In 2022 the Royal Society continued to fund researchers working across an impressive array of topics and disciplines, from animate materials to astrophysics.

Capturing the breadth of activity that we support can be a challenge; there is no such thing as a typical Royal Society project.

The Royal Society evaluates the projects it funds and regularly collects case studies to better understand the impact of its work, some examples of which are presented here.

A small but important portion of the research we've funded touches on topics relevant to the United Nations Sustainable Development Goals (UNSDGs), a broad framework of activities developed with the aim of securing an equitable and sustainable future for all. These include studies related to eco-efficient biofuels, clean energy production and offshore energy production. In this section we highlight some of the ways in which Royal Society funded researchers are helping develop solutions to some of today's biggest global challenges.



Dr Tom Hasell, University Research Fellow at the University of Liverpool

Tom Hasell is a chemist who is working to reduce the quantities of waste sulfur produced by the petrochemicals industry by developing methods to turn it into useful novel materials.

This research could produce new materials that are an alternative to plastics, with potential applications in water purification and battery production, reducing both sulfur waste and plastic use.



Muindi, FLAIR Fellowship at the **African Population** and Health **Research Centre**

Kanviva is working with 2,000 households to understand the extent of air pollution levels in Kenya and the potential to reduce them by using alternative fuels. Kanviva's introduction of cleaner cooking fuels to these families will improve the health of women and children, who are more frequently exposed to pollution caused by cooking, whilst simultaneously reducing carbon emissions and the need to cut down forests for wood supplies.



CO 12 RESPONSIBLE CONSUMPTION AND PRODUCTION

SUSTAINABLE

DEVELOPMENT

GALS

2 ZERO HUNGER



Dr Mohammad Heidarzadeh at Brunel University and Dr Danny Hilman Natawidiaia at the Indonesian Institute of Sciences -**Royal Society Challenge-led Grants**

A group of engineers and geophysicists are working together to further our understanding of seismotectonics in East Indonesia.

Better understanding how the area will be affected by tsunamis or earthquakes will enable more effective risk assessment. Mohammad and his team hope to increase building resilience to these disasters through their data safeguarding livelihoods and reducing the risk to life of the local populations.



Prof Robert Mokaya, Wolfson Research Merit Award at the University of Nottingham

Robert is a materials chemist whose research focuses on developing new methods for the synthesis of nanostructured carbons. These materials are designed to store gases,

namely CO₂ and H₂. Creating solid-state storage for hydrogen would allow its use as a sustainable fuel within the transport and power industries, reducing global consumption of carbon-based fossil fuels.



used in farming. The results of her work will inform land management techniques, increasing crop yield whilst reducing the risk to pollinating insects, who are vital contributors to our global ecosystem.

Dr Rachel Parkinson, Newton International Fellowship at the University of Oxford

Rachel is a biologist specialising in insect neuroscience, whose current research focuses on the capacity of bees to taste pesticides and agricultural chemicals which are commonly



Dr Rachel Lowe, Dorothy Hodgkin Fellowship at the London School of Hygiene and Tropical Medicine

A mathematician who focuses her research on global public health, Rachel is working to

develop models which will allow her to understand the relationships between climate change, human activity and mosquito-transmitted diseases. These models will inform future decision-making in various public health scenarios by predicting future disease risk and strengthening local resilience to mitigate the impact of

imminent disease epidemics.



Associate Professor Dyllon Randall, FLAIR Fellowship at the University of Cape Town

Novel sanitation systems have the potential to reduce water waste whilst enabling the separation and collection of

urine for use as valuable products. This is precisely what Dyllon and his research team of civil and chemical engineers hope to achieve by developing methods to extract nutrients from urine for use in fertilisers, supporting development in African countries with scarce access to water and sanitation. £0.5m

2021/22 income and expenditure

Income

The Society receives income from a number of sources, including the Government, trusts, foundations, companies, individuals, trading activities and income from investments. Its income enables the Society to deliver a wide range of programmes in support of its strategic aims. Income for the year totalled £124.6 million.

Income and endowments from donations and legacies (£0.5 million)

The Society has relied on the generous support of philanthropists throughout its history. This year the Society received funding from trusts, foundations, companies and individuals in addition to the contributions made by Fellows. The Society is grateful to all its donors and their names can be found on the Society's website.

Grants for charitable activities (£108.3 million)

The Society receives the majority of its funding from the UK Government's Department for Business, Energy & Industrial Strategy (BEIS). In year, a grant was also received from the Foreign, Commonwealth & Development Office (FCDO) (formerly known as the Department for International Development). In addition to Government funding, the Society receives valuable contributions towards its charitable activities from long-term partners such as the Wolfson Foundation and the Leverhulme Trust, as well as other external bodies.

Trading in furtherance of charitable activities (£8.4 million)

The Society undertakes trading activities in the form of publishing journals and hosting conferences that further its charitable objectives. In

March 2020, the Society's buildings were closed to Fellows, staff, conferencing clients and other visitors. Following a risk assessment and adhering to all Government advice, the office was opened partially in September 2021, with the first inperson events taking place.

Following a short closure in December 2021 in response to Government advice, the building was then reopened more broadly in January 2022.

Other trading activities (£0.1 million)

Royal Society (London) Ltd was established to process other noncharitable trading activities, including income from sponsorship agreements. Royal Society Trading Limited was dormant in year to 31 March 2022.

Income from investments (£7.2 million)

The Society holds a significant investment portfolio which was valued at £308.3 million at 31 March 2022. Many of these funds held were bequeathed to the Society as endowments or gifted as a restricted fund for a specific purpose. The investment objective of the Society is to at least maintain the real value of its investment assets while generating a stable and sustainable return to fund charitable activities, thus being evenhanded between current and future beneficiaries.

Other income (less than £0.1 million)

During the year, the Society also received other income amounting to less than £0.1 million.



Less than £0.1m

Expenditure

Expenditure for the year totalled £127.7 million. Expenditure is incurred on raising funds and charitable activities.

Expenditure on raising funds (£3.6 million)

Expenditure on raising funds includes the direct costs of raising funds, associated support costs, costs of trading and investment management fees.

Expenditure on charitable activities (£124.1 million)

The Society's charitable expenditure is categorised in the statement of financial activities as follows:

- promoting science and its benefits;
- supporting and recognising excellence in science;
- providing scientific advice for policy;
- fostering international and global cooperation; and
- education and public engagement.

Each of the areas above supported the delivery of the three strategic objectives as set out in the 2017 – 2022 strategic plan. The expenditure chart on the right illustrates expenditure by both strategic objective and expenditure category.

The expenditure to further the strategic objective of promoting excellence in science includes the majority of grant awards, the costs of the Society's publishing operation and the costs associated with lettings at Carlton House Terrace which are in furtherance of charitable objects. Expenditure in this area also includes costs arising from recognition of the excellence and creativity of scientists by election to the Fellowship and Foreign Membership and the awards to scientists to recognise excellence in science and technology.

Expenditure to further the objective of supporting international scientific collaboration mainly constitutes grant awards on international schemes, providing scientific advice for areas of international policy and expenditure on events convening scientists from across the world.

The majority of the Society's expenditure to demonstrate the importance of science to everyone is in the form of providing scientific advice for policy and education and public engagement work.

£3.6m

The Society's grant-giving activities

The primary purposes of the Society's grant-giving activities are to support the work of outstanding individual scientists at various stages of their careers, primarily in the UK, and to encourage collaborations between UK scientists and scientists throughout the world.

Expansion of our grant programme

The Society provides grants and Fellowships for outstanding researchers in the UK and internationally. The value of grant awards made by the Society has significantly increased since 2017/18 with an overall increase of 39% from £73.3 million to £101.6 million in 2021/22. The increase is mainly in grant awards to early career researchers through the Society's University Research Fellowship and Dorothy Hodgkin Fellowship programmes.

£m	2021/22	2020/21	2019/20	2018/19	2017/18	Change over four-year period
Early career researchers	72.7	69.4	60.2	51.8	42.6	71% ↑
Established researchers	11.4	14	12.7	9.8	7.5	52% ↑
International collaborations and travel	7.3	6.9	8.1	8.7	7.7	-5%
Capacity strengthening*	5.7	20.1	16.8	10.1	9.9	-42% 🗸
Industry, innovation and translation	2.7	3.1	2.7	2.3	2.4	13% 个
Other	1.8	1.6	2.0	2.0	3.2	-44% 🗸
Total	101.6	115.1	102.5	84.7	73.3	39% ↑

* The reduction in capacity strengthening grant awards is due to the decrease in grant funding made available by the UK Government for the Society's Official Development Assistance (ODA) funded programmes

Grant-making process

Grants made by the Society fall into two broad classes as follows:

- (1) Research Fellowships, which include early career, senior and industry fellowships as well as professorships; and
- (2) Research grants, which include collaboration grants, travel grants, capacity-building grants and education-related grants.

Grant applications are assessed by means of a peer-review process and consideration by a panel of experts comprising Fellows of the Royal Society and other senior scientists. Each panel is chaired by a Fellow of the Society.

Further information is available online at

royalsociety.org/grants/applications

8. The grant programmes are evaluated on a routine basis (approx. every five years), which helps to inform us whether the programmes are delivering their intended objectives and what steps can be made to improve them.

7. Once an award has been initiated, we monitor the progress of the award holder by requesting an annual progress report (or in the case of short awards, final report) each year.

> 6. Offer letters are sent to the candidates and host organisations. An offer will only become an award once both the applicant and host organisation have accepted the offer online.

5. All recommendations are then presented to the Grants Committee for approval.

process



Career progression

Professor Rebecca Kilner FRS, former Dorothy Hodgkin Fellow and University Research Fellow.

As well as being an alumna of the University Research Fellowship (2001 – 2007), she is the first former Dorothy Hodgkin Fellow (1998) to be elected as a Fellow of the Royal Society in 2021 for her discoveries on the interplay between social behaviour and evolution in animals, primarily in birds and burying beetles. She has shown how the social interactions between individuals within animal families are a balance of

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cooperation and conflict, and how these different types of behaviour contribute to subsequent evolution. For example, when parents care for their young then siblings are often in competition for food. In contrast, when there is no parental care, siblings evolve greater levels of cooperation with each other and are more likely to work together to obtain food.

GOVERNANCE

- 1. Applicants submit their proposal.



Professor Rebecca Kilner FRS, former Dorothy Hodgkin Fellow and University Research Fellow.

Strategy in action



By harnessing the expertise of its Fellowship, the Society's aim is to ensure that excellence in science is recognised and supported and that scientific work is of the highest quality.

Funding outstanding researchers In 2021/22 the Society awarded £101.6 million to fund exceptional researchers and outstanding scientists. This is a decrease in funding of 12% from last year, which was mainly due to a reduction in grant funding made available by the UK Government for the Society's Official Development Assistance (ODA) funded programmes

The Society supports both early career and senior scientists through a range of schemes which include both discovery-led and applied research.

of grants were

awarded to women

(2020/21: 28%)

We work with partners overseas to support international collaborations and are involved in industry and innovation schemes.

The next generation of research leaders are supported with opportunities including training, mentoring and networking. These schemes are funded by the Government, in partnership with other funding organisations, philanthropic gifts and through the Society's own funds.

were awarded to

women in our early

career schemes

(2020/21: 34%)



Gender diversity of new Fellows and of new grant awards



Some of the people we fund:



Dr Ajitha Rajan, Industry Fellow at the University of Edinburgh.

Awarded in 2021, Ajitha's research will investigate the safety of artificial intelligence (AI) used in autonomous vehicles (AV). Her project will focus on assessing the safety of perception AI tasks within AVs that are responsible for detection of vehicles, pedestrians, lanes, traffic light and obstacles.





Dr Steven Hall, Royal Society -**Newton International Fellow at** the Liverpool School of Tropical Medicine.

Antivenom, the only currently available treatment for snakebite, is an ineffective treatment of snakebite-induced tissue necrosis which causes permanent morbidity in upwards of 400,000 people annually. Steven is developing combination drug therapies (using two or more drugs simultaneously) that can rescue human cells and mice from snake venom-induced necrosis, regardless of the snake species or its locality.

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Elect exceptional scientists to the Fellowship

The Royal Society elected 62 new Fellows and Foreign Members, including 20 women and one Honorary Fellow. New Fellows have been elected from institutions across the UK and around the world, including the first two Foreign Members from South Korea. The intake also included one Nobel laureate as well as world-renowned figures from industry.







Professor Clare Burrage, University Research Fellow at the University of Nottingham.

Clare investigates dark energy and its potential role in the expansion of the universe. Dark energy has not been seen to date; however, it does not mean that it is impossible to see this force. Her research focuses on developing novel searches for these theories of dark energy.



Their achievements and research were diverse and ranged from the detection of a new type of neuron in the human brain and the design and development of new vaccines for globally important infectious diseases to a new way of looking at Einstein's theory of general relativity and contributing to understanding the link between the increase in sea levels and global warming.



Strategy in action CONTINUED



Above: Dr Ceri Batchelder, Entrepreneur in Residence, in conversation with SELA student engineers.

Advise on research landscape

This year, the Society has continued to advocate for meaningful support for the research landscape which benefits the UK's economy and society. We have joined with partners from across the UK and EU science sectors to consistently call for association to Horizon Europe through ministerial letters, select committee evidence and media interventions.

We have made written submissions to various reviews of the state of the research ecosystem (Nurse, Tickell, Grant, Innovation, Levelling-Up, People & Culture), published an updated version of our national academies *Investing in UK R&D explainer*, and released reports on key themes such as *Regional Absorptive Capacity: the skills dimension*. We are holding regular regional panel events on the role of R&D in levelling-up through the Society's *Creating Connections* series, and we continue to influence on immigration policy, including the expansion of the Global Talent visa.

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Demonstrate economic impact of science investment

The Society worked with partners across science, academia and industry to press the case for a good settlement for science in the Government's 2021 Spending Review. In the final weeks of negotiations, science had a high profile in Parliament and the media, resulting in a commitment from the Government to increase public investment in R&D from £14.9 billion in 2021/22 to £20 billion in 2024/25, with a clear pathway to reach £22 billion by 2026/27.



Above: Image from the *Regional Absorptive Capacity: the skills dimension* policy report.

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Encourage and support innovation

Eighty-one business leaders and senior industry scientists have been appointed as Royal Society Entrepreneurs in Residence (EiRs) since the scheme launched in 2017.

The BEIS-funded scheme aims to increase the knowledge and awareness in UK universities of cutting-edge industrial science, support the translation of ideas and build confidence in business and entrepreneurship.

Based on a review undertaken in 2021/22 of the first three cohorts of 50 award holders, EiRs have helped secure £19.5 million of follow-on funding for commercial projects and been directly involved in the launch of 16 companies underpinned by university research. The scheme has also enabled 85 students to obtain industry placements, helping to break down barriers between academic and commercial research and expand the practical application of science.



Publish scientific research

Last year, the Society announced a commitment to switch our four hybrid research journals, *Proceedings A*, *Proceedings B*, *Interface* and *Biology Letters* to fully open access when their proportion of open access articles reached 75%.

To drive this transition, the Society embarked on an ambitious programme of developing so-called transitional 'Read & Publish' agreements with institutional libraries and consortia around the world. In 2021 we made over 170 such agreements and this is set to double in the second year. This makes open access publishing in our hybrid journals easier for researchers who will have their open access charges covered centrally by their institution, rather than having to meet them individually or from their project grants.

As a result, in 2021/22 we reached the significant milestone that over half of all our published articles were open access (53%) – free to access and with liberal re-use rights under the Creative Commons CC-BY licence.

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PROCEEDINGS OF THE ROYAL SOCIETY IS





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OTHER INFORMATION



Above: Dame Jocelyn Bell Burnell FRS DBE, winner of the Copley Medal 2021.

Recognise scientific achievements

Fellow Dame Jocelyn Bell Burnell DBE was awarded the Copley Medal 2021 for her work on the discovery of pulsars, one of the major astronomical discoveries of the 20th century.

The Society introduced two new medals this year: the Royal Society Hauksbee Award for outstanding achievements in science by someone whose work is mostly 'behind the scenes' or in support, and the Royal Society Research Culture Award for outstanding contributions to the wider research community.

It was also decided to open awards – where appropriate – to teams or groups of researchers, rather than just individuals to better reflect the collaborative nature of contemporary research.



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Left: A selection of Royal Society journals from 2021/22

Tackling biodiversity loss and climate change

Human activities are changing Earth's climate and having huge impacts on our ecosystems.

Many of the scientists we fund are researching solutions for reversing biodiversity loss, mitigating the effects of climate change and creating technology to achieve net zero greenhouse gas emissions.



Professor Loeske Kruuk, Royal Society Research Professorship at the University of Edinburgh



Professor Corinne Le Quéré FRS, Royal Society Research **Professorship at the University** of East Anglia



Dr Jens Zinke, Royal Society Wolfson Fellowship at the University of Leicester



Dame Clare Grey FRS, Royal Society Research Professorship at the University of Cambridge

Loeske is an evolutionary ecologist whose current research looks at the effect of climate change on evolutionary processes in wild populations. She studies the genetic and short-term effects of rapid environmental changes, such as climate change or disease, in animal populations. Her analysis will determine the importance of evolutionary genetic adaptation and responses to environmental change and the consequences for the dynamics of natural populations. Loeske's research will inform the management of natural populations and ecosystems experiencing environmental change.

Corinne is a physicist specialising in understanding the carbon cycle and how it interacts with the Earth's climate. Her original research is helping to determine how and why the natural carbon reservoirs are changing, particularly in the Southern Ocean. The ocean absorbs, on average, a quarter of the carbon dioxide (CO_2) humans emit into the atmosphere every year, significantly slowing down climate change. Corinne is working to predict how the ocean will absorb carbon in the future and how marine ecosystems will change, because it will have a huge impact on how much and how quickly the planet will warm. She is a member of the Climate Change Committee which advises the UK Government and a member of the Royal Society's advisory group on climate change.

Jens' research focuses on understanding how the tropical oceans regulate our climate and to what extent global warming caused by humans has interrupted or modified the natural cycles. He studies corals from the tropical oceans as recorders of environmental and climate change over the past 300 years. This research contributes to his study of the impact of global warming, natural climate variability and human impacts on the oceans.

Clare Grey is a chemist and uses nuclear magnetic resonance spectroscopy (NMR) to study and optimise the functioning of materials for rechargeable batteries, supercapacitors and fuel cells. Her NMR studies have helped to understand and optimise the performance of lithium-ion batteries, which power mobile phones, laptops and electric cars. Her research has substantially contributed to the development of next-generation batteries and cost-effective, durable storage systems for renewable energy, with a recent focus on fast-charging. These will support the UK to achieve net zero emissions by 2050. Clare's work into new battery technologies is vital to moving away from fossil fuels and reducing the impact of climate change.



Professor Paul Bates CBE FRS, University of Bristol, Professor Raphael Tshimanga, University of Kinshasa, Professor Preksedis Ndomba, University of Dar Es Salaam, Professor Denis Hughes, Rhodes **University Initiative**

A group of UK and African universities worked together to develop a new understanding of the Congo River. Scientific knowledge and data on the hydrology of the river were lacking. The river is huge and critical for biodiversity, rural livelihoods and transportation in the region. The project gave African researchers access to the latest remote sensing data, methods and research models, as well as measuring equipment and training in how to use it; while UK researchers benefited from historical data and local knowledge to study the Congo River system. The research has fed into the development of hydropower and flood management which are both important to the local population and country as a whole.

Pictured above are members of the research team, from left to right: Jules Beya, Dr. Mark Trigg, Pierre Kabuya, Felly Ngandu, Andy Carr and Professor Raphael Tshimanga.



Supporting international collaboration

Priorities:

1 Proactive engagement in major issues.



- 3 Partner with leading scientific nations on new
- 4 Implement Commonwealth programmes.
- **5** Convene leading international meetings to advance science.

The Society works to foster international collaboration between researchers, emphasising the role that science plays in forging partnerships between nations.

Proactive engagement in major issues

The science community has overwhelmingly been in favour of the UK seeking formal association with the new Horizon Europe programmes.

On 30 December 2020, the UK and EU signed a Trade and Cooperation Agreement that included a deal for association to Horizon Europe. However, final agreement on association has not been reached. While all parties say that they remain committed to the agreement and recognise the mutual benefits of the deal, the issue remains unresolved. The Society's view continues to be that failing to secure association would undermine UK, European and global science and that the ongoing uncertainty around the issue has been counterproductive.

In 2021 the UK hosted the G7 leaders' summit, bringing together the national science academies of the G7 members to propose a series of evidencebased policy recommendations. Key themes of the summit included steps towards net zero emissions, climate resilience, safeguarding biodiversity

H-mode transition and pedestal studies in fusion plasmas

ONLINE SCIENTIFIC DISCUSSION MEETING

17 - 19 January 2022 Organised by Professor Eun-Jin Kim and Dr Yasmin Andrew,

ROYAL SOCIETY

Above: Social media card for the scientific discussion meeting. H-mode transition and pedestal studies in fusion plasmas

and improving the use of data in pandemics.. Please read the case study on page 17 for more information.

Following the Russian invasion of Ukraine, the Society joined with the national academies of the G7 nations to issue a statement condemning the attack. The Society worked with the Council for At-Risk Academics (Cara), which specialises in supporting scientists at risk to provide practical support. The Government restrictions had a very limited impact on our activities because the Society did not have any active programmes with the Russian Academy or any other Russian institutions. Additionally, there were no funding activities that fell within the scope of the restrictions. The Society has a long-standing opposition to blanket academic boycotts and supports the trusted research initiative.

1 3

Address global challenges

The Society continued to work with Cara to promote and campaign for academic freedom. In October, Michael Ignatieff gave a lecture at



the Society on Academic Freedom: Right or Privilege? as part of a series of lectures; and in December, a virtual symposium entitled Voices from the Syrian Academic Community: Unique local insights and contributions to research, policy and practice was held in partnership with Cara and the BA. The symposium provided a platform for Syrian academics to showcase and share their research with a wider audience from the academic and humanitarian sectors.



Partner with leading scientific nations on new technologies

The Third International Summit on Human Genome Editing was due to be held in London in March 2022 but was postponed to March 2023 because of the pandemic.

In its place and in partnership with UK Academy of Medical Sciences, the US National Academies of Sciences and Medicine and The World Academy of Sciences, the Society hosted three small, themed online discussions on priority areas that will inform the summit agenda for 2023. Looking ahead to the third human genome summit took place on 7 – 9 March 2022 and focused on the key topics of the summit's agenda, including discussion of the recent reports from the International Commission on the Clinical Use of Heritable Human Genome Editing and the WHO Expert Advisory Committee on Developing Global Standards for Governance and Oversight of Human Genome Editing.

The Society also delivered a programme of virtual international meetings across Europe, the Americas and Asia on a wide range of themes such as AI and other technologies.



Implement Commonwealth programmes

A raft of new activity has been undertaken as a result of the 2021 Commonwealth Science Conference (CSC).

In June 2021, in a joint letter to Commonwealth Secretary-General Baroness Scotland, the science academies of the Commonwealth jointly called for action by Commonwealth heads of government to address the interlinked challenges of climate change, biodiversity loss and health.

After the conference, a series of followon grants were awarded to participants to enable them to pursue new research connections made at the meeting. The conference has also resulted in the publication in 2022 of two themed issues of Philosophical Transactions, Developing resilient energy systems and Nurturing Resilient Ecosystems.

In March 2022, a regional follow-up meeting with early career researchers from the UK and sub-Saharan Africa was held in Accra, Ghana focusing on energy, biodiversity and equitable access to health.



120

scientists from over 20 countries contributed to Royal Society briefings on science and technologies to help tackle climate change.

GOVERNANCE

Convene leading international meetings to advance science

The Society runs a series of internationally renowned scientific meetings that bring together leading experts to discuss the latest research and to develop knowledge of their field.

This year, these meetings have brought together experts from a variety of disciplines to share their knowledge on topics as diverse as the emergence of collective knowledge in animals, humans and machines, microbial ecology for engineering biology and recent advancements in structured illumination microscopy.

Building on lessons learned during the height of the pandemic, these meetings are increasingly taking place virtually or in a hybrid format. Not only does this make them more easily accessible to a geographically dispersed range of participants, it also reduces the environmental impact associated with long-distance travel.

Other topics this year included: Genomic population structures of microbial pathogens; New approaches to 3D vision; H-mode transition and pedestal studies in fusion plasmas; and SIMposium: recent advancements in structured illumination microscopy.



OTHER INFORMATION

£9.8m

spent on fostering global and international collaboration

The science academies of the G7

Last financial year the Society and sister academies in the other G7 countries launched three statements aimed at the G7 leadership.

The statements included policy recommendations on the three inter-related crises of climate change, biodiversity loss and health.

The work continued into the next financial year, highlighting where science can help provide solutions to the severe and urgent crises the world currently faces.



Above: Some of the 12 Climate change: science and solutions briefings published before COP26.

G7 Leaders' Summit

In June 2021 the UK hosted the G7 Leaders' Summit. Once again, the Society brought together the national science academies (S7) of the G7 members to set a science agenda for the gathering. The focus was on creating a net zero climate-resilient world, tackling biodiversity loss and improving the use of data in pandemics.

Drawing on expertise from across the globe, the S7 were united in calling for greater cooperation and collaboration between the G7 nations. The S7 academies also urged a greater level of ambition and investment in the technologies and ideas that can deliver a more sustainable and healthier world.

Creating a net zero climate-resilient world, tackling biodiversity loss and improving the use of data in pandemics featured prominently in the discussions and outcomes of the summit.

The clearest success came in relation to the use of data. where the call to establish principles for well-governed access to international health data in emergencies was highlighted in both the Pandemic Preparedness Partnership roadmap that formed the basis for discussions and in the G7 Carbis Bay Health Declaration.

Regarding climate change, there were ambitious targets for net zero and further support to middle- and low-income countries to help them achieve net zero but more is needed. The S7 academies continue to believe that evidencebased transparent technology road maps which set out technologies to deploy, develop and research are needed to demonstrate how countries will meet those targets, and to drive efficient public and private investment.

On biodiversity, the recommendation to develop new approaches to valuing and accounting for biodiversity was not acknowledged. G7 nations should drive new approaches that result in biodiversity being addressed in national and corporate accounting procedures and that ensure that the long-term sustainability of the biosphere becomes embedded as a central consideration of economic growth.

2021 United Nations Climate Change Conference (COP26)

In anticipation of COP26, which was also held in the UK, the Royal Society launched a series of briefings on science and technology areas that are key for accelerating progress towards net zero greenhouse gas emissions and increased resilience to climate change.

This work drew on the expertise of over 120 scientists from more than 20 countries and was backed by a statement from many of the world's leading science academies. The *Climate change: science and solutions* briefings aim to rapidly accelerate research, investment and deployment in areas that will become increasingly important from now and for the next 30 years.

The outcomes of COP26 did not match the urgency that is clear from the scientific evidence; however, there was some encouragement with commitments to tackle deforestation and methane, among other areas. The Society believes that more concrete action and cooperation between countries, industry and scientists to deliver decarbonisation and the net zero agreements is necessary.



Above: Royal Society staff speaking with singer and songwriter, Ellie Goulding (left) at COP26 in Glasgow.





Above: Rebecca Pow, Parliamentary Under Secretary of State at the Department for Environment, Food and Rural Affairs, at the Society's stand at COP26 in Glasgow



Demonstrating the importance of science to everyone

Priorities:



- 2 Implement a programme of public dialogue and
- 3 Integrate science into public debate and
- 4 Promote the value of
- 5 Inspire through historic

Scientific thinking influences how people live their lives, never more so than now. The Society engages with the public in many different settings to hear their experiences and views and to make science part of the wider conversation.

Increase scientific advice for policy-makers

Over the past year, the Society has produced a wide range of reports to influence policy-makers in important areas of science.

In September last year, the Society commissioned the Education Policy Institute (EPI) to look at students' subject choices at A level and found the diversity in subjects had decreased significantly over the last ten years. Students' A level choices have never been so narrow. The UK needs to offer a broader education so young people have the right skills, education and knowledge for the future and do not get left behind.

The Society published a major report in January entitled The online information environment: Understanding how the internet shapes people's engagement with scientific information. The report provided a series of recommendations for countering scientific misinformation and was widely reported in the media.

November's report on the effects of net zero policies and climate change on air quality discussed how the changing climate, and the net zero measures adopted to limit further warming, can affect air quality. The report highlights that there are, so far, no equivalent air pollution reduction targets to match the Government's "net zero by 2050" pledge.

The intertwined topics of climate change and net zero continued with the publication of A healthy future – tackling climate change mitigation and human health together. Jointly produced with the Academy of Medical Sciences, the

report summarises the evidence of how climate change mitigation actions could promote human health in the near term, through 'co-benefits'.

In May 2021 the Society issued a report which set out 12 technology and climate research priorities for delivering net zero carbon emissions by 2050. You can read more about the three statements aimed at the G7 leadership on page 17.

The Transforming our future conference series continued this year with leading experts from the wider scientific community, industry, Government, funding bodies and charities coming together to focus on one topic or industry sector. Topics included technologies to improve women's health, building sustainability, green science and immuno-oncology therapies. Supported by AstraZeneca,



Above: Two reports published by the Royal Society during 2021/22 to provide scientific advice to policy-makers



Above: Sir Patrick Vallance FRS, speaking at the Transforming our future conference, The science of COVID-19.

The Science of COVID-19 explored the basic science, vaccine efforts, diagnostic logistics and treatment and recovery from long COVID. The event was well received and featured a distinguished array of speakers, including Chris Whitty, Jonathan Van Tam, Patrick Vallance, Kate Bingham, Andrew Pollard and June Raine.



Implement a programme of public dialogue and engagement

The Summer Science Exhibition continued in a virtual format in 2021 with four days of cutting-edge science, online workshops, lectures and athome activities. A digital hub replaced the exhibition floor, bringing the research to life through games, guizzes and interactive activities receiving an estimated 60,000 users.

There have been over 450,000 views to Summer Science content across the Society's YouTube channel. Popular content included the inaugural David Attenborough prize lecture by Professor Alice Roberts which has seen over 115,000 views, a talk exploring How has Hubble transformed our view of the distant universe? with over 20,000 views and the *Big Summer* science quiz with over 17,000 views.

Pandemic-related videos continued to be popular. Long COVID: an unfolding story with Professor Brian Cox had 160,000 views on catch up and a peak of over 4,900 views live. Vaccines: a *double dose* with Professor Brian Cox had views of 61,000 on catch up while the live broadcast had a peak of 1,200 viewers.

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Above: Why is biodiveristy important? animation, narrated by Sir David Attenborough

OTHER INFORMATION

Integrate science into public debate and culture

The Society continued to work with educational video platform BBC Ideas on a series of seven videos focusing on different aspects of science. The seven films have been viewed over 1.1 million times on the BBC Ideas website and the Society's YouTube channel, with over 600,000 additional views on social media.

Owing to the pandemic, a second series of 'People of Science' was not produced this year; however, another series is planned for 2022/23.

In the lead-up to COP26 and as part of our work on the UK's 2050 net zero target, we launched our #2050challenge on social media. Researchers, Fellows, and others from around the world, were challenged to explain a climate or environmental issue in 20 seconds, and then explain how their work would help to address it in 50 seconds. The campaign highlighted the global effort of the science community in working towards 2050, whether delivering net zero carbon emissions, reversing biodiversity loss, or improving human health and sustainability.

Since the campaign was launched in May 2021, the #2050Challenge hashtag has had over 850 posts, 5.1 million total impressions and 1.1 million web searches. Video views on Twitter have reached over 100,000.

The theme of biodiversity loss made up a significant part of the Society's engagement work. Sir David Attenborough voiced a short film, Why is biodiversity important? which explores key questions around biodiversity and its importance. The film has been viewed over 135,000 times on YouTube and has had more than 5k views on both Twitter and Instagram.

Strategy in action CONTINUED

A Q&A page was created on the Society's website to look at some of the most asked questions about biodiversity. It drew on the expertise of the Fellows to answer them as accurately and dispassionately as possible. Questions included 'How do we measure biodiversity?' and 'What is the scale of biodiversity loss?'

The Society's science and the law programme brings together scientists and members of the judiciary to discuss and debate key areas of common interest, ensuring that the best scientific guidance is available to the courts.

In 2021 the Society published a new primer designed to advise members of the judiciary on the fundamentals of forensic ballistics, specifically geared to its use in legal cases.

The Society has now published 6 such primers, each presenting an easily understood, accurate position on a range of scientific topics, considering the limitations of the science and the challenges associated with its application.















Above: As part of the Society's work on climate change and biodiversity, school resources were produced to encourage classroom discussion on these themes.

Promote the value of STEM education

The Partnership Grants scheme aims to offer students aged 5 - 18 a first glimpse of scientific research in the classroom. The grant offers up to £3,000 to UK schools or colleges to buy equipment to carry out research projects in partnership with a STEM professional.

The 2021/22 funding round demonstrated a 32% increase in funded applications as schools have re-engaged with STEM enrichment

activities post pandemic. In total, 73 schools received funding, 30 of which are part of the Tomorrow's climate scientists programme, which supports students with climate change and biodiversity research projects. In total 9,164 students will benefit from this funding equating to approximately £199k. You can read more about the Tomorrow's climate scientists programme on page 20.



Instagram followers 54k 20% increase on 2020/21



Book prizes

More than 11,000 young judges from

500 UK schools and youth groups

voted for the Royal Society Young

People's Book Prize and selected I Am

a Book. I Am a Portal to the Universe.

by Stefanie Posavec and Miriam Quick.

Entangled Life: How Fungi Make Our

Our Futures by biologist and writer

Worlds, Change Our Minds and Shape







MERLIN SHELDRAKE ENTANCLED

OW FUNG

MAKE OUR WORLDS, CHANODOUR MINDS, AND SHAPE OUR FUTURES

Above: Professor Brian Cox (left) with Merlin Sheldrake (right), winner of the 2021 Royal Society Insight Investment Science Book Prize

Left: Merlin Sheldrake's winning book, Entangled Life.

Merlin Sheldrake was the 2021 winner of the annual Royal Society Insight Investment Science Book Prize.

His book explores the surreal world of fungi which are organisms with no brain, yet they can solve complex problems and manipulate animal behaviour.







Above: Image from the Society's biodiverity Q&A web page. Image credit: istock.com/Mark Kostich.

Twitter followers 329k 3% increase on 2020/21

Facebook audience 255k 1% increase on 2020/21

Youtube subscribers 155k 95% increase on 2020/21

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Above: Crown of a fan worm, by Thomas Alan Stephenson FRS, 1944.

Inspire through historic collections

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New archival donations have included some fine paintings of marine life by Thomas Alan Stephenson FRS (1898 – 1961); together with larger collections of personal papers of Fellows across many disciplines, notably the neuroscientist Patrick Wall (1925 – 2001); oceanographer Michael Longuet-Higgins (1925 – 2016), immunologist Sir Peter Lachmann (1931 – 2020); geologist John Lawrence (1932 - 2020); and the organic chemist Sir John Cadogan (1930 – 2020).

Significant conservation work has been done on several portraits, including the likeness of the life-saving inventor Captain George Manby FRS (1765 -1854), by Samuel Lane.

Exhibitions on the Royal Society's platform in Google Arts and Culture were visited by a total of 140,964 people. New displays were *Dame* Anne McLaren: the road to IVF, with two exhibits timed for Summer Science Exhibition: The Royal Society soirees: highlights from the Summer Science Exhibition; and Painting with sunlight: John Ruskin and science (with The Ruskin, Lancaster University).



Strategy in action CONTINUED

Tomorrow's climate scientists

Tomorrow's climate scientists is an extension of the Society's Partnership Grants school funding programme.



Above: Image used to promote the Tomorrow's climate scientists programme. Image credit: istock.com/agnormark.

Introduced in 2020, students across the UK can take action themselves to address climate and biodiversity issues – to become the climate scientists of tomorrow.

Schools or colleges can apply for grants of up to £3,000 to run investigative STEM projects in partnership with researchers from academia or industry. By working with a STEM partner, students can develop green skills as the UK moves towards a net zero future.

In November 2021 the UN Climate Change Conference (COP26) took place and as part of the Society's exhibit a 'Meet the climate scientists of tomorrow' Q&A was held. Primary and secondary school children from all over the UK took part virtually in live Q&As to talk about how they were taking action to save the planet through science.

Earthworms

St Gregory's Catholic Primary School in Preston researched why earthworms are so important to our world with their STEM partner, Dr Kevin Butt from the University of Central Lancashire. The children learnt about the vital role worms play in ecosystems with six of their very own wormeries. Earthworms play a vital role in maintaining healthy soils and are natural recyclers of organic waste. The BBC spent a day filming year 1 students with a feature on BBC Breakfast.

How do trees affect our climate and air quality?

Students from Ribblesdale High School in Clitheroe have been studying the effect of trees on the climate and on air quality. The area around the school includes the ancient woodland of the Trough of Bowland as well as newly forested areas. Through the project, pupils are learning skills in Arduino programming that the school do not currently teach. They will learn how sensors attach to microprocessors and how the data is communicated back to their own computers.

They will learn skills in data interpretation and analysis and in data visualisation. During the process of gathering data and making connections, the pupils will learn scientific inquiry as well as important lessons about scientific integrity as they consider how to 'tell' children and adults about what they have found. The project is helping to raise the students' data literacy.



Above: Students at Ribblesdale High School studying climate and air quality.







Above: Students from Taynuilt Primary School in Argyll taking part in the Tomorrow's climate scientists programme

Human impact on shorelines

In this project, students at Taynuilt Primary School in Argyll researched the effects of plastic on marine life with their STEM partner, deep sea ecologist Professor Bhavani Narayanaswamy.

The school then worked with a local textile company, Crùbag, to produce recycled notebooks featuring the students' artwork and messages to engage the public with their work. Proceeds from the sale of the notebooks go into the school's science fund which will be used to run climate change projects next year. Students are also learning enterprise by tracking and recording income. Combining science, numeracy and art has enabled the children to make real life connections between school subjects.

The project has since been extended with students studying lichens as bioindicators of the health of the planet.



Above: Recycled notebooks produced by students from Taynuilt Primary School.

Introducing the 2022 – 2027 strategy

The Royal Society exists to recognise, promote, and support excellence in science and to encourage the development and use of science for the benefit of humanity. True to our founding principles, our underlying purpose remains unchanged.

However, the environment in which the Royal Society delivers this purpose is in constant flux. Ensuring that we remain relevant, responsive and resilient is crucial to the successful delivery of our mission. Mindful of this shifting context, the new strategy sets out our ambitions for the coming years and identifies the key principles which will shape how we work.

Principles

Recognising that how we work is just as important as what we do, our new strategy also identifies four core principles to guide our ways of working:

Independence

The global reach of the Royal Society and its intellectual and financial independence give it unique scope to influence, and to provide leadership in science.

- Partnership and convening The Fellowship represents excellence across the research landscape and beyond, providing an invaluable resource in building interdisciplinary and other partnerships to effect change.
- **Equality, Diversity and Inclusion** Throughout the period of this strategy, the Society will take an integrated approach, placing these themes at the centre of all its work, informed by their importance in driving the quality of science and decision-making.

Our

International and global focus Almost all that the Society does has a global dimension (among other activities, its publishing business and its grants programmes). The Society will embed this perspective across the range of its work.



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Read more about how we engage with our stakeholders on page <u>27</u>

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The Society has a long tradition of engagement in scientific matters with communities beyond the world of research.

Fundamentally, the Society is its Fellowship. None of

our work can be delivered

without an excellent, diverse,

and engaged Fellowship and Foreign Membership. They sit

at the centre of wider networks of excellence which are also

critical to the Society's work.

Since its inception, the Society

informed and evidence-based

Since its early focus on the

of the scientific enterprise.

application of the experimental

and beyond.

has been a leader in supporting

decision-making, in Government

The Society's ability to deliver these programmes rests on a wide range of coordination and support services. The systems and policies that underpin our work need to be fit for purpose and support clarity, transparency and accountability in our decision-making.

leader in shaping the character

Looking forward 2022/23

The Royal Society's new strategy sets out an ambitious programme of external activity for the next five years, founded on four broad areas of work: The Fellowship and Foreign Membership, our UK and Global Influencing agenda, the Research System and Culture – both in the UK and overseas – and the role of science in wider society. Over the course of the next 12 months we are committed to achieving specific outcomes against each of these areas.

Fellowship and Foreign Membership	Influencing – UK and global	Research system and culture	Science and society
 Desired outcomes: A Fellowship and Foreign Membership that is representative of scientific excellence in all its forms (including in industry, innovation, engineering, technology and medicine); A Fellowship and Foreign Membership that is closely engaged in the work and decisions of the Royal Society; A Royal Society that understands in depth (and makes best use of) the remarkable resource that the Fellowship, Foreign Membership, and its many grant holders represent; A Fellowship and Foreign Membership engaged in strong collaborative networks beyond the Society, with leaders in research, industry, innovation and administration. 	 Desired outcomes: Decision-making by those who frame policy for science is informed by a rich evidence base and sets a strong framework for excellence in research and innovation for the benefit of humanity; The case for investment in science and innovation is widely understood in all relevant sectors; The Royal Society is an active contributor to debates relating to matters where science has an important perspective to offer, improving decisions at all levels of Government and beyond; Royal Society advice on policy relating to global challenges is recognised and effectively used in bilateral and multilateral fora. 	 Desired outcomes: A healthy environment for scientific discovery and application in the UK and beyond; The Society is recognised internationally as a leader on open science, academic freedom and scientific integrity; People from diverse, non-traditional backgrounds are supported and enabled to take up scientific careers, progress to leadership positions and make positive contributions to the wider science and innovation agenda; The research system treats people fairly and rewards the full range of socially beneficial scientific activities; The UK is able to attract partners and talent from all over the world, thanks to the strength of the UK research system and the career opportunities it offers. 	 Desired outcomes: Debate on important societal and global issues is well informed by relevant science including the recognition of uncertainties; Decision-makers are better informed by science and benefit from stronger public understanding of science, founded on constructive public discourse regarding aspects of science that will impact the live of current and future generations; Citizens of all ages are inspired by scientin possibilities and achievements, enhancing participation in science, and demand for it benefits in shaping our lives and our future.
 Activities for the coming year: Two Working Groups will report to Council on the processes surrounding elections for Fellowship candidates from industry and related backgrounds, and on the size and shape of the Fellowship; On the basis of their recommendations, Council will review the nomination and election process to encourage a more diverse Fellowship and Foreign Membership, with a broad representation of expertise from across disciplines and backgrounds; Enhance engagement with the Fellowship, starting a series of Forums with Officers and Council across the UK, exploring Fellows' attitudes towards and experiences of the Society; An ongoing programme of engagement events across the UK, to strengthen relationships with and between Fellows and external stakeholders. 	 Activities for the coming year: Deliver a major influencing programme to improve the policy environment for science, influencing governments and other partners to secure a system that recognises and supports scientific excellence for the benefit of humanity; Develop a new innovation policy programme designed to enhance outcomes from investment in science; Continue to contribute expert scientific evidence to key global issues, involving decision-makers operating at all levels, including multilateral global organisations. Priorities in the short term will include data, climate change, net zero and energy, genome editing, and biodiversity; Establish a horizon-scanning function to understand the implications of new technologies for science, innovation, and policy, highlighting opportunities and risks for decision-makers in all fields, including Government, industry and beyond. 	 Activities for the coming year: Creation of a Young Academy to give a stronger voice to early career researchers; Increase investment in our grants programmes to support scientific excellence, international collaboration and broader participation; Provide leadership in open science by extending open peer review and reproducibility policies across the Society's journals; Hold a series of events on issues such as research integrity and academic freedom, to mobilise action across the research system; Continue the transition towards open access for Royal Society journals; A new programme of mid-career Fellowships and two new medals to recognise the crucial role that technicians and other research workers play; Expand the pipeline of scientific talent through our education programmes. 	 Activities for the coming year: Host the first in-person Summer Science Exhibition since 2019, one of the highlights of the Royal Society's long-standing commitment to engage the public with science by providing opportunities to mee researchers and discuss their work; Extend the Society's offer to leading sectors of public life through the continue implementation of the Science and the La programme, bringing scientists and the senior judiciary together to promote deep understanding of the role that science pla in wider society; Make the case for a reinvigorated approa- to science education, supported by robus evidence on effective interventions to promote a scientifically and technically literate workforce; Expand the partnership grants programme to enable more young people to undertal- investigative research projects, to develop their scientific skills and build their understanding of scientific careers

	Corporate and governance
ce, ;	 Desired outcomes: We can only achieve all this if we have the right resources, talent and systems in place, so the Royal Society is also investing in its enabling functions, including HR, Development, Digital and Governance, to deliver.
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	Activities for the coming year:
ts et	 A new human resources strategy which reflects the needs of an organisation that has expanded significantly, and ensures that we can continue to attract and retain a diverse pool of talent;
ed	 A new fundraising strategy, enabling the Royal Society to maintain its independence and pursue the ambitious programmes of activity outlined in its new strategy;
per ays	 Continued enhancement of the Royal Society's digital capabilities, enabling us to reach more people through high-quality hybrid events and rich and compelling online
ach st	 A clear plan for reducing the Royal Society's environmental footprint across its portfolio of activities.
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People report

Fellows of the Society elected in 2021:

Professor Julie Ahringer FMedSci FRS

Director, Wellcome Trust/Cancer Research UK Gurdon Institute, University of Cambridge.

Professor Glen Barber FRS

Professor and Chairman, Department of Cell Biology, University of Miami Miller School of Medicine, United States.

Professor Paul Bates CBE FRS

Professor of Hydrology, School of Geographical Sciences, University of Bristol.

Professor Richard Benton FRS

Professor, Center for Integrative Genomics, University of Lausanne. Switzerland.

Professor William Bond FRS

Emeritus Professor, Department of Biological Sciences, University of Cape Town, South Africa.

Professor Sir Ian Boyd FRS

Professor in Biology, School of Biology, University of St Andrews.

Professor Nigel Brandon OBE FREng FRS

Chair, Sustainable Development in Energy and Dean, Faculty of Engineering, Imperial College London.

Dr Peter Campbell FMedSci FRS

Head, Cancer, Ageing, and Somatic Mutations Programme, Wellcome Sanger Institute.

Professor Frank Close OBE FRS

Professor of Theoretical Physics Emeritus and Fellow Emeritus of Exeter College, University of Oxford.

Professor David Craik FRS

Director, ARC Centre of Excellence for Innovations in Peptide and Protein Science, Group Leader, Chemistry and Structural Biology Division and Director, Clive and Vera Ramaciotti Facility for Producing Pharmaceuticals in Plants, Institute for Molecular Bioscience, University of Queensland, Australia.

Professor Donald Dingwell OC FRS

Earth and Environmental Sciences, LMU - University of Munich, Germany.

Dr Connie Eaves FRS

Distinguished Scientist, Terry Fox Laboratory, British Columbia Cancer Research Institute and University Professor, Departments of Medical Genetics, Medicine, Pathology & Laboratory Medicine, and the School of Biomedical Engineering, University of British Columbia, Canada,

Professor Sadaf Faroogi FMedSci FRS

Professor of Metabolism and Medicine, Wellcome-MRC Institute of Metabolic Science, University of Cambridge.

Professor Ten Feizi FMedSci FRS

Director, Glycosciences Laboratory, Department of Metabolism, Digestion and Reproduction, Faculty of Medicine, Imperial College London.

Professor Michael Finnis FRS

Professor, Department of Materials and Department of Physics, Imperial College London.

Professor Julie Forman-Kay FRS

Senior Scientist and Program Head, Molecular Medicine, The Hospital for Sick Children (SickKids) and Professor, Department of Biochemistry, University of Toronto, Canada.

Professor Dame Jane Francis DCMG FRS

Director, British Antarctic Survey.

Professor Vernonica Franklin-Tong FRS

Professor in Plant Cell Biology, School of Biosciences, University of Birmingham.

Professor Usha Goswami CBE FBA FRS

Professor of Cognitive Developmental Neuroscience, Department of Psychology, University of Cambridge.

Professor Hugh Griffiths OBE FREng FRS

Royal Academy of Engineering/Thales Chair of RF Sensors, Department of Electronic and Electrical Engineering, University College London.

Mr Andrew Haldane FRS

Chief Economist, Bank of England (until June 2021) and Chief Executive Officer, Royal Society for Arts, Manufactures and Commerce (from September 2021).

Professor Geoffrey Hall FRS

Professor of Physics, Blackett Laboratory, Imperial College London.

Professor Karen Heywood FRS

Professor of Physical Oceanography, Centre for Ocean and Atmospheric Sciences, School of Environmental Sciences, University of East Anglia.

Professor Adrian Hill FRS

Lakshmi Mittal and Family Professor of Vaccinology and Director, The Jenner Institute, Nuffield Department of Medicine, University of Oxford.

Professor Richard Horne FRS

Head, Space Weather and Atmosphere, British Antarctic Survey.

Professor Gregory Houseman FRS

Emeritus Professor of Geophysics, School of Earth and Environment, University of Leeds.

Professor Rebecca Kilner FRS

Professor of Evolutionary Biology and Director, University Museum of Zoology, University of Cambridge.

Professor Roger Lemon FRS

Sobell Chair of Neurophysiology, Queen Square Institute of Neurology, University College London.

Professor Thomas Muir FRS

Van Zandt Williams Jr. Class of '65 Professor of Chemistry, Princeton University, United States.

Professor Frances Platt FMedSci FRS

Professor David Rowitch FMedSci FRS

Professor of Paediatrics and Head of Department, Department of Paediatrics, University of Cambridge and Adjunct Professor of Pediatrics, University of California, San Francisco, United States.

Professor Bernard Schutz FRS

Professor, School of Physics and Astronomy, and Fellow and founding Director, Data Innovation Research Institute, Cardiff University; and Director (retired), Max Planck Institute for Gravitational Physics (Albert Einstein Institute).

OTHER INFORMATION

Dr Fiona Marshall FMedSci FRS

Senior Vice President Head of Discovery Sciences and Translational Medicine, MSD.

Professor of Biochemistry and Pharmacology, Department of Pharmacology, University of Oxford.

Professor Jeremy Quastel FRS

Professor, Department of Mathematics, University of Toronto, Canada.

Professor Marilyn Renfree FRS

Melbourne Laureate Professor and Ian Potter Chair of Zoology, School of BioSciences, University of Melbourne.

Professor Richard Samworth FRS

Professor of Statistical Science and Director, Statistical Laboratory, University of Cambridge.

Dr Sjors Scheres FRS

Group Leader, Structural Studies Division, MRC Laboratory of Molecular Biology.

Professor Abigail Sellen FREng FRS

Deputy Lab Director, Microsoft Research.

Professor David Silver FRS

Principal research scientist, DeepMind and Professor of Computer Science, Department of Computer Science, University College London.

Professor Benjamin Simons FRS

Royal Society EP Abraham Professor, Gurdon Institute and Department of Applied Mathematics and Theoretical Physics, University of Cambridge.

Professor Endre Süli FRS

Professor of Numerical Analysis, Mathematical Institute, University of Oxford.

Professor Richard Sutton FRS

Professor, Department of Computing Science, University of Alberta, Canada and Distinguished Research Scientist, DeepMind.

Professor Louis Taillefer FRS

Professor, Department of Physics and Institut quantique, Université de Sherbrooke, Canada.

Dr Christopher Tate FRS

MRC Investigator, MRC Laboratory of Molecular Biology.

Professor Philip Torr FREng FRS

Professor, Department of Engineering Science, University of Oxford.

Professor Thirumalai Venkatesan FRS

Director, Center for Quantum Research and Technology and Professor of Physics and ECE, University of Oklahoma (from July 2021), and Affiliate Scientist, National Institute of Standards and Technology (NIST) Gaithersburg, United States, and Adjunct Professor, Electrical and Computer Engineering Department, National University of Singapore.

Professor Karen Vogtmann FRS

Professor, Mathematics Institute, University of Warwick and Goldwin Smith Professor Emeritus, Cornell University, USA.

Professor Bruce Weir FRS

Professor, Department of Biostatistics, University of Washington, United States.

Sir Simon Wessely FMedSci FRS

Regius Chair of Psychiatry, Institute of Psychiatry, Psychology & Neurosciences, King's College London and Past President, Royal College of Psychiatrists and Royal Society of Medicine.

Professor Stanley Whittingham FRS

Distinguished Professor of Chemistry and Materials Science and Engineering, Department of Chemistry, Binghamton University, United States.

Professor Charlotte Williams OBE FRS

Professor of Inorganic Chemistry, Department of Chemistry, University of Oxford.

Foreign Members elected in 2021

Professor Stephen Benkovic ForMemRS

Evan Pugh University Professor and Eberly Chair in Chemistry, Department of Chemistry, Pennsylvania State University, United States.

Dr Anny Cazenave ForMemRS

Emeritus scientist at LEGOS/CNES, France and Director for Earth Sciences, International Space Science Institute, Switzerland.

Professor Elena Conti ForMemRS

Director and Scientific Member, Max Planck Institute for Biochemistry, Germany.

Professor Stanley Deser ForMemRS

Senior Research Associate, Brandeis University and Institute of Theoretical Physics, Caltech, United States.

Dr Vishva Dixit ForMemRS

Vice President, Early Discovery Research, Genentech Inc, United States.

Professor Michael Jordan ForMemRS

Professor, Department of Electrical Engineering and Computer Sciences and Department of Statistics, University of California, Berkeley, United States.

Professor V. Narry Kim ForMemRS

Professor, School of Biological Sciences, Seoul National University and Director, Center for RNA Research, Institute for Basic Science, South Korea.

Professor Sang Yup Lee ForMemRS

Distinguished Professor, Department of Chemical and Biomolecular Engineering, and Vice President for Research, Korea Advanced Institute of Science and Technology (KAIST), South Korea.

Professor Giacomo Rizzolatti ForMemRS

Emeritus Professor, Department of Medicine and Surgery, University of Parma, Italy.

Professor Claire Voisin ForMemRS

Senior researcher, Centre National de La Recherche Scientifique (CNRS), France.

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Honorary Fellow elected in 2021

Sir John Kingman KCB FRS

Chair, UK Research and Innovation; Group Chairman, Legal and General plc; Chairman, Tesco Bank; Deputy Chair, The National Gallery; Trustee, Royal Opera House; and a World Fellow, Yale University.

People

At the core of the Society are people, from Fellows and staff to generous donors and the scientists who are supported through the Society's funding programme.

Fellows

Fellows are elected through a peer-review process on the basis of their contribution to science. It is from the eminence of its Fellowship and Foreign Membership and its independence from Government that the Society derives its authority in scientific matters. Fellows and Foreign Members fulfil a range of responsibilities for the Society on a voluntary basis. Many others, scientists and non-scientists, also contribute to the work of the Society on a voluntary basis. The Fellowship is supported by staff based in London.

Scientists

The Society has played a part in some of the most fundamental, significant and life-changing discoveries in scientific history and the Society's scientists continue to make outstanding contributions to science in many research areas. The Society is currently supporting 986 (2021: 1,083) researchers through its research fellowships. These researchers receive long-term funding from the Society and range from early career researchers just starting their independent careers to some of the most distinguished senior researchers in the country.

Staff

The Society aims to offer fair pay to attract and retain appropriately qualified staff to lead, manage, support and deliver the Society's aims on behalf of its Fellows and Council. As at 31 March 2022, the Society had 205 paid staff. The Society's staff are organised into programmes, services and trading sections.

An organisation's values support its vision, shape its culture and reflect expectations of employees and the way they work together. During the year, staff created a set of organisational values to help inform how we should work together and represent the Society.

Our values

In March 2020, the Society's buildings were closed to Fellows, staff, conferencing clients and other visitors. Following a risk assessment and adhering to all Government advice, the office was opened partially in September 2021, and staff were able to book desk space and offices to work in. Following a short closure in December 2021 in response to new Government advice, the building was then reopened more broadly in January 2022. Staff were consulted on measures in place to reduce the risk of infection, and risk assessments were updated regularly and shared with staff. The return to the office takes a more flexible approach than before the pandemic, retaining some flexibility and benefits of time spent away from the office. Although the building



Above: Four of the Society's staff meeting at the Society's offices at Carlton House Terrace



was closed for part of the year, the business of the Society continued with most staff able to continue working remotely.

The well-being of staff has been an important consideration for the Trustees and the Senior Management Team throughout the year. Increased well-being services have been offered to staff, including the training of 15 mental health First Aiders, and availability of telephone, online and face-to-face counselling support through our Employee Assistance Programme. The Society also ran a range of training, webinars and management sessions for staff.

The new strategy for 2022 – 2027 was developed and staff were consulted throughout the process.

Volunteers

A number of our public engagement events and other work would not be possible without the contribution of our volunteers and the Society is grateful to all those who have contributed to its work over the past year. We also recognise the contributions of the many scientists who have supported our work by lending their expertise to panels and discussions. Finally, we are fortunate to have volunteer committee members across several of our committees. Their experience and expertise is invaluable to the operation of the charity.

Equality, diversity and inclusion

As the UK's national academy of science, engineering, technology and mathematics, the Society has a particular responsibility to ensure that diversity and inclusion are embedded across all of its activities and are part of the culture of the organisation.

The Society's Diversity Committee regularly monitors statistics on diversity across the Society's activities and publishes an annual diversity data report. The Society is committed to making diversity and inclusion a priority, both within our own organisation and across the scientific landscape. The Society's Diversity Strategy for 2019 -2022 sets out how the Royal Society will use its convening power and leadership, in partnership with others, to increase diversity in STEM and build a more inclusive scientific community. The Diversity Committee, a Standing Committee of Council, keeps under review and makes recommendations to Council on the diversity strategy. The Committee also oversees the delivery of a programme of activities by the Society in line with this strategy.

As an employer, the Society is committed to providing an environment free from discrimination, bullying, harassment or victimisation and to creating a culture of inclusivity where individual differences and the contributions of all staff are recognised and valued. The Society provides equality of opportunity for all and will not tolerate discrimination on grounds of age, disability, gender reassignment, marriage and civil partnership, pregnancy and parenthood, race, religion or belief, sex or sexual orientation. The Society regularly surveys staff in staff surveys and in exit interviews on matters of diversity and inclusion, specifically any issues they have witnessed or would like to report.

In 2021/22, the Society committed to join the Business in the Community's Race at Work charter, to increase understanding of conversations regarding race in the workplace, and to ensure our staff and those we interact with are confident in ensuring an open and inclusive workplace



Above: Two of the Society's staff working together at the Society's offices at Carlton House Terrace.

and the role everyone plays in working towards that. A range of toolkits, seminars, listening circles and training sessions are underway and endorse the Society's commitment to this issue.

There are new challenges with recruiting staff during the COVID-19 pandemic, particularly where a key part of the recruitment and selection process is the ability for both the candidate and employer to have the opportunity to meet in person. Recruitment processes were initially amended to ensure they still meet the high standards of good recruitment Executive Director's annual performance review on behalf of practice; these processes now include a greater use of the digital and online platforms available to us. The Society has now reverted to in-person interviewing while retaining some of the flexibility that remote selection also offers.

The Society has been affected by the heightened issues of recruitment and retention of staff as seen in so many other sectors and widely reported in the media. A review of benefits and salary positioning as well as a broader recruitment strategy has gone some way to easing this, as well as a commitment to internal progression.

Remuneration policy

The aim of the Society's remuneration policy is to maintain sustainable, fair levels of pay at the same time as attracting and retaining the right people to deliver our charitable objectives. In setting appropriate levels of senior management pay, the Society considers the skills, experience and competencies required for each role, and the remuneration level for those roles in sectors where suitable candidates would be found.

Recommendations regarding the remuneration of staff are made by the Society's Remunerations Committee, chaired by Sir Martin Taylor FRS. The Committee meets annually to consider the remuneration of senior staff, taking their individual responsibilities and an analysis of levels of remuneration in comparable roles elsewhere in the sector into account. The annual inflationary increase provided to all staff is also agreed by the Society's Remuneration Committee. The Committee includes Fellows and independent advisers.

Benefits accessible to all Royal Society staff include a generous annual leave allowance and pension package, life assurance and access to the cycle to work scheme and childcare vouchers.

The total emoluments of the Society's Executive Director, Dr Julie Maxton CBE, including taxable benefits in kind, in 2021/22 were £385,444 (2020/21: £381,431). The Executive Director's contract of employment requires that they reside in the Society's premises at Carlton House Terrace during the working week for no less than twelve nights in a month, and the use of an apartment in the building is treated as a taxable benefit in kind for this purpose.

The Chair of Remuneration Committee conducts the the Committee.

All Trustees are unremunerated.

Gender pay gap reporting

The Society has voluntarily completed gender pay gap reporting. At the 'snapshot' date of 5 April 2021, the mean gender pay gap was -0.02% and the median gender pay gap was 15.33% compared with the national average of 14.9% and 15.4% respectively, as reported on the Gender Pay Gap website as at 20 May 2022.

Gender gap reporting

On 5 April 2021, we employed 212 full-pay relevant employees (2020: 208):

No. of employees (2020: 79(M) 130(F))

Proportion of men and women in each quartile 2021 (%)

The difference between the mean pay of the men and women in each quartile is shown above each chart (a negative difference indicates that the mean pay of women was higher).



Note: gender pay gap percentages referenced in quartiles are based on mean calculations. The reported quartiles represent an equal number of employees in each quartile, from the highest paid to the lowest paid. The upper quartile represents the highest paid employees.

Mean gender pay gap in hourly pay



 Male (79) Female (133)



Median gender pay gap in hourly pay



Median: men earn 15.33% more than women (2020: 9.32%)

Engaging with stakeholders

The Royal Society has a long history of engaging and inspiring people about the crucial contribution that science makes to our society. Aside from ongoing programmes tailored to young people and the general public, and our work to strengthen relationships with industry, we regularly engage with a series of other specialist stakeholder groups. We recognise how important it is that we understand what matters to them, so as well as informing them about our work and achievements, we also consult our stakeholders on any major changes to the way we work and our strategic direction.

Fellows



Why they are important to the Royal Society

The Royal Society is a self-governing Fellowship made up of the most eminent scientists, engineers and technologists from the UK and the Commonwealth. Simply put, it would not exist without its Fellows and Foreign Members.

What matters to them

Our work depends on having an engaged and committed Fellowship and Foreign Membership. The Royal Society places a huge emphasis on encouraging collaboration and knowledge sharing within the Fellowship and Foreign Membership. It also provides a powerful platform for Fellows and Foreign Members to engage with external stakeholders in related and divergent disciplines, in industry, academia and beyond.

How we responded

Fellows and Foreign Members are elected for life through a peer review process on the basis of excellence in science. As part of the new strategy, we will commission research with Fellows and Foreign Members to gauge their opinions and experiences of the Royal Society and to better understand how we can enhance working with them in future.

Research scientists



Why they are important to the Royal Society

As the UK's national academy for science, research scientists are at the heart of what the Royal Society does. Creating the right conditions within the field and expanding opportunities for all is crucial for future scientific breakthroughs.

What matters to them

Excellent science relies on having the right incentives, opportunities and career pathways in place. We know that researchers in both industry and academia can face obstacles in pursuing their vocation and that some groups are consistently under-represented in the scientific community. That is why the Royal Society is committed to expanding opportunities for all.

How we responded

Our grants programmes gives outstanding young scientists the freedom to conduct cutting-edge research and to pursue exploratory, curiosity-led innovation. In addition to providing funding, we work with academic institutions, industry, funding bodies and policy-makers to create the conditions in which talented researchers from a range of backgrounds can flourish.

Government and policy-makers



Why they are important to the Royal Society

The Royal Society benefits from its strong reputation and a rich history of independent thought, it also recognises that often the best way to increase its impact is to work with partners to leverage its expertise. That is why the Society invests in creating long-term relationships with Government and policymakers, applying scientific insight to some of the most pressing social and political issues of the day.

What matters to them

Sound scientific advice is a crucial element for evidence-based policy-making, and the Royal Society provides access to leading authorities across a range of different disciplines. Its independence from outside influence and the rigour of its approach positions it as a trusted source of impartial advice on policy matters of national and international import.

How we responded

The Royal Society has strong relations with Government and policy-makers, who regularly approach it for expert advice on scientific matters; from coordinating the response to the global pandemic, to making recommendations on the impact of new technologies like facial recognition and Al. In addition, we actively engage with stakeholders to highlight the value of evidence-based decision-making in all forms of public debate and discourse.

International partners



Why they are important to the Royal Society

Scientific breakthroughs do not happen in isolation. The Royal Society has a longstanding commitment to fostering scientific collaboration across borders, as well as using its convening powers to facilitate knowledge sharing and cross-pollination of ideas.

What matters to them

Many of the biggest challenges faced by the world today cut across national boundaries. It is equally true that international cooperation and collaboration will be required to find workable solutions. While the global pandemic has restricted travel and disrupted many inperson conferences and workshops over the last two years, it has also served to emphasise the important role these forums play in facilitating advances in science.

How we responded

In the wake of Brexit and disruptions to global travel, the Royal Society has responded quickly to ensure that information can continue to flow freely between scientists working in different geographies and across different disciplines. Our ongoing involvement in a range of high-profile international partnership schemes ensures that scientific discourse continues to reflect and benefit from a range of different perspectives.

STRATEGIC REPORT

FINANCIAL STATEMENTS

Staff

Why they are important to the Royal Society The breadth and impact of activity that the

Royal Society delivers is only possible due to the expertise, commitment and creativity of its staff. Ensuring that the Royal Society continues to be able to attract and develop talented individuals from a diverse range of backgrounds is vital to its continued success.

What matters to them

Working patterns have been significantly disrupted over the last two years as staff have been required to work remotely, or work on a hybrid basis. Supporting and celebrating our staff has never been more important as they continue to deliver outstanding work in such challenging and uncertain times.

How we responded

We regularly consult staff via surveys and feedback sessions, helping us to ensure that we are providing people with the support they need to excel in their roles. The Royal Society is committed to investing in its staff by recognising excellence and creating opportunities for career progression as well as providing an extensive well-being offer. In addition to our ongoing staff engagement, retention and reward programmes, a new human resources strategy will be developed as part of the 2022 - 2027 strategy.

Financial review

Overview

In the year to 31 March 2022, the Society's income decreased from $\pounds136.2$ million to $\pounds124.6$ million.

Income before exceptional items decreased by 7%, from £133.9 million to £124.6 million. The majority of the Society's income came from charitable activities, which decreased by 8% during the year to £116.7 million (2021: £127.1 million). Total income in the prior year included exceptional net income from the property sale of Chicheley Hall of £2.2 million.

Total income before exceptional item



Grants for charitable activities

2021

2021



2022

2022

Total expenditure decreased by 8% on the prior year from £138.4 million to £127.7 million, largely driven by the decrease in grant income. Expenditure on charitable activities decreased from £136.3 million to £124.1 million and has dropped to around 97.2% of total expenditure from around 98.5% in 2021. Income from investments has increased by 47% from the previous year to £7.2 million (2021: £4.9 million).

In March 2020, due to the COVID-19 pandemic, the Society closed its buildings to Fellows, staff, conferencing clients and other visitors. The office was opened partially in September 2021 and, following a short closure in December 2021 in response to new Government advice, reopened more broadly in January 2022. Although the building was closed for part of the year, the business of the Society continued with most staff able to continue working remotely.

In the prior year, there was a significant reduction in some of the Society's activities and activities recommenced this year, including reopening the building for conferencing clients. As activities restarted, the Society has retained benefits from the use of virtual platforms with some meetings and events taking place in a hybrid format at reduced costs.

Investments performed well in the year resulting in a net gain in investments and overall net income, despite a fall in the last quarter of the year caused by uncertainty in markets.

Income

Change

-8%

Income from charitable activities

Most of the year-on-year decrease in income relates to the decrease in grants for charitable activities, which dropped to £108.3 million (2021: £119.0 million). The Society's core grant from BEIS increased from £48.0 million in 2021 to £50.7 million in 2022. There were decreases in the Investment in Research Talent Fund (IRTF) from £39.3 million in 2021 to £38.6 million in 2022 and under the BEIS Global Challenges Research Fund (GCRF) from £18.6 million in 2021 to £7.7 million in 2022. Additional funding of £4.3 million (2021: £0.9 million) was received from BEIS to fund costed extensions to ease the impact of the COVID-19 pandemic on researchers funded by the Society.

In the prior year, the Society was notified that the UK Government's overseas development aid budget was to be cut, leading to a decrease in the Society's BEIS ODA funding for the 2021/22 year and therefore a reduction in the Society's ODA funded programmes, including those funded by the GCRF. The GCRF supports the Future Leaders – African Independent Research (FLAIR) Fellowships, which launched in May 2018; in the year ended 31 March 2022, the number of FLAIR Fellows decreased from 59 in 2021 to 29 in 2022, with the current year being the last year of the scheme.

Trading in furtherance of charitable objectives increased by £0.4 million to £8.4 million (2021: £8.0 million) due to the reopening of the Society's buildings and the resumption of conferencing activities.

Income from donations and legacies

Income from donations and legacies fell by £1.4 million to £0.5 million (2021: £1.9 million), mainly due to a donation received to support the Society's COVID-19 response work in the prior year.

Expenditure

The Society undertakes a broad range of activities that provide public benefit either directly or indirectly, in line with our strategic priorities. Read more on the Society's public benefit statement on page 8.

Expenditure on charitable activities

The majority of the Society's charitable expenditure relates to grant awards, this year accounting for £101.6 million (2021: £115.1 milli The decrease in grant expenditure largely relates to the FLAIR Fellowships, which fell b £5.7 million to £3.9 million (2021: £9.6 million) the Royal Society Research Professorships, which decreased by £3.1 million to £12.1 million (2021: £15.2 million) and the Roya Society Challenge Grants, which fell by £2.9 million to £Nil (2021: £2.9 million). This v offset by increases in the University Researc Fellowships (URF) programme, which increase by £2.9 million to £55.5 million (2021: £52.6 million); and the International Exchanges, which rose by £1.2 million to £3.7 million (2021: £2.5 million).

	2022 £m	
Expenditure on raising funds	3.6	
Expenditure on charitable		
activities	124.1	13

Expenditure on charitable activities, £m



ar	from £4.0 million in 2021 to £4.5 million in
ion).	2022. The Society's work in this area focused
	particularly on biodiversity and climate change,
ру	the impact of the internet on our information
);	environment and on work to continue to
	provide advice to the UK Government through
	the COVID-19 pandemic.
al	Expenditure on education and public
	engagement decreased slightly from £4.1 million
was	in 2021 to £3.7 million in 2022. The decrease in
cn a a al	spend is due to the delay in public engagement
sea	events or events replanned to take place
	digitally or in a hybrid format at a lower cost.
	Spend in the year includes expenditure on a
	number of events, including the second online
2021	Summer Science Exhibition, a series of online
£m	events on You and the Planet and a COVID-19
2.1	related public dialogue programme.

Aside from grants activity, expenditure on

providing scientific advice for policy increased

36.3

Royal Society Trading Limited

In line with Government advice, Chicheley Hall closed on 23 March 2020 and did not reopen. The sale of Chicheley Hall was completed in March 2021. Royal Society Trading Limited was dormant for the year ended 31 March 2022.

Royal Society (London) Ltd

Royal Society (London) Ltd was set up in 2013 to process corporate sponsorships at the Society. The company commenced trading in 2019 and had income of £0.1 million (2021: £0.1 million).

Pension and Life Assurance Plan of the Royal Society

The Society operates a defined benefit pension scheme which was closed to new members in 2014.

The valuation of the scheme at 31 March 2022 showed a deficit of £4.3 million (2021: £12.2 million). This represents the difference between the assets and the obligations of the fund rather than an immediate cash liability. The decrease in the deficit was mainly driven by changes to actuarial assumptions resulting from changes in market conditions, including a higher discount rate than the previous year, and the payment of deficit funding contributions in the year of £1.3 million. In accordance with FRS 102, the actuarial gains on the scheme of £7.0 million (2021: £2.5 million loss) have been taken to unrestricted funds.

A triennial valuation of the scheme at 1 January 2022 will be undertaken during 2022/23, which will determine the long-term liability of the scheme for the coming years. The current valuation of the scheme at 1 January 2019 showed an increase in the 'technical provisions' deficit from £3.7 million to £8.7 million and it was agreed with the Trustees that the Society will pay deficit payments of £1.3 million per annum under a seven-year recovery plan. Current budgets and forecasts indicate that the Society will be able to meet these contributions as they arise.

Investment policy and performance

On 23 March 2016, Council passed a resolution under Section 104A(2) of the Charities Act 2011 to adopt the use of total return in relation to its permanent endowments with the exception of the Theo Murphy Australia Fund in order to best enable it to be even-handed between current and future beneficiaries.

The Society does not invest in organisations which conflict with the charity's purpose, or where Council deem that to do so would hamper the charity's work, for example by alienating those who support the Society financially. Council resolved that the Society should not invest in companies or funds that derive a significant portion of their income from the sale or manufacture of tobacco products. The Society ensures that performance is managed against appropriate benchmarks. Income from investments for the year was £7.2 million (2021: £4.9 million). The value of the Society's investment portfolio increased in the year, from £297.3 million in 2021 to £308.3 million in 2022. The increase was due to a strong performance in investment markets, despite a fall in the last quarter due to the ongoing conflict in Ukraine.

Reserves

The total funds of the Society increased by £21.6 million to £356.2 million during the financial year, mainly due to the gain on investments. Free reserves are unrestricted reserves (after the pension deficit) less heritage assets and fixed assets. The Society holds free reserves so that it can respond to unforeseen charitable opportunities and continue to honour existing commitments in the event of a shortfall of income. The Society's policy is to review its income streams and expenditure commitments on an annual basis, and assess the main financial risks faced by the Society and their associated likelihood in order to develop a risk-based reserves level. The target level was set cognisant of the risks associated with the changes in the publishing landscape and volatility in investment markets which may affect returns.

At the balance sheet date, the value of the Society's free reserves was £34.3 million (2021: £26.2 million), well above the target level for 2021/22 of £14.9 million. The increase in the level of free reserves is largely due to the decrease in the pension deficit by £7.9 million to a deficit of £4.3 million as at 31 March 2022. The Society continues to develop longer-term strategies to increase its charitable activities in a sustainable way, which will reduce the level of reserves while ensuring that it has adequate resources to enable it to respond to emerging risks and opportunities.

	2022 £m	2021 £m
Unrestricted funds	93.1	85.4
Unrestricted intangible and tangible fixed assets	(9.6)	(10.0)
Heritage assets	(49.2)	(49.2)
Free reserves	34.3	26.2

Enterprise Fund (Amadeus RSEF LP)

The Royal Society Enterprise Fund was created with the aim of becoming a financially successful contributor to early-stage sciencebased companies in the UK and a role model for the translation of excellent science for commercial and social benefit. Due to the dual benefits expected to be received, the fund is accounted for as a mixed motive investment in the financial statements. The Society entered into a Limited Partnership Agreement with Amadeus Capital Partners in 2014 to create the Amadeus RSEF LP.

Statement of policy on fundraising

Section 162a of the Charities Act 2011 requires the Society to make a statement regarding fundraising activities because it is subject to an external audit. We do not use professional fundraisers or 'commercial participators' or indeed any third parties to solicit donations. We are therefore not subject to any regulatory scheme or relevant codes of practice, nor have we received any complaints in relation to fundraising activities nor do we consider it necessary to design specific procedures to monitor such activities.

Modern Slavery Act

The Society is committed to taking the appropriate measures to reduce the risk of slavery and human trafficking taking place in our organisation or our supply chains. Pursuant to Section 54 of the Modern Slavery Act 2015, the Society has published its slavery and human trafficking statement for the financial year ended 31 March 2022.



Read more about the Royal Society online at royalsociety.org



Above: A sketch of the Society's chest, which is also referred to as the Treasurer's chest.

Going concern

The Trustees consider that there are no material uncertainties about the Society and Royal Society (London) Ltd to continue as a going concern. This conclusion has been reached after careful consideration of future forecasts which take into account the impact of COVID-19 and changes in external factors, such as the political uncertainty caused by the conflict in Ukraine. The Society manages uncertainties through risk management processes with mitigations in place for key risk areas, and has a robust reserves position and availability of liquid assets in cash at hand and as cash within the investment portfolio.

Royal Society Trading Limited was dormant for the year ended 31 March 2022.

INFORMATION

OTHER

Principal risks and uncertainties

The Royal Society Council is responsible for ensuring that proper arrangements are in place for risk management. Council relies principally on the Audit Committee, supported by the internal auditors, to assess those arrangements and to advise it accordingly. During the year, Crowe U.K. LLP replaced KPMG LLP as the Society's internal auditors.

The Audit Committee considers regular reports on riskmanagement systems and management of major risks. Council considers regular reports from the Audit Committee and reviews management of major risks, including using its own risk register. The risk registers of the Society's sections

effectiveness of the various means it employs to mitigate those risks. They are also vigilant in identifying new risks and taking steps to address them. Actions and processes often contribute to mitigation of several risks simultaneously. The Society works assiduously to develop and maintain relationships to ensure that its activities remain relevant, that its contributions are effective and that the value of its work is recognised. The Society enjoys many beneficial relationships through its Fellows, Foreign Members and staff.

In March 2020, due to the COVID-19 pandemic, the Society's buildings were closed to Fellows staff conferencing clients

Although the building was closed for part of the year, the business of the Society continued with most staff able to continue working remotely. The risk register was regularly reviewed during the period in response to developments in the external landscape, in particular the COVID-19 pandemic and the operational changes required to continue the Society's work and support the Society's staff. The findings of these reviews were that the impact did not expose the Society to unduly high levels of risk.

The main risks identified by Council and actions taken to manage them including ongoing actions are described in Key

Status of risk

High risk

Medium risk

rated as low risk

Only significant risks are

therefore none have been

presented in the table,

are also updated periodically and used in managing and monitoring risks and communicating information about risks across the organisation. Council and senior staff reflect frequently on uncertainties and risks to achieving the Society's goals and the	and other visitors. Following a rist to Government advice, the office in September 2021, and staff we space and offices to work in. Fo December 2021 due to rising ca reopened more broadly in Janua	s, stan, contretencing clients in manage them, including ongoing actions, are described in sk assessment and adhering in the table. e was opened partially ere able to book desk llowing a short closure in ises, the building was then ary 2022.	Change of status Image: Change of status ↑ Increased risk ↓ Decreased risk ↔ No change N New	Science and society Corporate and lovernance
Risk	Key strategic priorities at risk	Management		Status of risk
UK Young Academy The UK Young Academy initiative does not maintain its indep and an identity separate from the Royal Society, and this pos legal and/or reputational risk to the Society.	bendence ses a financial,	 Established a committee to oversee the UK Young Academy, with representation from the Appropriate legal advice sought and followed. Dedicated project manager appointed. Independent systems developed. 	e other six academies.	Proposed statu N Prior year statu n/a
Strategy delivery The Society's strategy does not clearly articulate objectives effective prioritisation of work, which means the Society com beyond its resource capacity; therefore, the Society does not against its mission and does not act effectively in its three ke charity, fellowship and national academy of science.	 gy delivery ociety's strategy does not clearly articulate objectives to allow ve prioritisation of work, which means the Society commits to work dits resource capacity; therefore, the Society does not deliver st its mission and does not act effectively in its three key roles as a g fellowship and national academy of science. The Society has a system of committees that report to Council and are responsible for key areas of the Society's work. New five-year strategy in place on 1 April 2022. Regular meetings of the Officers and regular communication from the Officers to Council. Specifically during the current pandemic, the Officers actively consider the latest Government advice and the impact on the Society's work programme with reprioritisation and diversion of resources to the areas of the biggest current need. Internal audit of governance arrangements was performed in the prior year and actions for improvements are in progress. 			
National decision-making Decisions and actions by the UK Government have a negative the Society's work and ability to achieve its strategy.	ve impact on	 Regular communication with the Fellowship and other key stakeholders. Strengthen existing relations with key stakeholders, including partners and funders. Transparent communication on the Society's position on key areas. 		Proposed statu Prior year statu N
Public benefit recognition The Society does not ensure the effectiveness of its work, far remain relevant and/or address important issues as they aris Environmental, Social and Governance considerations, and ensure that its public benefit is recognised by stakeholders.	e, including does not	 New five-year strategy in place on 1 April 2022. As the national academy of science, the Society has provided science policy advice to G The Society has run public engagement activities to communicate with the public on key New programmes of work are approved by Council, who have oversight over all work at strategy. Regular meetings of the Officers and regular communication from the Officers to Council. Oversight of the Society's activities by Fellows with relevant experience. Effective project initiation and project management processes. 	overnment during the pandemic. areas in relation to the pandemic. the Society and set the Society's	Proposed statu ↓ Prior year statu ↔

Key strategic priorities at risk



membership



🛞 Influencing – UK and global



status:

status:

status:

status:

status:

status:

status:

status:

Risk	Key strategic priorities at risk	Management
International collaboration Political developments in major international science partners, or between UK and major international science partners, have negative impacts on the UK science system. This could lead to funding cuts to foreign partners or their withdrawal from international agreements and collaboration arrangements and a drop in foreign applications for Royal Society grant awards.	6	 Continue to work with many partners, in the UK, the rest of Europe and globally. Advocate and promote future arrangements for international collaboration and the desire to work globally, and the ability of the UK to continue to attract outstanding scientists from overseas, funding for UK science and regulatory matters. Continue to seek dialogue with the Government on the most challenging issues. Promote good research culture and values of science which promote good collaboration. Provide advice and build relationships.
Business continuity Events adversely impact reputation and/or operations, including loss of operations due to a major incident (cyber-attack, serious data security breach, a serious fraud, major health and safety incidents, internal control failures or an outbreak of a communicable disease).	 	 Engage senior-level management, committees and Council in policy setting and monitoring. Regular review and update of information security policies and procedures. Regular review and update of business continuity and disaster recovery plans to help minimise disruption to operations from unexpected events.
Governance structure Governance structure fails to provide the right level and diversification of expertise to make decisions and run the Society effectively.		 Oversight of election process by Officers and other Council members. Clear role descriptions for Officers and Council members. Identify potential members with broad Trustee experience. Include non-Fellows with relevant expertise on Society committees. Continue to enable willing Fellows to contribute to the Society's work. Provide induction and ongoing training and workshops from legal and audit specialists. Complete regular board effectiveness reviews. Engage with internal and external audit functions to provide support as appropriate. Annual self-assessments against the Charity Governance Code. Internal audit of Governance arrangements was performed in the prior year and actions for improvements are in progress.
Employees Talented staff not recruited, developed and retained.		 External consultancy firm engaged to review the effectiveness of the structure of the organisation and structure change recommendations implemented. Ongoing benchmarking of compensation and benefits to the rest of the sector. Employee engagement surveys informing areas of change. Schedule of internal courses available for employees. Launch of new staff values.
Quality of the science Dilution in the quality or perceived quality of the science funded or produced and/or failure to apply the available resources to activities that are of the highest quality and are likely to have the most valuable impact to further the Society's strategic aims.		 Grants Committee formed of experts in subject area, making them best placed to select applications of 'excellent science'. Regular review of performance against strategy. Policies and procedures in place with disciplined adherence, to govern sign-off and decision-making processes. Periodic scheme evaluations to ensure offerings remain relevant and competitive.

tion to operations from	Proposed status: Prior year status:
	Proposed status:
ents are in progress.	↔
d structure change	Proposed status:
of 'excellent science'.	Proposed status: ↔
processes.	Prior year status: ↔

Status of risk

Proposed status:



Prior year status: ↔



Risk	Key strategic priorities at risk	Management	Status of risk
Safeguarding The Society does not effectively safeguard its people or those with whom it comes into contact.		 Relevant and appropriate policies are in place, and regular review of such policies. Internal safeguarding working group and safeguarding officers appointed. Council member with designated responsibility for safeguarding. Agreed a code of conduct for staff, Fellows and other relevant stakeholders. Specifically during the pandemic, monitor Government advice and opportunities for support, and produce plans for a return to work in the office based on advice and scientific evidence once available. Employees consulted on health and safety arrangements in relation to the return to work in the office. 	Proposed status: Prior year status:
Reduction in funding Funding reduced or remaining static has a negative impact on the Society's ability to support excellent science. A reduction of income could be due to a reduction in funding from Government, reduced income generated by publishing activities due to open access journals strategy, failure of trading activities to perform and/or reduced investment returns due to financial crises.	In the second se	 Strengthen existing relations and develop new relationships, seeking to secure additional funding and diversify sources of funding. Improve arrangements for financial planning. High levels of discretionary expenditure that do not have a long-term commitment attached to them and grant awards include termination clauses in the event of funding withdrawal. A new financial plan will be created to sit alongside the new strategy. 	Proposed status: ↔ Prior year status:
Investment performance The economic climate and inherent uncertainties in performance give rise to the risk that investments are not properly safeguarded or perform poorly, including those in the DB pension scheme.	®	 Review of investment-management arrangements. Regularly review the investment portfolio and performance of the investment manager. Appropriate legal advice sought and followed. Trained and competent staff in senior positions, and professional pension Trustees appointed. 	Proposed status: ↔ Prior year status: ↔
Diversity Narrow representation due to lack of diversity in the Fellowship, Council, grant applicants and general science arena.		 Active agenda to positively influence and encourage engagement from under-represented groups. Unconscious bias training provided to those in positions to make decisions. Continual consideration and engagement with experts in relevant fields. 	Proposed status: ↔ Prior year status: ↑
Influence and support The Society loses influence and support, and the Fellowship does not support the activities of the Society.	 	 Regular communication with the Fellowship and other key stakeholders. Implemented a new customer relationship management system to more effectively track and monitor communications and contributions. Fellowship engagement events across the UK to consult with the Fellowship on key issues. To launch an annual survey of Fellows. 	Proposed status: ↓ Prior year status: ↔
Legal and regulatory requirements The Society does not comply with legal and regulatory requirements.		 Appropriate legal advice sought and followed. Trained and competent staff in senior positions. Approved policies and procedures with significant exceptions reported to the Audit Committee. Internal and external audit functions in place. 	Proposed status: ↔ Prior year status: ↔

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Governance

Structure and management

The Society is a registered charity and the Royal Society Council is the Trustee body under charity law. The Society was founded in 1660 and incorporated by Royal Charter in 1662, 1663 and 1669. A Supplemental Charter was granted in 2012, and that now serves as the Society's governing document. The members of its Council are elected by and from the Fellowship.

Under the Charter, the Royal Society Council 'shall and may have full authority, power, and faculty from time to time to draw up, constitute, ordain, make, and establish such laws, statutes, acts, ordinances, and constitutions as shall seem to them, or to the major part of them, to be good, wholesome, useful, honourable, and necessary, according to their sound discretions, for the better government, regulation, and direction of the Royal Society aforesaid, and of every Member of the same, and to do and perform all things belonging to the government, matters, goods, faculties, rents, lands, tenements, hereditaments, and affairs of the Royal Society aforesaid.'

Council

The Charter specifies that Council must have between 20 and 24 members, each of whom must be a Fellow of the Society. Council determines the strategic direction of the Society and in particular approves the Society's strategic plan. Council also approves plans for specific charitable programmes on the recommendation of relevant committees, and those committees oversee activities within the programmes on behalf of Council. Council currently has 22 members.

Membership of Council

Among the members of Council are the President, who is the Chair of Council, and four Officers: the Biological Secretary, the Physical Secretary, the Foreign Secretary, and the Treasurer. At the start of the year, there were 18 Ordinary Members of Council. One resigned in February 2022, meaning that there were 17 at the close of this period. The President and the Officers normally serve five-year terms and the Ordinary Members serve three-year terms.

There have been 62 Presidents of the Royal Society since it was founded in 1660. Previous Presidents of the Royal Society have included Christopher Wren, Samuel Pepys, Isaac Newton, Joseph Banks, Humphry Davy and Ernest Rutherford.

Appointment of Officers

- Nominations are sought from amongst the Fellowship.
- Nominations Committee recommends a shortlist 2 for interview to Council.
- A panel consisting of Officers and Council 3 Members, and chaired by the Chair of Nominations Committee, interviews shortlisted candidates and recommends a candidate to Council.
- Council approves a candidate to recommend to 4 the Fellowship.
- Candidate's name is put to the Fellowship for (5) ratification.

Appointment of Ordinary Members of Council

- Nominations are sought annually from amongst the Fellowship.
- Nominations Committee recommends a shortlist of Fellows for a ballot to Council.

Council approves a slate of 12 Fellows to be 3 put to the Fellowship for election.

The Fellowship elect six candidates.

4

Changes in the membership of Council took place as usual on 30 November, which is the Society's Anniversary Day. New members included Sir Robin Grimes FRS, who became Foreign Secretary on that date. The new members received an induction that included a review of relevant documents and presentations on Trustee duties by a partner in a leading charity law practice. During the year, Council also received guidance from professional advisers on specific matters and updates on relevant developments affecting charities and Trustees. Council delegates responsibility for day-today management of the Society's affairs to the Executive Director.

Public benefit

Fellows are not remunerated for serving as Trustees. Counci has complied with its duty to have due regard to the Charity Commission's public benefit guidance when exercising any powers or duties to which that guidance is relevant. With a view to increasing the diversity of Officers, the Charity Commission approved the application submitted by Council to make grants to Officers' parent institutions to reimburse some of the costs that arise from the significant time commitment involved in Officers' roles.

Committees

The Council is supported by a number of committees and working groups to which it has delegated some of its functions. Its Standing Committees include committees that oversee key strands of the Society's work, committees that make recommendations to Council of recipients of medals and awards and committees that assess applications for and make grant awards. All Standing Committees have terms of reference agreed by Council that set out the delegations of responsibility to that committee and a member of Council sits on most committees. The committee structure diagram on the following page illustrates the Society's committee structure by type of business and provides additional information on committees relevant to central business on finance and planning.

The Board

The Board is a sub-committee of Council formed of the President and the four Officers of the Society. It meets six times a year, between Council meetings. It plans Council's work programme throughout the year and reports regularly to it

Key business in the year

In the year, Council received regular reports from the Executive Director and Board as well as reports from its key Standing Committees.

Council focused on the development of a Strategic Plan for 2022 – 27 throughout the year, with a series of exploratory discussions addressing key areas of focus in depth. It received reports on the whole range of Society activity, and worked on the Society's submissions to the Government Spending Review. Consideration of the impact on science and science funding of the UK's decision to leave the EU formed a key topic for Council throughout the year.

Following changing Government guidance, Council oversaw the reopening of the building to staff and events through the year following lockdown.

Council is committed to a continuing review of governance in the Royal Society, adopting the Charity Governance Code as a benchmark for assessing its current practice and making continuous improvements. Significant developments through the year included reforms to the process involved in the election of the Society's President, following the recommendations of a working group chaired by Lord Neuberger FRS, and the adoption of a Code of Conduct for Fellows and Foreign Members, following the recommendations of a working group chaired by Professor Sheena Radford FRS.

An internal audit report on governance was presented to Council: it found that the Society was compliant with the Charity Governance Code, and had a number of recommendations for improvement, which are now being implemented. For instance, revised Terms of Reference for Council were approved in March 2022 clarifying those matters that may be delegated and those where decisions must be reserved to Council.

Council continues to review the processes surrounding the election of Fellows and Foreign Members with a focus on increasing the diversity of the Fellowship. Equality, diversity and inclusion were also considered in the wider context of the research system.

Council reviewed the Society's safeguarding policy, considered and agreed the Council risk register, and approved the Society's budget for the 2022/23 financial year.

Council

The Trustee body under charity law. Council has a system of committees and determines the memberships of committees, which comprise Fellows and many non-Fellows with relevant expertise. Delegations of authority by Council are explicit in the terms of reference of committees.

Board

A subcommittee of Council comprising the President and the Officers. Board oversees fundraising and considers on behalf of Council matters that require urgent attention and matters, such as international affairs, that span many programmes.

Fellowship committees The members of Council

Fellows and Foreign Members are elected by the Fellowship. Council determines the candidates for election on the advice of its Nominations Committee and sectional committees. The sectional committees span the scientific disciplines and a committee to advise on general and honorary candidates whose contributions to science are not primarily in research.

Financial, planning and subsidiary committees

Committees make recommendations to Council for approval in a range of areas, including financial planning and budgeting, the effectiveness of the Society's internal control system, external audit and financial statements, pay-related matters and trading activities.

Charity Governance Code

Council reviews its compliance with the Charity Governance Code annually. Some of the ways in which the Society meets the Code's standards are listed below

	Principle	
mittees	Organisational Purpose	The Society's underlying mission - human benefit – remains relevant
immes versity,		The Strategic Plan for 2022 – 27 i secure in pursuit of this mission.
rizes, Lea	Leadership	Council agendas are designed to insights on the Society's strategic
ce policy etings, they are		A Code of Conduct for Fellows an provide greater clarity regarding t
Integrity Integrity Decision-making, risk and control	Regular briefings are provided to duties of trustees, in general and i	
		The Code of Conduct makes clear Fellows' conduct and the accomp Society will follow where issues of
	Decision-making, risk and control	Council is routinely provided with across the range of its work.
		A strategy team was formed in 20 management information available
		Standing Committees report regul appropriate, on key decisions.
	Board	Oversight of Council's work progr
	effectiveness	A dedicated Nominations Commit election of new members.
		The Society will commission an in
ommittee	Equality, diversity and inclusion	There is regular reporting to Cour
ders pay- ncluding		The Society adopted a set of staff "Our teams are stronger when we

Audit Committee

The Audit Committee approves the internal audit programme; reviews internal audit reports and tracks implementation of any actions arising; approves the external audit plan; discusses the audit and matters arising from it with the external auditors and management; and makes recommendations to Council in relation to the financial statements and associated matters.

Planning and Resources Committee

The Planning and Resources Committee monitors financial performance, oversees the Society's trading activities and the provision of services and recommends the Society's financial plan and its annual budgets to Council for approval.

Investment Committee

The Society's Investment Committee advises Council on investment policy, determines investment strategy and oversees the performance of the Society's investment managers.

Remuneration Committee

Programme cor

There are prog

and translation,

of Council, Cha

The Remuneration Committee considers payrelated matters, including remuneration of key management personnel.

Openness and

accountability

– to promote excellence in science and its application for t and is widely understood at all levels of the Society.

identifies the key outcomes that the Society seeks to

provide Council with the opportunity to provide high-level aims and planning.

nd Foreign Members was adopted in February 2022 to he Society's and Council's values.

Council from the Society's legal advisers on its members' in specific matters (for instance safeguarding).

ar the Society's expectations regarding standards for banying Disciplinary Regulations detail the processes the of conduct are raised.

opportunities to consider aspects of the Society's strategy

021/22 to oversee continuing work to improve the e to Council.

larly to Council on their work, seeking approval, where

ramme by the Board allows for effective planning.

ttee provides advice to Council on the appointment and

dependent Board Effectiveness Review in 2022/23.

ncil on the Society's relevant work programmes.

The Society adopted a set of staff values in 2021/22, highlighting 'respect' as a key theme: "Our teams are stronger when we are inclusive by encouraging diversity in all its forms. We recognise and value each others' skills, expertise and experience. Respect, empathy and advocacy for one another builds an open and constructive environment."

The Society publishes key diversity data regarding its works annually.

The Society conforms to key reporting requirements.

The Officers and Executive Director meet regularly with the Fellowship in question and answer sessions to provide accountability on the Society's work programmes.

Statement of Trustees' responsibilities

The Council members (who are the Trustees of the Society) are responsible for preparing the Trustees' annual report and the financial statements in accordance with applicable law and regulations.

Charity law requires the Council to prepare financial statements for each financial year in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards and applicable law). Under charity law the Council members must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the group and charity and of the incoming resources and application of resources, including the income and expenditure, of the group for that period.

In preparing these financial statements, the Council members are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and accounting estimates that are reasonable and prudent;
- state whether applicable United Kingdom Accounting Standards have been followed, subject to any material departures disclosed and explained in the financial statements; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the charity will continue in business.

The Council members are responsible for keeping adequate accounting records that are sufficient to show and explain the charity's transactions and disclose with reasonable accuracy at any time the financial position of the charity and enable them to ensure that the financial statements comply with the Charities Act 2011. They are also responsible for safeguarding the assets of the charity and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Financial statements are published on the charity's website in accordance with legislation in the UK governing the preparation and dissemination of financial statements, which may vary from legislation in other jurisdictions. The maintenance and integrity of the charity's website is the responsibility of the Council. The Council's responsibility also extends to the ongoing integrity of the financial statements contained therein.

The current Council members, having made enquiries of fellow Council members and the charity's auditors, confirm that:

- so far as they are aware, there is no relevant audit information of which the charity's auditors are unaware; and
- they have taken all reasonable steps they ought to have taken as Trustees in order to make themselves aware of any relevant audit information and to establish that the charity's auditors are aware of that information. This report was approved by Council on 5 July 2022 and signed on their behalf by:

Sir Adrian Smith President of the Royal Society

Independent auditor's report to the Trustees of the Royal Society Opinion on the financial statements Conclusions related to going concern

In our opinion, the financial statements:

- give a true and fair view of the state of the Group's and of the Parent Charity's affairs as at 31 March 2022 and of the Group's incoming resources and application of resources for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Charities Act 2011.

We have audited the financial statements of The Royal Society ("the Parent Charity") and its subsidiaries ("the Group") for the year ended 31 March 2022 which comprise the consolidated statement of financial activities, the consolidated and charity balance sheets, the consolidated statement of cash flows and notes to the financial statements, including a summary of significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including Financial Reporting Standard 102 The Financial Reporting Standard applicable in the UK and Republic of Ireland (United Kingdom Generally Accepted Accounting Practice).

Opinion on other matter as required by BEIS grant letter

In our opinion, in all material respects, the Core and Investment in Research Talent Funding grant payments received from the Department for Business, Energy & Industrial Strategy ("BEIS") have been applied for the purposes set out in the grant letters and in accordance with the terms and conditions of the grants.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We are independent of the Group and the Parent Charity in accordance with the ethical requirements relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

In auditing the financial statements, we have concluded that the Trustees' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

Other information

STATEMENTS

FINANCIAL

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the Group and the Parent Charity's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

Our responsibilities and the responsibilities of the Trustees with respect to going concern are described in the relevant sections of this report.

The Trustees are responsible for the other information. The other information comprises the information included in the Trustees' report and financial statements, other than the financial statements and our auditor's report thereon. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon. Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

Matters on which we are required to report by exception

We have nothing to report in respect of the following matters in relation to which the Charities (Accounts and Reports) Regulations 2008 requires us to report to you if, in our opinion:

- the information given in the Trustees' Report for the financial year for which the financial statements are prepared is inconsistent in any material respect with the financial statements; or
- adequate accounting records have not been kept by the Parent Charity; or
- the Parent Charity financial statements are not in agreement with the accounting records and returns; or
- we have not received all the information and explanations we require for our audit.

Responsibilities of Trustees

As explained more fully in the Statement of Trustees' responsibilities, the Trustees are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the Trustees determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Trustees are responsible for assessing the Group's and the Parent Charity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Trustees either intend to liquidate the Group or the Parent Charity or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

We have been appointed as auditor under Section 144 of the Charities Act 2011 and report in accordance with the Act and relevant regulations made or having effect thereunder.

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are

considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

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

Irregularities, including fraud, are instances of noncompliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud, is detailed below:

Based on our understanding of the Group and the industry in which it operates, we identified that the principal laws and regulations that directly affect the financial statements to be the relevant Charities Acts and the financial reporting framework in the UK. We assessed the extent of compliance with these laws and regulations as part of our procedures on the related financial statement items. We considered the Group's and Parent Charity's own assessment of the risks that irregularities may occur either as a result of fraud or error. We considered financial performance, key drivers for bonus or other performance targets. We also considered the risks of non-compliance with other requirements imposed by the Charity Commission and we considered the extent to which non-compliance might have a material effect on the Group financial statements.

In addition, the Group and Parent Charity are subject to many other laws and regulations where the consequences of non-compliance could have a material effect on amounts or disclosures in the financial statements, for instance through the imposition of fines or litigation. We identified the following areas as those most likely to have such an effect: employment law, data protection and fundraising regulations. Auditing standards limit the required audit procedures to identify non-compliance with these laws and regulations to enquiry of Those Charged with Governance and other management and inspection of regulatory and legal correspondence, if any.

Our tests included agreeing the financial statement disclosures to underlying supporting documentation, enguiries of the Audit Committee, management and internal audit, and a review of minutes of meetings of Those Charged with Governance. We made enquiries regarding any matters identified as a Serious Incident as reportable to the Charity Commission. We also performed analytical procedures to

identify any unusual or unexpected relationships that may indicate risks of material misstatement due to fraud. We challenged assumptions made by management in their

significant accounting estimates, in particular in relation to the assumptions related to the valuation of the defined benefit pension scheme and the assumptions related to the valuation of heritage assets.

We did not identify any matters relating to irregularities, including fraud. As in all of our audits, we also addressed the risk of management override of internal controls, including testing journals including those which potentially impact remuneration and other performance targets and evaluating whether there was evidence of bias by management or Those Charged with Governance that represented a risk of material misstatement due to fraud.

Our audit procedures were designed to respond to risks of material misstatement in the financial statements, recognising that the risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error, as fraud may involve deliberate concealment by, for example, forgery, misrepresentations or through collusion. There are inherent limitations in the audit procedures performed and the further removed non-compliance with laws and regulations is from the events and transactions reflected in the financial statements, the less likely we are to become aware of it.

A further description of our responsibilities for the audit of the financial statements is located at the Financial Reporting Council's ("FRC's") website at:

https://www.frc.org.uk/auditorsresponsibilities.

This description forms part of our auditor's report.



Use of our report

This report is made solely to the Charity's Trustees, as a body, in accordance with the Charities Act 2011. Our audit work has been undertaken so that we might state to the Charity's Trustees those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Charity and the Charity's Trustees as a body, for our audit work, for this report, or for the opinions we have formed.

-DocuSigned by Fiona Condron BC8C15A11E07446

BDO LLP, statutory auditor Gatwick, UK Date: 19 August 2022

BDO LLP is eligible for appointment as auditor of the Charity by virtue of its eligibility for appointment as auditor of a company under section 1212 of the Companies Act 2006.

BDO LLP is a limited liability partnership registered in England and Wales (with registered number OC305127).

Consolidated statement of financial activities (incorporating an income and expenditure account)

For the year ended 31 March 2022

	Notes	Unrestricted funds £'000	Restricted funds £'000	Expendable endowment funds £'000	Permanent endowment funds £'000	2022 Total funds £'000	2021 Total funds £'000
Income and endowments from donations and legacies	1	295	248	_	_	543	1,858
Income from charitable activities							
Grants for charitable activities	4	3,004	105,286	_	_	108,290	119,031
Trading in furtherance of charitable activities	3	7,789	607	_	-	8,396	8,044
		10,793	105,893	_	-	116,686	127,075
Other trading activities	3	137	_	-	-	137	110
Income from investments	2	994	1,046	1,203	3,957	7,200	4,857
Other income		6	9	-	-	15	23
		1,137	1,055	1,203	3,957	7,352	4,990
Total income before exceptional item		12,225	107,196	1,203	3,957	124,581	133,923
Exceptional net income from property sale	5	-	-	-	-	-	2,247
Total income		12,225	107,196	1,203	3,957	124,581	136,170
Expenditure on raising funds	6	1,220	522	415	1,405	3,562	2,095
Expenditure on charitable activities	7						
Promoting science and its benefits		344	108	-	-	452	342
Supporting and recognising excellence in science		8,627	97,000	_	_	105,627	114,672
Providing scientific advice for policy		2,395	2,105	-	_	4,500	4,044
Fostering international and global cooperation		730	9,048	-	-	9,778	13,164
Education and public engagement		2,132	1,603	_	_	3,735	4,105
		14,228	109,864	_	-	124,092	136,327
Total expenditure		15,448	110,386	415	1,405	127,654	138,422
Net (expenditure)/income before net gains/(losses)		(2 2 2 2 2)	(2400)	700	2 5 5 2	(2.072)	(2.252)
	10	(3,223)	(3,190)	2 000	2,352	(3,073)	(2,252)
	lõ	(1,930	3,390	2,088	9,705	17,719	62,098
Cross transfers between funds	22	(1,287)	1655	3,476	(2.102)	14,040	59,840
	23	2,025	1,000	(1,497)	(2,103)	-	
Actuarial gains/(losses) on delined benefit pension	25	6 971	_	_	_	6 971	(2 504)
Net movement in funds	20	7709	1855	1 979	10 074	21 617	57342
		7,700	1,000	1,575	10,074	21,017	57,572
Total funds brought forward		85,414	40,485	47,608	161,083	334,590	277,248
Total funds carried forward		93,123	42,340	49,587	171,157	356,207	334,590

All of these results are derived from continuing activities. There are no other gains or losses other than those stated above. Royal Society Trading Limited ceased trading on 23 March 2020. The income and expenditure in the Consolidated Statement of Financial Activities for the Group that relate to the discontinued trading subsidiary were £Nil (2021: £Nil) and £Nil (2021: £0.2 million) respectively.

The Consolidated Statement of Financial Activities is for the Group as a whole. The Charity's total income for the year was £124.4 million (2021: £136.1 million). The Charity's total funds increased by £21.6 million in the year (2021: £57.1 million increase).

The notes that follow form part of the financial statements.

Consolidated and charity balance sheets

As at 31 March 2022

		Grou	р	Charity	
	Notes	2022 £'000	2021 £'000	2022 £'000	2021 £'000
Fixed assets					
Tangible assets	15B	9,378	9,727	9,378	9,727
Intangible assets	15A	256	228	256	228
Heritage assets	17	49,247	49,163	49,247	49,163
Investments	18	308,310	297,310	308,310	297,310
		367,191	356,428	367,191	356,428
Current assets					
Stocks		37	21	37	21
Debtors receivable within one year	19	3,057	2,564	3,192	2,540
Cash at bank and in hand		11,626	6,790	11,459	6,788
		14,720	9,375	14,688	9,349
Creditors: amounts falling due within one year	20	(21,361)	(18,951)	(21,329)	(18,925)
Net current liabilities		(6,641)	(9,576)	(6,641)	(9,576)
Total assets less current liabilities		360,550	346,852	360,550	346,852
Creditors: amounts falling due after more than one year	20	(39)	(45)	(39)	(45)
Net assets before pension scheme liability		360,511	346,807	360,511	346,807
Defined benefit pension scheme liability	25	(4,304)	(12,217)	(4,304)	(12,217)
Total net assets		356,207	334,590	356,207	334,590
Permanent endowment funds	23	171,157	161,083	171,157	161,083
Expendable endowment funds	23	49,587	47,608	49,587	47,608
Restricted funds	23	42,340	40,485	42,340	40,485
Unrestricted Funds					
Revaluation reserve	23	47,541	47,541	47,541	47,541
Defined benefit pension reserve	23	(4,304)	(12,217)	(4,304)	(12,217)
Unrestricted income funds	23	49,886	50,090	49,886	50,090
Total funds		356,207	334,590	356,207	334,590

The financial statements were approved and authorised for issue by Council on 5 July 2022 and signed on its behalf by

Sir Andrew Hopper Treasurer

GOVERNANCE

Consolidated statement of cash flows

For the year ended 31 March 2022

		202	2	2021
	Notes	£,000	000' 3	£,000
Net cash used in operating activities	А		(5,467)	(6,432)
Cash flows from investing activities:				
Investment income	2	7,200		4,857
Purchase of intangible assets	15A	(84)		(207)
Purchase of tangible fixed assets	15B	(763)		(492)
Proceeds from disposal of tangible fixed assets	15B	-		6,460
Purchase of heritage assets	17	(84)		(2)
Proceeds from disposal of heritage assets	17	-		14
Purchase of investments	18	(99,297)		(52,552)
Proceeds from sale of investments	18	103,331		50,385
Net cash provided by investment activities			10,303	8,463
Increase in cash and cash equivalents			4,836	2,031
Cash and cash equivalents at 1 April			6,790	4,759
Cash and cash equivalents at 31 March			11,626	6,790

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

		2022 £'000	2021 £'000
Net income as per the statement of financial activities		14,646	59,846
Adjustments for:			
Depreciation and amortisation charges	15	1,134	1,172
Gains on investments	18	(17,719)	(62,098)
Investment income	2	(7,200)	(4,857)
Losses/(gains) on the disposal of fixed assets	15B	34	(2,814)
Loss on the disposal of heritage assets	17	-	301
Investment management fees charged to portfolio	18	2,685	1,030
(Increase)/decrease in stocks		(16)	19
- (Increase)/decrease in debtors	19	(493)	856
Increase in creditors	20	2,404	1,117
Difference between pension charge and cash contributions	25	(942)	(1,004)
Net cash used in operating activities		(5,467)	(6,432)

B. Analysis of changes in net debt

	Balances at 1 April 2021 £'000	Cash flows £'000	Balances at 31 March 2022 £'000
Cash and cash equivalents	6,790	4,836	11,626
Total	6,790	4,836	11,626

Accounting policies

For the year ended 31 March 2022

The principal accounting policies adopted in the preparation of these financial statements are as follows.

Accounting convention

The financial statements have been prepared in accordance with Financial Reporting Standard 102 - 'The Financial Reporting Standard applicable in the United Kingdom and Republic of Ireland' ('FRS 102') and with the Statement of Recommended Practice: Accounting and Reporting by Charities FRS 102 as revised in 2019 ('the SORP 2019 2nd Edition') together with the reporting requirements of the Charities Act 2011.

The financial statements have been prepared under the historical cost convention with items recognised at cost or transaction value unless otherwise stated in the relevant accounting policy or note.

The accounts have been prepared on a going concern basis. This conclusion has been reached after careful consideration of future forecasts which take into account the impact of COVID-19 and changes in external factors, such as the political uncertainty caused by the conflict in Ukraine. The Society manages uncertainties through risk management processes with mitigations in place for key risk areas, and has a robust reserves position and availability of liquid assets in cash at hand and as cash within the investment portfolio. The Royal Society ('the Society') is a Public Benefit Entity as defined by FRS 102. The accounting policies have been applied consistently throughout the financial statements and the prior year.

Royal Society Trading Limited, a trading subsidiary of the Royal Society, was dormant in the year.

Basis of consolidation

These financial statements consolidate the results of the Royal Society and its active wholly owned subsidiary, Royal Society (London) Ltd, on a line-by-line basis. In the consolidated financial statements uniform accounting policies have been used. A separate statement of financial activities for the charity itself is not presented.

Cash flow statement

The Society meets the definition of a qualifying entity under FRS 102 and has therefore taken advantage of the disclosure exemption in relation to presentation of a cash flow statement in respect of its separate financial statements, which are presented alongside the consolidated financial statements.

Multi-employer defined benefit scheme

Certain employees participate in a multi-employer defined benefit scheme with other organisations. In the judgement of the Trustees, the Society does not have sufficient information on the plan assets and liabilities to be able to reliably account for its share of the defined benefit obligation and plan assets. In accordance with FRS 102, this is therefore accounted for as though it were a defined contribution scheme.

The cost of the defined benefit pension scheme and the present value of the scheme liability depend on a number of factors, including assumptions about inflation, discount rates and mortality, which are taken by actuarial specialists. The valuation of the scheme is particularly sensitive to discount rate assumptions, with a 0.1% movement in the discount rate resulting in a £1.2 million change in the value of the scheme liabilities.

Impairment of heritage assets

GOVERNANCE

Critical accounting judgements and key sources of estimation uncertainty

In the application of the Group's accounting policies the Trustees are required to make judgements, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. Judgements, estimates and associated assumptions are reviewed on an ongoing basis and are based on historical experience and other factors that are considered to be relevant, including expectations of future events that are believed to be reasonable under the circumstances.

Critical judgements relate to the accounting treatment of the multi-employer defined benefit scheme. Critical accounting estimates and assumptions relate to the defined benefit pension scheme and the valuation of heritage assets.

Defined benefit pension scheme

Heritage assets held at valuation or cost totalled £49.2 million at 31 March 2022 (2021: £49.2 million). In 2022, a rolling schedule of valuations per asset class was agreed and printed books were valued this year. There were no indicators of impairment identified in this review.

Accounting policies CONTINUED For the year ended 31 March 2022

The last detailed impairment assessment of the collections was last performed in 2015. The valuation assumes that since 2015: (a) the physical condition of the assets has not deteriorated; and (b) there have not been any significant changes in the markets of these assets.

A review of the indicators of impairment is undertaken annually and should this review identify any indicators, then a detailed impairment assessment would be undertaken. No indicators of impairment were identified in this annual review.

Royal Society Trading Limited

Royal Society Trading Limited ceased to trade on the closure of Chicheley Hall on 23 March 2020 following Government advice due to the COVID-19 pandemic and the property was sold in March 2021. Royal Society Trading Limited was dormant for the year ended 31 March 2022.

Income

Income is accrued and recognised when conditions on entitlement are met, receipt can be quantified reliably and is probable.

Donations and legacies

Donated goods and services are included at the value to the Society where these can be quantified. No amounts are included in these financial statements for the services donated by volunteers or Fellows.

Donations are accounted for on a receivable basis where receipt is probable and there is entitlement to the income. Donations include Gift Aid based on amounts receivable at the accounting date.

Legacy income is recognised on a receivable basis when there is sufficient evidence to assess that receipt is probable and receipt can be quantified reliably. Receipt of a legacy, in whole or in part, is only considered probable when the charity has been notified of the executor's intention to make a contribution.

Fellows' annual contributions are recognised in the year in which they become due.

Grants for charitable activities

Grants are recognised when all conditions for receipt are met. Where donor-imposed restrictions apply to the timing of the related expenditure as a precondition of its use, the grant is treated as deferred income until those restrictions are met. Grants received for specific purposes are accounted for as restricted funds.

Income from trading activities

Income from conferencing activities is recognised when the event takes place. Income from publishing activities is recognised when the publication or service is provided. Income for the sales of subscriptions, package subscriptions and consortium deals is recognised evenly over the period of subscription or service.

Income from investments

Investment income and interest on deposits is recognised on an accruals basis. Investment income arising on endowment funds is credited to the appropriate fund in accordance with the prescribed conditions.

Expenditure

Expenditure, including irrecoverable VAT, is accounted for on an accruals basis. Expenditure is allocated to the particular activity where the cost relates directly to that activity. Support costs, which cannot be directly attributed to a particular activity, are apportioned based on the costs of staff engaged in direct activities.

Expenditure on raising funds

Costs of raising funds include those costs incurred in raising donations and legacies.

Expenditure on charitable activities

Charitable expenditure includes all expenditure incurred on grants awarded and on other schemes run in pursuance of the Society's objectives under its Charter, including Fellowship activities and primary purpose trading.

The direct costs of supporting these activities, including staff and other overhead costs, are separately analysed and shown as support costs under this heading.

Grants are recognised as a liability when the Society formally notifies the recipient of the award. Due to the nature of the funding source for the majority of grant awards, the liability is measured as the total of expected payments for the period to the next confirmation of income due. Payments due in future periods are disclosed as grant commitments. Any termination liabilities are recognised when a decision to cease the grant is made. Liabilities for awards where more than one year of expected payments are provided at the outset are discounted to current value using a rate equivalent to the opportunity cost from investments foregone.

Leased assets

Rentals payable under operating leases are charged to the statement of financial activities evenly over the term of the lease.

Tangible fixed assets

Tangible fixed assets are capitalised at cost, including purchase price and any other costs of bringing the asset into working condition for its intended use. The Society only capitalises items costing more than £5,000. Batches of items below this threshold are capitalised if forming part of a larger asset or project and together cost more than £5,000. Depreciation is provided on all assets, excluding freehold land and assets under development, to write off the cost of tangible fixed assets on a straight-line basis over their expected useful lives as follows:

Freehold property and improvements:	20 – 50 years
Freehold fixtures and fittings:	3 – 10 years
Leasehold improvements:	20 – 30 years
Leasehold fixtures and fittings:	3 – 10 years
Computers and AV equipment:	3 – 5 years
Other equipment:	10 – 20 years

On completion, assets under development are transferred to the relevant category and depreciated.

Intangible assets

Intangible assets consist of computer software that is not an integral part of its related hardware. Intangible assets are capitalised at cost, including purchase price of computer software licences and any other costs directly attributable to bringing the licences into use, such as configuration or implementation costs. Software development costs are recognised as an intangible asset when all of the conditions of FRS 102 are met.

The Society only capitalises items costing more than £5,000. Batches of items below this threshold are capitalised if forming part of a larger asset or project and together cost more than £5,000.

Intangible assets are measured at cost less accumulated amortisation and any impairment losses.

Amortisation is charged to write off the cost of the intangible asset on a straight-line basis over the estimated useful life of between 3 – 10 years.

In 2022, a rolling schedule of valuations per asset class was agreed and printed books were valued this year. There were no indicators of impairment identified in this review.

Additions to heritage assets are made by purchase or donation. Purchases are initially recorded at cost and donations are recorded at a fair value where practicable. The Society holds and maintains these assets principally for their contribution to knowledge and culture in line with its charitable aims.

The Trustees do not consider that a reliable estimate of the fair value can be obtained for a large part of the archives collection without incurring costs that would exceed the benefits provided. The Society was founded in 1660 and the collection has been built up throughout its existence and the number of assets held in the collection is extensive and diverse in nature. Reliable and relevant information on the cost of many of the assets is therefore not readily available and there is a lack of comparable market values. As such, these assets are not recognised in the accounts.

Investments

Listed investments are held at fair value. Unlisted investments are held at cost as an approximation to fair value where the fair value is not obtainable. Private equity investments are valued at fair value based on the latest information from the fund managers. Realised gains and losses on investments sold in the year and unrealised gains and losses on revaluation of investments are included in the statement of financial activities.

Heritage assets comprise:

printed books:

archives;

• pictures, sculptures and other works of art; and • other artefacts.

Printed books and archives are included on the balance sheet at deemed cost using a valuation performed in 2003. Pictures, sculptures and other works of art, and other artefacts are included on the balance sheet on a valuation basis. The valuation reflects their fair value and was last performed in 2015. Impairment reviews of these collections are undertaken every 5 - 10 years and when changes in circumstances indicate. A review of indicators of impairment is undertaken annually.

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Accounting policies CONTINUED For the year ended 31 March 2022

Investment management fees are allocated proportionally against the funds under investment.

The Enterprise Fund is accounted for as a mixed motive investment, owing to the dual benefits expected to be received.

The investments in subsidiary undertakings are held at cost on the Society-only balance sheet.

Total return accounting

The Society adopts the use of total return in relation to its permanent and expendable endowments with the exception of the Theo Murphy Australia Fund. Income from the endowments and investment gains and losses are recognised in the endowment column of the statement of financial activities. Unapplied total return that is allocated to income funds is presented as an allocation between endowment funds and income funds as a transfer on the face of the statement of financial activities.

The amount of any unapplied total return fund is included as part of the relevant endowment together with the value of the trust for investment on the balance sheet.

The Trustees' policy is to distribute up to 4% of the rolling five-year average capital value of the fund. In determining that the charity should adopt a total return approach, the Trustees considered the Charities (Total Return) Regulations 2013 and received advice from Stone King LLP and Cazenove Capital Investment managers.

The core endowment represents the part of the assets which the Trustees seek to maintain in real terms. It is based on the value of the endowments at 31 March 2012, together with an allowance for inflation (UK consumer price index (CPI) as determined by the Office for National Statistics).

Impairment of fixed assets

Tangible fixed assets, intangible assets and investments are subject to review for impairment when there is an indication of a reduction in their carrying value.

Investments held at cost are reviewed annually for impairment. Any impairment is recognised in the corresponding statement of financial activities category in the year in which it occurs.

Heritage assets are reviewed for indicators of impairment at the end of each reporting period to ensure that the carrying value reflects their carrying amounts.

Foreign currency

Transactions in foreign currencies are recorded at the exchange rate at the date of the transaction. Assets and liabilities in foreign currency are translated into sterling at the exchange rate at the balance sheet date. Resulting gains or losses are included in the statement of financial activities.

Financial instruments

The Society has financial assets and financial liabilities of a kind that gualify as basic. Basic financial instruments are initially recognised at transaction value and subsequently measured at amortised cost.

Fund accounting

Restricted funds can only be used for particular purposes specified or agreed by the donor. Permanent endowment funds are funds where the capital must be retained and invested. Expendable endowment funds are funds that must be invested to produce income. Unrestricted funds may be used for any purpose in the furtherance of the general objectives of the charity.

Pension costs

Defined benefit pension scheme assets are measured at fair value and liabilities on an actuarial basis using the projected unit method and discounted at a rate equivalent to the current rate of return on a high-quality corporate bond of equivalent currency and term to the Scheme liabilities. The actuarial valuations are obtained triennially and updated under FRS 102 rules at each balance sheet date. Any surplus or deficit is shown in the balance sheet as an asset or liability.

The charge to the statement of financial activities is calculated so as to spread the cost of pensions over employees' working lives with the Society. The charge comprises the administration costs of running the scheme, the current service cost computed by the actuary under FRS 102 and gains and losses on settlements and curtailments. Past service costs or credits are recognised immediately if the benefits have vested. If the benefits have not vested immediately, the costs are recognised over the period until vesting occurs. The interest on the assets and liabilities for the period is shown as a net amount of other finance costs or credits charged or credited to the statement of financial activities. Actuarial gains and losses are recognised immediately under the description 'Actuarial losses on defined benefits pension scheme'.

Multi-employer schemes are accounted for as defined contribution schemes as it is not possible to identify the Society's share of the underlying assets and liabilities on a reasonable and consistent basis. Contributions payable relating to funding of the deficit are included as a liability on the balance sheet and charged to the statement of financial activities.

The amounts charged to the statement of financial activities for defined contribution pension schemes represent the employer's contributions payable in the year. The method for allocation of pension costs between funds is to allocate on a pro rata basis using departmental salary costs as a base.

Termination benefits

Termination benefits are payable when employment is terminated by the Society, or whenever an employee accepts voluntary redundancy in exchange for these benefits. The amounts charged to the statement of financial activities represent the best estimate of the expenditure required to settle the obligation at the balance sheet date.

Taxation

The Society is a charity within the meaning of Paragraph 1 Schedule 6 of the Finance Act 2010. Accordingly, the Society is exempt from income and corporation taxes on income and gains to the extent that they are applied to charitable purposes. The trading subsidiaries do not generally pay UK corporation tax because their policy is to pay taxable profits to the Society as Gift Aid.

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OTHER INFORMATION

Prior year comparatives

- In accordance with FRS 102, prior year comparative figures can be found as follows:
- consolidated statement of financial activities note 27:
- analysis of net assets between funds note 28;
- movement on trust and specific funds in year note 29.

Notes to the financial statements

For the year ended 31 March 2022

1. Income and endowments from donations and legacies

	Unrestricted funds £'000	Restricted funds £'000	Expendable endowment funds £'000	Permanent endowment funds £'000	2022 Total funds £'000	2021 Total funds £'000
Gifts and donations	32	248	_	_	280	1,143
Legacies	38	_	_	_	38	486
Fellows' contributions	225	_	_	_	225	229
Total	295	248	-	_	543	1,858

2. Income from investments

	Unrestricted funds £'000	Restricted funds £'000	Expendable endowment funds £'000	Permanent endowment funds £'000	2022 Total funds £'000	2021 Total funds £'000
Dividends and interest	993	1,046	1,203	3,957	7,199	4,853
Bank deposit interest	1	_	_	_	1	4
Total	994	1,046	1,203	3,957	7,200	4,857

3. Trading

	External income £'000	Recharged internal lettings £'000	Gross expenditure £'000	2022 Net surplus/ (deficit) £'000	2021 Net surplus/ (deficit) £'000
Trading activities through subsidiary companies					
Kavli Royal Society International Centre (Chicheley Hall)	-	-	_	-	(185)
Sponsorships	137	-	(5)	132	106
	137	_	(5)	132	(79)
Trading in furtherance of charitable activities					
Publishing	7,230	-	(3,079)	4,151	4,238
Conferencing activities in furtherance of objectives – Carlton	n				
House Terrace	526	213	(896)	(157)	(825)
Other	640	_	_	640	548
	8,396	213	(3,975)	4,634	3,961
Total	8,533	213	(3,980)	4,766	3,882

The costs of the Society's publishing operation and the costs associated with the lettings in furtherance of charitable objects are included in 'Supporting and recognising excellence in science' on the face of the statement of financial activities. The costs of trading through subsidiary companies are included in expenditure on raising funds.

The Society was exempt from income tax, corporation tax and capital gains tax on income derived from its primary purpose trading and charitable activities.

4. Grants for charitable activities

				_		
	I lana atriata d	De stuiste d	Expendable	Permanent	2022	2021
	Unrestricted	Restricted	endowment	endowment	Iotal	IOtal
	£'000	funds £'000	£'000	funds £'000	funds £'000	£'000
From Government and other public bodies						
Core grant from Department for Business,						
Energy and Industrial Strategy (BEIS)	2,992	47,707	_	-	50,699	48,022
BEIS Investment in Research Talent Fund	_	38,625	_	-	38,625	39,267
BEIS Newton Fund	_	541	_	-	541	4,364
BEIS Global Challenges Research Fund	_	7,706	_	_	7,706	18,551
BEIS COVID Costed Extensions fund	_	4,257	_	-	4,257	941
Foreign, Commonwealth & Development						
Office	_	802	_	-	802	1,686
Other grants from government and public						
bodies	12	423	_	-	435	419
From other external bodies						
Contribution to charitable activities	_	5,225	_	_	5,225	5,781
Total	3,004	105,286	_	_	108,290	119,031

Other grants from government and public bodies includes income of £12,000 (2021: £189,000) from the Coronavirus Job Retention Scheme.

Details of the income to and movement of individual funds are disclosed in note 23.

5. Property sale – exceptional item

There were no exceptional items in the year. In the prior year, the Society recognised exceptional net income of £2,247,000 from the property sale of Chicheley Hall in Milton Keynes.

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6. Expenditure on raising funds

	Unrestricted funds £'000	Restricted funds £'000	Expendable endowment funds £'000	Permanent endowment funds £'000	2022 Total funds £'000	2021 Total funds £'000
Direct costs on raising funds	421	_	_	_	421	431
Support costs on raising funds	451	_	_	_	451	449
Cost of trading	5	_	_	_	5	185
Investment management fees	343	522	415	1,405	2,685	1,030
Total	1,220	522	415	1,405	3,562	2,095

7. Expenditure on charitable activities

	Staff costs £'000	Grant costs £'000 (Note 10)	Other direct costs £'000	Support costs £'000 (Note 8)	2022 Total £'000	2021 Total £'000
Charitable activities						
Promoting science and its benefits	23	30	93	306	452	342
Supporting and recognising excellence in science	4,367	93,563	3,138	4,559	105,627	114,672
Providing scientific advice for policy	1,747	_	386	2,367	4,500	4,044
Fostering international and global cooperation	643	7,755	650	730	9,778	13,164
Education and public engagement	1,207	298	1,114	1,116	3,735	4,105
Total for costs of charitable activities	7,987	101,646	5,381	9,078	124,092	136,327

8. Support costs

	Media relations and public engagement £'000	Facilities and building management £'000	Support services £'000	Governance £'000	2022 Total £'000	2021 Total £'000
Support costs on raising funds	42	100	297	12	451	449

Charitable activities						
Promoting science and its benefits	28	68	202	8	306	231
Supporting outstanding and recognising excellence in science	419	1,011	3,004	125	4,559	4,146
Providing scientific advice for policy	217	525	1,560	65	2,367	1,945
Fostering international and global cooperation	67	162	481	20	730	885
Education and public engagement	103	248	734	31	1,116	1,570
	834	2,014	5,981	249	9,078	8,777
Total support costs	876	2,114	6,278	261	9,529	9,226

Facilities and building management comprises the rent and running costs (maintenance, insurance, cleaning and security) of Carlton House Terrace.

Support services comprises finance, IT, HR, pension costs and corporate management.

Support costs are allocated on a pro-rata basis using departmental salary costs as a base.

9. Staff costs

	£'000	£'000		
Costs by type				
Salaries	10,525	10,155		
Social Security costs	1,065	1,036		
Pension costs	1,167	1,018		
Total	12,757	12,209		
As required by FRS102, included in 2022 staff costs is an amount of £301,000 (2021: £297,000) relating to holiday pay				

owed to staff at 31 March 2022.

Pension costs include employer contributions to two Royal Society pension schemes, a defined contribution scheme and a defined benefit scheme, and the Universities Superannuation Scheme (USS) pension scheme as follows:

- The Royal Society Group Personal Pension Plan (defined contribution): £641,000 (2021: £633,000);
- The Pension and Life Assurance Plan of the Royal Society (defined benefit): £375,000 (2021: £377,000); and
- USS: £26,000 (2021: £26,000).

The following numbers of employees of the Royal Society earning £60,000 per annum or more received total emoluments within the bands shown:

	2022	2021
£60,001 – £70,000	11	10
£70,001 – £80,000	4	6
£80,001 – £90,000	3	3
£90,001 - £100,000	3	5
£100,001 – £110,000	4	1
£110,001 – £120,000	-	1
£120,001 – £130,000	1	2
£130,001 – £140,000	2	-
£150,001 – £160,000	2	2
£380,001 – £390,000	1	1
The 12 loss management nervennel of the Devial Conjects (2021; 12) received t	intel remuneration of C1 021 000	including

The 12 key management personnel of the Royal Society (2021: 12) received total remuneration of £1,921,000 including employer's NIC (2021: £1,832,000).

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The average number of employees, analysed by function, was:		
	2022	2021
Raising funds	5	6
Charitable activities	149	162
Support (including governance)	59	51
Total	213	219

A restructure took place during the year to re-align staff to the teams that best reflected the roles they were undertaking. As a result, some staff that were included in charitable activities in 2021 are now classified in Support. The average full time equivalent was 207 (2021: 214).

Redundancy and termination payments were made to 4 employees during the year (2021: 2). Total redundancy and termination payments in respect of these employees were £67,000 (2021: £15,000).

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10. Grants

	Grants to	Grants to	2022	2021
	institutions £'000	individuals £'000	Total £'000	Total £'000
Fellowships		2000		
University Research Fellowships	_	55,519	55,519	52,621
Royal Society Research Professorships	_	12,087	12,087	15,240
Dorothy Hodgkin Fellowships	_	8,315	8,315	7,689
Newton International Fellowships	_	3,502	3,502	4,237
FLAIR Fellowships	_	3,865	3,865	9,602
Sir Henry Dale Fellowships	-	4,298	4,298	4,214
RS Visiting Research Professorship	_	1,318	1,318	3,794
Newton Advanced Fellowships	_	(90)	(90)	2,433
RS Challenge Grants	-	-	-	2,873
Wolfson Research Merit Award	912	_	912	1,285
Industry Fellowships	_	1,908	1,908	2,152
Wolfson Advanced Fellowships	2,606	_	2,606	1,931
Leverhulme Trust Senior Research Fellowships	_	398	398	387
International Fellowship Grants	_	112	112	182
Professorship of Public Engagement	_	(10)	(10)	26
Education Schemes				
Partnership grants scheme	204	_	204	142
Education Research Fellowships	_	_	-	3
Other Education grants	-	137	137	5
Other Grant Programmes				
DFID Africa Awards	_	596	596	1,392
International Exchanges	_	3,698	3,698	2,518
Entrepreneur in Residence	_	806	806	897
Leverhulme Trust APEX Awards	-	716	716	673
Wolfson Laboratory Refurbishment Grants	28	-	28	258
Commonwealth Science Conference	-	60	60	-
Australian Academy of Science Think Tank	-	410	410	103
Paul Instrument Fund	-	27	27	101
Awards and prizes	-	216	216	223
Newton International Exchanges	-	(84)	(84)	(20)
Brian Mercer Awards	-	_	-	61
Other	-	92	92	109
Total	3,750	97,896	101,646	115,131

	2022	2021	2022 Total	2021 Total
Recipients of institutional grants	Number	Number	000'3	000'£
University of Glasgow	20	12	304	485
University College London (UCL)	9	9	292	188
Imperial College London	14	14	276	393
University of Cambridge	10	15	217	135
University of Birmingham	7	12	177	176
The Francis Crick Institute	2	1	172	53
University of Bristol	10	9	166	121
University of Edinburgh	7	8	163	111
University of York	4	5	149	97
University of Southampton	6	7	138	146
King's College London	4	4	119	143
University of Leicester	3	4	115	123
Nottingham Trent University	2	2	96	106
University of Leeds	5	8	93	111
Liverpool School of Tropical Medicine	3	3	86	81
University of Manchester	3	5	75	58
University of East Anglia	1	-	74	_
University of Oxford	4	5	70	83
Swansea University	2	1	65	15
Durham University	5	5	64	71
University of Nottingham	4	6	60	132
University of Bath	4	5	55	56
University of St Andrews	1	3	52	68
University of Warwick	4	10	49	65
Brunel University London	1	1	48	43
University of Portsmouth	1	1	44	38
Aberystwyth University	2	1	41	_
University of Northumbria	2	1	41	_
Diamond Light Source Ltd	1	1	40	34
Queen's University Belfast	1	2	37	34
University of Sheffield	1	2	28	91
Queen Mary University of London	1	2	20	21
University of Exeter	1	3	19	26
University of Dundee	2	3	18	_
Cardiff University	3	4	15	29
Newcastle University	1	1	15	15
University of Sussex	2	5	10	30
Other organisations	81	62	247	238
Total	234	242	3,750	3,616

Grants are generally awarded to particular individuals, although the actual award is made to the host organisation.

Details of individual grants awarded during the year analysed by organisation are available from the finance department on request. STRATEGIC REPORT

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11. Reconciliation of grants payable

	2022 Total £'000	2021 Total £'000
Liability at 1 April	5,725	4,785
New grants awarded in year	104,443	116,751
Grants paid in year	(99,357)	(114,242)
Grants refunded to the Society	(2,797)	(1,569)
Liability at 31 March	8,014	5,725

All grants payable fall due within one year.

12. Payments to Trustees and Related Party Transactions

	2022	2021
	Total	Total
	£,000	£'000
Expenses: Travel and subsistence	22	2

No Trustees received remuneration from the Society in the year (2021: Nil). Expenses were reimbursed to or paid on behalf of 15 Trustees (2021: 5 Trustees).

Indemnity insurance

With the consent of the Charity Commission, the Society has taken out Trustees' indemnity insurance. The cost of this insurance for the year was £14,000 (2021: £10,000). No claims have been made under this policy.

Grants and awards

Sir Peter Bruce FRS is a co-applicant on a Newton Advanced Fellowship grant. The total value of the award is £111,000. This was awarded and taken up in the 2018/19 financial year. No payment was made in 2021/22.

Professor Nora de Leeuw, spouse of Sir Richard Catlow FRS, held a grant as part of the ACBI programme funded by DFID (now FCDO) and administered by the Royal Society grants team. The total value of the award is £1,295,800 and it has been paid.

Professor Sheena Radford FRS is an award holder of Royal Society Research Professorships grant. The total value of the award is £1,165,000. This was awarded and taken up in 2021. A £253,000 payment was made in 2021/22 to University of Leeds.

Professor Jennifer Thomas FRS is an award holder of Royal Society Research Professorships grant. The total value of the award is £1,229,000. This was awarded and taken up in 2020. A £193,000 payment was made in 2021/22 to University College London.

Sir David Baulcombe FRS is an award holder of Royal Society Research Professorships grant. The total value of the award is £806,000. This was awarded and taken up in 2017. A £197,000 payment was made in 2021/22 to University of Cambridge. He is also a collaborator on a University Research Fellowship grant. The total value of the award is £808,000. This was awarded and taken up in 2020/21. No payment was made in 2021/22.

Other

Sir Adrian Smith, President of the Royal Society, has use of the President's flat at Carlton House Terrace.

With a view to increasing the diversity of Officers, the Charity Commission approved the application submitted by Council to make grants to Officers' parent institutions to reimburse some of the costs that arise from the significant time commitment involved in Officers' roles. The grants paid this year was £165,000 (2021: £50,000).

Related Party Transactions

The Royal Society had two wholly-owned trading subsidiaries during the year, Royal Society Trading Limited (registered number 06967016) and Royal Society (London) Ltd (registered number 08808518). The Royal Society Trading Limited ceased trading on 23 March 2020 and was dormant in the year ended 31 March 2022.

Details of transactions with these subsidiaries are set out in note 26.

13. Total expenditure include the following amounts:

	2022 Total	2021 Total
Operating lease rentals	2000	£ 000
Plant and machinery	55	71
Rent	490	490
	545	561
Fees payable to the Charity's auditors for:		
The audit of the Charity and Group accounts	50	46
The audit of the Charity's subsidiaries accounts pursuant to legislation	3	5
Tax returns of the Charity and trading subsidiaries	6	6
Total auditor's remuneration	59	57
Charges on owned assets		
Depreciation and amortisation	1,134	1,172
	1,134	1,172

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Notes to the financial statements CONTINUED

For the year ended 31 March 2022

14. Financial memoranda

Income and expenditure relating to government grants during the year was as follows:

	2022 Total	2021 Total
	£'000	£'000
Department for Business, Energy and Industrial Strategy – core grant		
Income	50,699	48,022
Expenditure	(50,699)	(48,022)
	-	-
Department for Business, Energy and Industrial Strategy – Investment in Research Talent Fund		
Income	38,625	39,267
Expenditure	(38,625)	(39,267)
	-	-
BEIS Global Challenges Research Fund		
Income	7,706	18,551
Expenditure	(7,706)	(18,551)
	-	_
BEIS Newton Fund		
Income	541	4,364
Expenditure	(541)	(4,364)
	-	-
BEIS COVID Costed Extensions fund		
Income	4,257	941
Expenditure	(4,257)	(941)
	-	_
Foreign, Commonwealth & Development Office (formerly DFID) grant		
Income	802	1,686
Expenditure	(802)	(1,686)
	-	_

15. Intangible and tangible fixed assets

15a Intangible assets

Group and Charity

	Software 2022 £'000	Software 2021 £'000
Cost		
At 1 April	250	_
Additions	84	207
Transfers	-	43
At 31 March	334	250
Accumulated amortisation		
At 1 April	22	_
Charge for year	56	22
At 31 March	78	22
Net book value at 31 March 2022	256	
Net book value at 31 March 2021		228
A Customer Relationship Management (CRM) system was completed and went live in the prior	year. The ass	et costs

A Customer Relationship Management (CRM) system was completed and went live in the prior year. The asset costs were reviewed and it met the criteria of an intangible asset. The CRM system continues to be developed and improved, with costs incurred during this process being capitalised.

Amortisation of intangible fixed assets is included within the Expenditure on charitable activities in note 7.

There were no contractual commitments for acquisitions of intangible assets as at 31 March 2022 (2021: £Nil).

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15. Intangible and tangible fixed assets CONTINUED

15b Tangible fixed assets

Group and Charity

	Leasehold improvements £'000	Computers and other equipment £'000	Assets under development £'000	2022 £'000	2021 £'000
Cost					
At 1 April	21,890	4,270	49	26,209	44,746
Additions	220	68	475	763	492
Disposals	(260)	(615)	_	(875)	(18,986)
Transfers	_	22	(22)	-	(43)
At 31 March	21,850	3,745	502	26,097	26,209
Depreciation					
At 1 April	13,650	2,832	-	16,482	30,672
Charge for year	706	372	_	1,078	1,150
Disposals	(227)	(614)	-	(841)	(15,340)
Transfer	_	_	-	-	_
At 31 March	14,129	2,590	_	16,719	16,482
Net book value at 31 March 2022	7,721	1,155	502	9,378	
Net book value at 31 March 2021	8,240	1,438	49		9,727

All tangible fixed assets are used for the support of charitable activities within the Society.

Depreciation of tangible fixed assets is included within the expenditure on charitable activities in note 7.

16. Capital commitments

Group and Charity

	2022 £'000	2021 £'000
Authorised and contracted for	130	225
Authorised but not contracted for	3,008	1,660
Total Commitment	3,138	1,885

At the balance sheet date, £1,575,000 (2021: £811,000) of capital commitments was authorised for refurbishment of 6 – 9 Carlton House Terrace. A further spend of £559,000 (2021: £646,000) had been authorised on IT projects. Other general capital items total £1,004,000 (2021: £428,000). Of these commitments £130,000 (2021: £225,000) has been contracted for by the year end.

17. Heritage assets

Group and Charity

The Society holds an extensive collection of heritage assets relating to the history of the Society itself and the wider history of scientific endeavour. The collection has four main components:

Printed works: The Library contains over 70,000 titles, published from the 1470s to the present day. The main strength of the collection is in the 17th and 18th centuries; from the 1680s to the mid-19th century, the policy of the Library was to acquire every important scientific publication.

Archives: These comprise an extraordinary and unrivalled record of the development of science that spans nearly 350 years. The archive collection is a unique resource for historians, particularly historians of science, containing over 250,000 items. It includes the manuscript of Isaac Newton's *Principia Mathematica*.

Pictures, sculptures, and other works of art: The collection includes over 200 original works (primary collection) and approximately 10,000 photographs and engravings (secondary collection), many of them portraits of past and present Fellows.

Other artefacts: The collection comprises approximately 250 items and includes scientific instruments, furniture and furnishings, and the Society's Charter Book.

The collections are accessible to scholars and the wider public through the Royal Society's History of Science Centre, which includes a reference library and an extensive online presence, including a fully searchable catalogue and image library.

Summary of heritage asset transactions

	Assets held at cost £'000	Assets held at valuation 5'000	2022 5'000	2021 5'000
Purchases/ donations	2000	2000	2000	2000
At 1 April	36,270	12,893	49,163	49,476
Additions	84	_	84	2
Disposals	_	_	_	(315)
Valuation or cost at 31 March	36,354	12,893	49,247	49,163
The heritage assets comprise:				
Printed books			13,278	13,278
Archives			22,981	22,965
Pictures, sculptures and other works of art			9,232	9,164
Other artefacts			3,756	3,756
Total			49,247	49,163

The printed books and archives were originally valued in August 2003 by Roger Gaskell, a rare book dealer, and the pictures and other artefacts were valued in 2015 by Weller King, Fine Art Dealers. The valuations are on a fair market/ replacement basis on those parts of the collection where it is felt such a valuation can be reasonably made. Assets are held at valuation as a proxy for cost.

An annual review of the indicators of impairment was undertaken in March 2022 and no indicators of impairment were identified in this review. An independent valuation of the printed books was carried out in March 2022 by Bernard Quaritch Ltd, a rare book dealer. There was no indication of an impairment in the deemed cost of the printed books as a result of this independent valuation.

17. Heritage assets CONTINUED

Five year financial summary of heritage asset transactions

	2022 £'000	2021 £'000	2020 £'000	2019 £'000	2018 £'000
Purchases/donations					
Printed books	-	-	1	7	1
Archives	16	-	37	51	-
Pictures, sculptures and other works of art	68	2	22	37	20
Other artefacts	-	_	_	_	_
Total Purchases/ donations	84	2	60	95	21

Donated heritage assets are recognised in the year they are received. There were no disposals of heritage assets during the year (2021: £315,000). Other than heritage assets disposed in 2021, there have been no other disposals of heritage assets within the last five years.

Preservation and Management

Expenditure which in the Trustees' view is required to preserve or clearly prevent further deterioration of individual collection items is recognised in the Income and Expenditure account when it is incurred.

The Society has an ongoing cataloguing project and the Society's major strategic facilities for the long-term preservation of its historic archives, manuscripts and printed books are environmentally-controlled store rooms (conforming to British Standard BS EN 16893:2018).

The Society's modern records have been subject to a full audit, completed in April 2011. This process enabled the full-life management, destruction and permanent archiving of pertinent files. Conservation of both old and new archives is now underway.

Each of the Society's major collections (archives, modern records, printed books, pictures, journals, objects) has a designated member of curatorial staff and exhibited materials are looked after by an exhibitions manager. Collections are managed and recorded in discrete databases and according to the prevailing standard in each area (for example, International Standard Archival Description (ISAD) for archival cataloguing, SPECTRUM for museum standards and picture control). In 2018, the Society's archives achieved accredited status (for procedures and service quality) with the UK National Archives.

18. Investments Group and Charity

	2022 £'000	2021 £'000
Valuation at 1 April	297,310	234,075
Additions of investments	100,801	53,397
Disposal of investments	(103,331)	(50,385)
Net change in cash invested for trades within portfolio	1,770	(3,673)
Investment management costs	(2,685)	(1,030)
Net cash (withdrawn from)/added to portfolio	(3,274)	2,828
Net gains on valuation at 31 March	17,719	62,098
Valuation at 31 March	308,310	297,310
Total historical cost at the end of the year	242,508	200,562

The valuation at 31 March comprises:

Investments listed on a recognised stock exchange including investments and unit trusts:

UK	168,060	139,807
Overseas	114,900	130,046
Other Unlisted Securities:		
UK	10,116	8,642
Overseas	2,705	3,076
Cash:		
UK	6,984	11,699
Overseas	5,545	4,040
Total	308,310	297,310

Overseas investments comprise equities, unit/investment trusts and fixed interest funds.

The Society owns 100% of the issued share capital of Royal Society Trading Limited (note 26). The principal activity of the company was conferencing activities at Chicheley Hall. The company ceased trading on 23 March 2020 and was dormant in the year ended 31 March 2022.

The Society owns 100% of the issued share capital of Royal Society (London) Ltd (note 26). The principal activity of the company is corporate sponsorships.

Funds are invested as follows:

Pooled investments	
Specific investments – Theo Murphy Australia Fund	
Specific investments – Amadeus RSEF	

2022 £'000	2021 £'000
9,136	7,555
4,181	3,982
294,993	285,773
308,310	297,310

19. Debtors

	2022 Receivable within one year £'000	2021 Receivable within one year £'000
Trade debtors	1,441	683
Grants receivable	542	1,115
Legacy receivable	-	14
Other debtors	8	72
Accrued income	413	97
Prepayments	653	583
Total	3,057	2,564

All Group debtors in 2022 relate to the Charity. In 2021, Group debtors included £132,000 Royal Society (London) Ltd trade debtors. As at 31 March 2022 all debtors are receivable within one year. As at 31 March 2021 all debtors were receivable within one year.

20. Creditors

	2022 Due within one year £'000	2022 Due after one year £'000	2021 Due within one year £'000	2021 Due after one year £'000
Trade creditors	913	_	538	-
Publications advanced sales	3,835	-	3,586	-
Grants payable	8,014	-	5,725	-
Other creditors	402	-	1,657	-
Accruals and provisions	1,055	39	611	45
Deferred income	7,142	_	6,834	-
Total	21,361	39	18,951	45

Included in the Group creditors are creditors of £32,000 (2021: £26,000) relating to Royal Society (London) Ltd. All other creditors relate to the Charity.

As required by FRS102, included within accruals and provisions 2022 is a provision for a liability under the deficit recovery plan for the Universities Superannuation Scheme (USS) multi-employer pension scheme. A total amount of £47,000 (2021: £50,000) has been provided for, comprising £8,000 (2021: £5,000) due within one year and £39,000 (2021: £45,000) due after more than one year.

Reconciliation of deferred income

	2022 £'000	2021 £'000
Deferred income brought forward	6,834	5,759
Amount released from previous year	(6,834)	(5,759)
Income deferred in the year	7,142	6,834
Total	7,142	6,834

21. Statement of total returns

Investment returns	
Investment Income	
Capital gains	
Investment management costs	
Total return for year	
Indexation	
Less application of total return	
Net total return for the year	

	Expendable endowment £'000	Permanent endowment £'000	2022 Total £'000
Investment returns			
Investment Income	1,203	3,957	5,160
Capital gains	2,688	9,449	12,137
Investment management costs	(415)	(1,405)	(1,820)
Total return for year	3,476	12,001	15,477
Indexation	(1,993)	(6,542)	(8,535)
Less application of total return	(1,497)	(2,183)	(3,680)
Net total return for the year	(14)	3,276	3,262
Unapplied Total return			
At 31 March 2022	17,785	63,213	80,998
At 31 March 2021	17,799	59,937	77,736

22. Analysis of net assets between funds

Group

	Unrestricted funds £'000	Restricted funds £'000	Expendable endowment funds £'000	Permanent endowment funds £'000	2022 Total funds £'000	2021 Total funds £'000
Funds balances at 31 March are represented by:						
Intangible assets	256	_	_	_	256	228
Tangible fixed assets	9,378	_	_	_	9,378	9,727
Heritage assets	49,247	_	-	-	49,247	49,163
Investments	45,226	42,340	49,587	171,157	308,310	297,310
Net current liabilities	(6,641)	_	-	-	(6,641)	(9,576)
Creditors: Due after one year	(39)	_	-	_	(39)	(45)
Defined benefit pension scheme liability	(4,304)	_	_	_	(4,304)	(12,217)
Net assets	93,123	42,340	49,587	171,157	356,207	334,590

The net current liabilities in 2022 are funded by investments, which could be realised to meet the net liabilities as they fall due.

All net current liabilities in the Group accounts relate to the Charity.

There is no material difference in net assets between funds for the Charity.

23. Movements on Trust and specific funds in year - Group

Permanent endowment funds

	Relevant value b/f	Indexation	Relevant value c/f	Unapplied total return at 1 April 2021	Income £'000	Investment gain/(loss) £'000	Expenditure £'000	Indexation	Transfers/ application of total return £'000	Unapplied total return at 31 March 2022	Total at 31 March 2022 £'000
Life Sciences Trust	11,598	776	12,374	7,028	469	1,135	(166)	(776)	(641)	7,049	19,423
Maths and Physical Sciences Trust	10,639	710	11,349	6,478	431	1,043	(153)	(710)	(589)	6,500	17,849
RW Paul Instrument Fund	11,407	763	12,170	7,441	472	1,121	(168)	(763)	(106)	7,997	20,167
Theo Murphy – UK	54,677	3,655	58,332	33,742	2,213	5,258	(786)	(3,655)	(515)	36,257	94,589
Other Permanent Endowments	9,574	638	10,212	5,248	372	892	(132)	(638)	(332)	5,410	15,622
Total Permanent endowments part of the UTR	97,895	6,542	104,437	59,937	3,957	9,449	(1,405)	(6,542)	(2,183)	63,213	167,650
Funds not part of the Unapplied Total Return											
Theo Murphy – Australia	3,251		3,251			256					3,507
Total Permanent endowments	101,146	6,542	107,688	59,937	3,957	9,705	(1,405)	(6,542)	(2,183)	63,213	171,157

Expendable endowment funds

										Unapplied	
				Unapplied					Transfers/	total	
				total return					application	return at	Total at
	Relevant		Relevant	at 1 April		Investment			of total	31 March	31 March
	value b/f	Indexation	value c/f	2021	Income	gain/(loss)	Expenditure	Indexation	return	2022	2022
General Trust											
Fund	11,121	744	11,865	8,027	483	1,078	(167)	(744)	(604)	8,073	19,938
Life Sciences											
Trust	6,797	454	7,251	4,073	275	616	(95)	(454)	(375)	4,040	11,291
Maths and											
Physical Sciences	5										
Trust	3,701	248	3,949	2,241	151	337	(52)	(248)	(206)	2,223	6,172
Other Expendable	9										
funds	8,190	547	8,737	3,458	294	657	(101)	(547)	(312)	3,449	12,186
Total expendable endowment	•										
funds	29,809	1,993	31,802	17,799	1,203	2,688	(415)	(1,993)	(1,497)	17,785	49,587

Indexation has been applied using the annual CPI rate to March.

	Prought forward	Investment and			Carried forward	
	at 1 April 2021 £'000	Income £'000	(loss) £'000	Expenditure £'000	Transfers £'000	2022 £'000
Restricted funds						
Life Sciences Trust	4,846	117	137	(1,638)	1,089	4,551
Maths and Physical Sciences Trust	4,057	82	182	(1,239)	587	3,669
Enterprise Fund	7,555	-	1,851	(270)	_	9,136
Nutrition in Old Age Fund	7,252	153	297	(52)	(19)	7,631
Other restricted funds	16,775	106,844	923	(107,187)	(2)	17,353
Total restricted funds	40,485	107,196	3,390	(110,386)	1,655	42,340
Unrestricted funds						
General Trust Fund	18,830	411	753	(607)	607	19,994
BEIS Science and Research	_	2,992	_	(2,992)	_	-
Revaluation Reserve	47,541	_	_	_	_	47,541
Defined Benefit Pension Reserve	(12,217)	-	6,971	942	_	(4,304)
General Purpose	31,260	8,822	1,183	(12,791)	1,418	29,892
Total unrestricted funds	85,414	12,225	8,907	(15,448)	2,025	93,123

	Brought forward		Investment and			Carried forward
	at 1 April 2021 £'000	Income £'000	(loss) £'000	Expenditure £'000	Transfers £'000	2022 £'000
Restricted funds						
Life Sciences Trust	4,846	117	137	(1,638)	1,089	4,551
Maths and Physical Sciences Trust	4,057	82	182	(1,239)	587	3,669
Enterprise Fund	7,555	_	1,851	(270)	_	9,136
Nutrition in Old Age Fund	7,252	153	297	(52)	(19)	7,631
Other restricted funds	16,775	106,844	923	(107,187)	(2)	17,353
Total restricted funds	40,485	107,196	3,390	(110,386)	1,655	42,340
Unrestricted funds						
General Trust Fund	18,830	411	753	(607)	607	19,994
BEIS Science and Research	_	2,992	-	(2,992)	_	-
Revaluation Reserve	47,541	_	-	_	_	47,541
Defined Benefit Pension Reserve	(12,217)	_	6,971	942	_	(4,304)
General Purpose	31,260	8,822	1,183	(12,791)	1,418	29,892
Total unrestricted funds	85,414	12,225	8,907	(15,448)	2,025	93,123

Purposes of funds

The objects of the Life Sciences Trust are to promote and advance for the general benefit of the public, including the scientific (science, medicine, engineering and technology) community, the study and investigation of, and research into all areas of life sciences and other science at the interface between this area and other areas of science. This shall be done in particular by supporting scientists working in this area, advancing engagement of the public in all matters relating to such science and providing the best possible scientific advice and information to those making policy in the area of life science.

The objects of the Mathematics and Physical Sciences Trust are to promote and advance for the general benefit of the public, including the scientific (science, medicine, engineering and technology) community, the study and investigation of, and research into all areas of mathematics and physical sciences and other science at the interface between this area and other areas of science. This shall be done in particular by supporting scientists working in this area, advancing engagement of the public in all matters relating to such science and providing the best possible scientific advice and information to those making policy in the area of mathematics and physical science.

Following the Deed of retirement of the other trustees the property and investments of the RW Paul Instrument Fund were transferred to the sole remaining trustee being the Royal Society. The application of the income from the portfolio is restricted to the provision of grants under the Paul Instrument Grants Scheme.

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23. Movements on Trust and specific funds in year - Group CONTINUED

The Theo Murphy Funds (in the UK and Australia) were created through a bequest from the estate of the late Theo Murphy. The funds "shall be used or applied to further scientific discovery in the fields of medicine, science, technology and engineering". The Australia Fund will carry out activities in Australia in accordance with the will.

The objects of the General Fund are to promote and advance for the general benefit of the public, including the scientific (science, medicine, engineering and technology) community, the efficiency and effectiveness of the Royal Society and its Fellowship. This shall be done in particular by establishing, promoting, supporting and maintaining, for the general benefit of the public and the scientific community, its activities, premises, fixtures and fittings, equipment, libraries and archives, general publications and the history of science.

The Enterprise Fund was created by generous donations in support of the Society in making equity investments in innovative early-stage businesses emerging from the science base in the UK and elsewhere.

The Nutrition in Old Age Fund was established following the receipt of a legacy for the study of nutrition in old age.

Other Restricted Funds comprise monies received to fund separate restricted projects in line with our charitable activities and are held as separate individual funds in our accounts. No individual balance is in excess of £4 million on 31 March 2022.

The Revaluation Reserve relates to the revaluation of the heritage assets.

The Transfers between projects and funds include administration charges of the investments held in the trusts, administration costs reclaimed from projects where applicable, notional interest paid to projects in respect of income held during the year and any income released to the general reserves at the end of projects (where allowed under the gift or grant agreement).

24. Financial Commitments – Group and Charity

At 31 March 2022 the Society had the following commitments:

Total future minimum lease payments under a non-cancellable operating lease in respect of occupation of 6–9 Carlton House Terrace, London is as follows for each of the following periods:

	2022 £'000	2021 £'000
Less than one year	490	490
One to five years	1,960	1,960
Over five years	18,130	18,620
Total	20,580	21,070

The lease is due to expire on 5 January 2064 however the next 10 yearly rent review is due on 5 January 2025.

Agreements and commitments to fund research professorships / fellowships and other grants at 31 March 2022 totalled £144,000,000 (2021: £130,000,000). Of these, £77,000,000 (2021: £59,000,000) are due in less than one year, and £68,000,000 (2021: £71,000,000) in between two and five years. There are no grants payable in more than 5 years. As the Society retains the discretion to terminate these grants they are treated as liabilities of future periods and will be financed by specific grants or other income receivable in those periods.

The Society has entered into investment contract commitments totalling £46,000 (2021: £462,000) payable at dates yet to be agreed.

25. Pension obligations – Group and Charity

The Royal Society ('the Employer') operates a defined benefit pension arrangement in the UK called the Pension and Life Assurance Plan of the Royal Society ('the Plan'), with assets held in a separately administered fund. The Plan provides retirement benefits on the basis of members' final salary. The Plan is closed to new members, although remains open to future benefit accrual, and provides benefits on a defined benefit basis.

The most recent valuation of the Plan under FRS102 was carried out as at 31 March 2022. The valuation of the Plan used the projected unit method and was carried out by Barnett Waddingham LLP, professionally qualified actuaries.

The Employer expects to make contributions to the Plan during the year to 31 March 2023 of around £1,850,000 (2022: £1,850,000).

The Plan is subject to the Statutory Funding Objective under the Pensions Act 2004. A valuation of the Plan is carried out at least once every three years to determine whether the Statutory Funding Objective is met. As part of the process, the Employer must agree with the trustees of the Scheme the contributions to be paid to address any shortfall against the Statutory Funding Objective and contributions to pay for future accrual of benefits.

The full actuarial valuation at 1 January 2019 showed an increase in the deficit from £3,716,000 to £8,732,000. It has been agreed with the Trustees that the Employer will pay £652,000 on or before each 30 April and 31 October in the years 2020 to 2026 inclusive to meet the deficit. The triennial valuation as at 1 January 2022 is currently in progress.

Contributions payable by the Employer in respect of future benefit accrual and expenses are at the rate of 28% of Pensionable Salaries. Members' contributions are 7% of Pensionable Salaries. Life cover and dependants' pensions in respect of death in service are provided by additional insurance premiums. Contributions payable by the Employer in respect of expenses are at the rate of £13,750 per month.

The Principal assumptions used to calculate Plan liabilities include:

	2022 % pa	2021 % pa
Inflation (RPI)	3.60	3.50
Inflation (CPI)	3.05	2.90
Salary escalation	2.00	2.00
Increase to pensions in payment* – subject to LPI minimum 4%	4.30	4.20
Increase to pensions in payment* – subject to LPI	3.40	3.30
Statutory revaluation	3.05	2.90
Discount rate (pre-and-post-retirement)	2.75	2.05
Pre-retirement mortality table	105% of S3NA	105% of S3NA
Post-retirement mortality table	105% of S3NA	105% of S3NA
Post-retirement mortality projection	CMI_2021 projections with LTR of 1.25% pa and initial addition of 0.25% pa. The 2020 and 2021 weight parameters are both 10%	CMI_2020 projections with LTR of 1.25% pa and initial addition of 0.25% pa and the 2020 weight parameter is 25%
Tax free cash	20% of pension	20% of pension
Withdrawals	None	None

* Pensions in payment increase by the lesser of the annual increase in the retail price index or 5%. For service prior to 1 November 2001, this is subject to a minimum increase of 4%

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25. Pension obligations – Group and Charity CONTINUED

Under the mortality tables and projections adopted, the assumed future life expectancy at age 60 is as follows:

	2022	2021
Male currently aged 40	27.8 years	27.8 years
Female currently aged 40	30.6 years	30.6 years
Male currently aged 60	26.4 years	26.3 years
Female currently aged 60	29.2 years	29.2 years

The assets in the Plan were:

	Value at 31 March 2022 £'000	Value at 31 March 2021 £'000
Equities	15,998	14,941
LDI Portfolio	9,740	11,097
Multi asset fund	18,747	17,153
Cash	5,990	5,877
Annuity policies	4,193	4,821
Total market value of Plan assets	54,668	53,889
Present value of scheme liabilities	(58,972)	(66,106)
Net pension liability	(4,304)	(12,217)

The assets do not include any investment in the Employer.

Reconciliation of present value of scheme liabilities

	Value at 31 March 2022	Value at 31 March 2021
	000' 3	£'000
Defined benefit obligation at 1 April	66,106	59,070
Current service cost	485	412
Contributions by Plan participants	94	94
Past service cost	-	-
Interest cost	1,339	1,337
Benefits paid	(1,669)	(2,026)
Change due to settlements or curtailments	-	_
Experience loss/(gain) on liabilities	503	(541)
Changes to demographic assumptions	10	(1,014)
Changes to financial assumptions	(7,896)	8,774
Defined benefit obligation at 31 March	58,972	66,106

Sensitivity analysis of the scheme deficit

The sensitivity of the present value of the scheme deficit to changes in the principal assumptions used is set out below.

	Change in assumption	Change in liabilities £'000
Discount rate	-0.10%	1,153
Rate of inflation*	-0.10%	(993)
Commutation	No commutation	1,950
Mortality – long term improvements	1% pa long-term rate of mortality improvements	(620)
Mortality – no weight on pandemic data	2020 and 2021 weight parameters set to 0%	178

* Other assumptions linked to the rate of inflation are also assumed to change appropriately.

Reconciliation of fair value of scheme assets

	Value at 31 March 2022 £'000	Value at 31 March 2021 £'000
Fair value of scheme assets at 1 April	53,889	48,353
Interest on assets	1,106	1,109
Contributions by the Employer	1,843	1,832
Contributions by Scheme participants	94	94
Benefits paid	(1,669)	(2,026)
Administration costs	(183)	(189)
Return on Plan assets less interest	(412)	4,716
Fair value of scheme assets at 31 March	54,668	53,889
The actual return on Plan assets in the year was £680,000 (2021: £5,825,000).		

Analysis of the amount charged to the statement of financial activities – operations

	Value at	Value at
	31 March	31 March
	2022	2021
	£'000	£'000
Current service cost	485	412
Administration costs	183	189
Interest cost	1,339	1,337
Interest on assets	(1,106)	(1,110)
Past service cost	-	_
Total Charge	901	828

25. Pension obligations – Group and Charity CONTINUED

Actuarial gains and losses

	Value at	Value at
	31 March	31 March
	2022	2021
	£'000	£'000
Losses/(gains) on scheme assets in excess of interest	412	(4,715)
Experience losses/(gains) on liabilities	503	(541)
Losses/(gains) from changes to demographic assumptions	10	(1,014)
(Gains)/losses from changes to financial assumptions	(7,896)	8,774
Actuarial (gains)/losses	(6,971)	2,504

The Royal Society ('the Employer') operates two pension schemes and contributes to the Royal Society Group Personal Pension Plan (defined contribution). During the year ended 31 March 2022, employer contributions to this scheme totalled £641,000 (2021: £633,000).

During the year, one member of the Society's staff was a member of Universities Superannuation Scheme (USS), a defined benefit scheme (2021: one member). During the year ended 31 March 2022, employer contributions to this scheme totalled £26,000 (2021: £26,000). The employer contribution rates at the year end was 21% (2021: 21%).

USS is a defined benefit scheme which is externally funded and valued every three years by professionally qualified independent actuaries using the Projected Unit Method. The scheme is a "last man standing" scheme which means that in the event that another member institution becomes insolvent the other participating members will pick up any funding shortfall.

At the date of the latest actuarial valuation of the scheme (31 March 2020), the assets were sufficient to cover 84% of the benefits that had accrued to members; the deficit at 31 March 2020 was £12.9 billion (2019: £5.4 billion).

Based on expected contributions until 31 March 2028, the net present value of the payment towards the reduction of the deficit is estimated using the modeller developed by the British Universities Finance Directors Group (BUFDG), with the support of the USS trustee company, as a tool for estimating the liability under the recovery plan for accounting purposes. An initial liability of £184,000 was charged to the Statement of Financial Activities during 2015/16 and recorded as a liability on the balance sheet to be unwound over time (initially over the period to 2031) as the liability is discharged; to 31 March 2022, £138,000 of this provision has been released. Further information can be found at https://www.uss.co.uk

26. Subsidiary undertakings

The Society owns 100% of the £1 called-up and issued share capital of Royal Society Trading Limited 06967016. Royal Society Trading Limited company was set up to process the activities that occur at Chicheley Hall. On 23 March 2020, Directors of Royal Society Trading Limited agreed to cease operations immediately and the company has not traded since this date. On 10 March 2021, Chicheley Hall was sold. Royal Society Trading Limited was dormant in the year ended 31 March 2022.

The Society also owns 100% of the £1 called-up and issued share capital of Royal Society (London) Ltd 08808518. Royal Society (London) Ltd company has been set up to process corporate sponsorships at the Society.

Trading inc	ome
External inc	ome
Cost of sale	S
Gross profi	:
Administrati	ve expenses
Operating p	profit/(loss)
Qualifying c	haritable donation payable to parent charity
Result for t	ne period
Total funds	prought forward at 1 April
Capital cont	ribution from parent charity
Total funds	carried forward at 31 March
Total funds	carried forward at 31 March
Total funds	carried forward at 31 March
Total funds Balance Sh	carried forward at 31 March eet as at 31 March:
Total funds Balance Sh Current ass	carried forward at 31 March eet as at 31 March:
Total funds Balance Sh Current ass Debtors	carried forward at 31 March eet as at 31 March:
Total funds Balance Sh Current ass Debtors Cash at ban	carried forward at 31 March eet as at 31 March: ets k and in hand
Total funds Balance Sh Current ass Debtors Cash at ban	carried forward at 31 March eet as at 31 March: ets k and in hand
Total funds Balance Sh Current ass Debtors Cash at ban Creditors: a	carried forward at 31 March eet as at 31 March: ets k and in hand mounts falling due within one year
Total funds Balance Sh Current ass Debtors Cash at ban Creditors: a Net Current	carried forward at 31 March eet as at 31 March: ets k and in hand mounts falling due within one year : Liabilities
Total funds Balance Sh Current ass Debtors Cash at ban Creditors: a Net Current	carried forward at 31 March eet as at 31 March: ets k and in hand mounts falling due within one year : Liabilities reserves
Total funds Balance Sh Current ass Debtors Cash at ban Creditors: a Net Curren Capital and Called up sl	carried forward at 31 March eet as at 31 March: ets k and in hand mounts falling due within one year : Liabilities reserves hare capital

Shareholder's funds

* During the financial year 2020/21, costs were incurred in arrangements for the closure of the Chicheley Hall business and the preparation for the sale of the property.

Royal Society (Australia) Pty Limited ACN 126112678 is the Trustee of the Royal Society Theo Murphy (Australia) Fund. It is an Australian company, the shares of which are owned by the Society.

Royal Societ	ty (London) Ltd	Royal Society 1	Trading Limited
2022	2021	2022	2021
£'000	£'000	£'000	£'000
137	110	-	_
-	_	-	(176)*
137	110	-	(176)
(5)	(4)	_	(9)
132	106	_	(185)
(132)	(106)	_	_
_	_	_	(185)
-	-	_	(270)
-		_	455
-	_	-	_
-	132	-	_
167	2	-	_
(167)	(134)	-	-
_	_	_	_
-	_	_	_
-	_	(1,297)	(1,297)
-	_	1,297	1,297

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27. Prior year comparison – Consolidated statement of financial activities

(incorporating an income and expenditure account)

For the year ended 31 March 2021

	Notes	Unrestricted funds £'000	Restricted funds £'000	Expendable endowment funds £'000	Permanent endowment funds £'000	2021 Total funds £'000
Income and endowments from donations and legacies	1	734	1,124	_	_	1,858
Income from charitable activities						
Grants for charitable activities	4	1,181	117,850	_	_	119,031
Trading in furtherance of charitable activities	3	7,522	522	_	_	8,044
		8,703	118,372	_	_	127,075
Other trading activities	3	110	_	_	_	110
Income from investments	2	786	654	802	2,615	4,857
Other income		-	23	-	_	23
		896	677	802	2,615	4,990
Total income before exceptional item		10,333	120,173	802	2,615	133,923
Exceptional net income from property sale	5	2,247	_	-	_	2,247
Total income		12,580	120,173	802	2,615	136,170
Expenditure on raising funds	6	1,191	303	127	474	2,095
Expenditure on charitable activities	7					
Promoting science and its benefits		261	81	-	_	342
Supporting and recognising excellence in science		8,275	106,397	_	_	114,672
Providing scientific advice for policy		1,945	2,099	-	_	4,044
Fostering international and global cooperation		885	12,279	_	_	13,164
Education and public engagement		2,998	1,107	-	_	4,105
		14,364	121,963	_	_	136,327
Total expenditure		15,555	122,266	127	474	138,422
Net (expenditure)/ income before net gains/ (losses) on investments)	(2,975)	(2,093)	675	2,141	(2,252)
Net gains on investments	18	8,462	4,015	11,275	38,346	62,098
Net income for the year		5,487	1,922	11,950	40,487	59,846
Gross transfers between funds	23	1,986	1,834	(1,331)	(2,489)	_
Actuarial gains/(losses) on defined benefit pension scheme	25	(2,504)	_	_	_	(2,504)
Net movement in funds		4,969	3,756	10,619	37,998	57,342
Total funds brought forward		80,445	36,729	36,989	123,085	277,248
Total funds carried forward		85,414	40,485	47,608	161,083	334,590

28. Prior year comparison Analysis of net assets between funds – Group

	Unrestricted funds £'000	Restricted funds £'000	Expendable endowment funds £'000	Permanent endowment funds £'000	2021 Total funds £'000
Funds balances at 31 March 2021 are represented by:					
Intangible assets	228	_	_	-	228
Tangible fixed assets	9,727	_	_	_	9,727
Heritage assets	49,163	_	_	_	49,163
Investments	48,134	40,485	47,608	161,083	297,310
Net current liabilities	(9,576)	_	_	_	(9,576)
Creditors: Due after one year	(45)	_	_	_	(45)
Defined benefit pension scheme liability	(12,217)	_	_	_	(12,217)
Net assets	85,414	40,485	47,608	161,083	334,590

29. Prior year comparison

Movements on Trust and specific funds in year – Group

	Brought forward at 1 April				Investment and actuarial gain/	Carried forward at 31 March
	2020 £'000	Income £'000	Expenditure £'000	Transfers £'000	(loss) £'000	2021 £'000
Permanent endowment funds						
Life Sciences Trust	14,511	314	(57)	(596)	4,454	18,626
Maths and Physical Sciences Trust	13,336	288	(52)	(548)	4,093	17,117
RW Paul Instrument Fund	14,361	310	(56)	(175)	4,408	18,848
Theo Murphy – UK	67,396	1,456	(264)	(855)	20,686	88,419
Theo Murphy – Australia	2,052	_	_	-	1,199	3,251
Other Permanent Endowments	11,429	247	(45)	(315)	3,506	14,822
Total permanent endowment funds	123,085	2,615	(474)	(2,489)	38,346	161,083
Expendable endowment funds						
General Trust Fund	14,836	322	(51)	(481)	4,522	19,148
Life Sciences Trust	8,479	184	(29)	(349)	2,585	10,869
Maths and Physical Sciences Trust	4,637	100	(16)	(192)	1,413	5,943
Other Expendable Endowments	9,037	196	(31)	(309)	2,755	11,648
Total expendable endowment funds	36,989	802	(127)	(1,331)	11,275	47,608
Restricted funds						
Life Sciences Trust	4,819	67	(1,394)	772	582	4,846
Maths and Physical Sciences Trust	3,766	70	(1,044)	511	754	4,057
Enterprise Fund	8,621	_	(200)	-	(866)	7,555
Nutrition in Old Age Fund	5,916	116	(19)	(18)	1,257	7,252
Other restricted funds	13,607	119,920	(119,609)	569	2,288	16,775
Total restricted funds	36,729	120,173	(122,266)	1,834	4,015	40,485
Unrestricted funds						
General Trust Fund	15,348	310	(483)	483	3,172	18,830
BEIS Science and Research	-	992	(992)	-	_	-
Revaluation Reserve	47,856	-	_	(315)	_	47,541
Defined Benefit Pension Reserve	(10,717)	_	1,004	_	(2,504)	(12,217)
General Purpose	27,958	11,883	(15,689)	1,818	5,290	31,260
Total unrestricted funds	80,445	13,185	(16,160)	1,986	5,958	85,414

	Brought forward at 1 April 2020 £'000	Income £'000	Expenditure £'000	Transfers £'000	Investment and actuarial gain/ (loss) £'000	Carried forward at 31 March 2021 £'000
Total for all trusts						
Life Sciences Trust	27,809	565	(1,480)	(173)	7,621	34,342
Maths and Physical Sciences Trust	21,739	458	(1,112)	(229)	6,260	27,116
RW Paul Instrument Fund	14,361	310	(56)	(175)	4,408	18,848
Theo Murphy – UK	67,396	1,456	(264)	(855)	20,686	88,419
Other Permanent Endowments	11,429	247	(45)	(315)	3,506	14,822
Theo Murphy – Australia	2,052	_	_	_	1,199	3,251
General Trust Fund	30,184	632	(534)	2	7,694	37,978
Other Expendable Endowments	9,037	196	(31)	(309)	2,755	11,648
Enterprise Fund	8,621	_	(200)	_	(866)	7,555
Nutrition in Old Age Fund	5,916	116	(19)	(18)	1,257	7,252
Other Restricted Funds	13,607	119,920	(119,609)	569	2,288	16,775
BEIS Science and Research	_	992	(992)	_	_	-
Revaluation Reserve	47,856	_	_	(315)	_	47,541
Defined Benefit Pension Reserve	(10,717)	_	1,004	_	(2,504)	(12,217)
General Purpose	27,958	11,883	(15,689)	1,818	5,290	31,260
Total	277,248	136,775	(139,027)	_	59,594	334,590

Reference and administrative details

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Physical Secretary Sir Peter Bruce

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