




# Financial Report & Accounts

For the year ended  
31 March 2019



ROYAL  
ACADEMY OF  
**ENGINEERING**



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# Introduction

Engineering matters. It underpins our daily lives, drives economic growth, plays a critical role in addressing major societal challenges and helps ensure our readiness for the future, from providing a sustainable supply of food, water and clean energy, to advancing healthcare, and keeping us safe and secure.

As the UK's national academy for engineering and technology, the Royal Academy of Engineering brings together the most talented and successful engineers - our Fellows - to advance and promote excellence in engineering for the benefit of society.

We harness their experience and expertise to provide independent advice to government, to deliver programmes that help exceptional engineering researchers and innovators realise their potential, to engage the public with engineering, and to provide leadership for the profession.

Drawn half from business and half from academia, and from all branches of engineering including areas of emerging technology, our 1,600 Fellows give their time and expertise voluntarily.

Engineering is a global profession addressing global challenges, so we work with partners across the world to advance engineering's contribution to society on an international, as well as a national scale.

## Academy values

### Excellence and continual improvement

As a leadership body for the profession we are committed to demonstrating excellence in both what we do and how we do it. We strive for the highest quality in everything we deliver, and we reflect on and learn from our achievements and our experiences. We identify and share best practice, and we continually review how we can improve. We are ambitious, and committed to delivering on that ambition.

### Integrity

As a charity and a National Academy, we strive for accuracy, balance, and the highest levels of integrity in all of our activities and outputs. Our work is considered and evidence based. We aim to reflect and respond to the needs and challenges of our stakeholders, and the context in which we operate. We are consistent in our values and our purpose - to advance and promote excellence in engineering for the benefit of society.

### Partnership and collaboration

We work in partnership and collaboration with our stakeholders for mutual gain. We respect others' expertise and know where we most add value. We work collaboratively as a staff team and as a Fellowship, sharing knowledge and expertise between departments and disciplines, and spotting opportunities to work together in new and integrated ways to accelerate progress towards our strategic objectives.

### Inclusivity and equality of opportunity

We ensure that all individuals - regardless of gender, ethnicity, age, sexual orientation, disability, religion and belief, socio-economic or educational background - are valued, treated with dignity and respect and have equal opportunities available to them. We value the diversity and different perspectives that people from different backgrounds bring to their work, and a commitment to diversity and inclusion underpins everything that we do. We invest in all our people. We do not tolerate discrimination.

# Report of Trustee Board

## Objectives and activities for the public benefit

### Charitable activities

We bring together engineers, policymakers, entrepreneurs, business leaders, academics, educators and the public, focusing on four areas of activity for public benefit:

- Supporting engineering innovation.
- Inspiring young people and advancing engineering education.
- Leading and shaping engineering policy.
- Engaging the public with engineering.

In pursuing its objectives, the Academy aims to position engineering at the centre of society, and to demonstrate the contribution made by engineers and engineering to society in the UK and beyond. The Trustee Board confirms that it has referred to the guidance contained in the Charity Commission's general guidance on public benefit, both when reviewing the Academy's aims and objectives and also in planning future activities.

### Activities, achievements and performance

#### Supporting engineering innovation

##### **Main public benefits:**

- Supporting high-quality engineering and technology research and encouraging entrepreneurs and innovators to develop ideas and provide solutions to societal challenges.
- Facilitating links between industry and universities to enable innovative, use-inspired research.
- Enhancing the links between UK and international engineers and encouraging cross-country collaboration to address global challenges.

##### **Main achievements**

Enterprise Hub

- In 2018/19, the Academy awarded 19 Enterprise Fellowships and supported 21 promising leaders of high-growth engineering SMEs through the SME Leaders programme.
- To date, there are 168 Hub members who have started 114 companies, creating more than 430 jobs. Since

becoming Hub members, they have attracted £90 million in follow-on funding for their startups, spin-outs and SMEs.

Research

- The Department for Business, Energy and Industrial Strategy (BEIS) made a substantial investment in the Academy through the Investment in Research Talent fund, which has grown the research programmes by 200% and allowed the Academy to expand the number of grants awarded.
- Achievements in programmes funded by government grants included:
  - more than 55 research chairs and Senior Research Fellows were in post during the year, co-funded by an industry sponsor
  - 13 Chairs in Emerging Technologies were awarded
  - 67 Research Fellows (including RAEng/Leverhulme Trust Senior Research Fellowships, RAEng Research Fellowships, RAEng/Daphne Jackson Trust Fellowships, RAEng/Engineering for Development Research Fellowships, RAEng/Lloyd's Register Foundation Fellowships, and UK Intelligence Community Postdoctoral Research Fellowships) were in post
  - 18 fellowships were awarded under the Industrial Fellowships scheme, which facilitates knowledge transfer between academia and industry by placing an engineering researcher in an industrial setting
  - 14 researchers were awarded APEX Awards (Academies Partnership in Supporting Excellence in cross-disciplinary research) for interdisciplinary proposals, which are funded in partnership with the Royal Society and the British Academy, with support from the Leverhulme Trust

International

- In 2018, the third Africa Prize for Engineering Innovation was awarded to Brian Gitta, a Ugandan software engineer whose innovation tests for malaria without drawing blood. Matibabu is a low-cost, reusable device that clips onto a patient's finger, requiring no specialist expertise to operate, and the results are available within one minute on a linked mobile phone. He and three other finalists delivered their presentations at a ceremony in Nairobi, Kenya, before Africa Prize judges and the audience chose a winner.
- In March 2019, Muzalema Mwanza, Founder of Safe Motherhood Alliance, a Zambia-based social enterprise that develops simple, low-cost disposable baby delivery

kits, won Pitch@Palace Africa 2.0. Her innovation was also shortlisted for the 2019 Africa Prize.

- Achievements in programmes funded by government grants included:
  - Frontiers of Engineering for Development symposia led to funding for 13 projects between researchers across several countries and Frontiers of Development symposia also led to funding for 13 collaborative projects between international researchers
  - 15 universities were supported as part of the Higher Education Programmes in sub-Saharan Africa programme
  - eight engineering institutions were supported under the Africa Catalyst programme
  - under the Newton Fund, 220 researchers from 13 Newton Fund partner countries were trained under the Leaders in Innovation Fellowships scheme, 51 bilateral collaborations with six countries were funded as part of the Industry-Academia Partnership Programme, 24 Distinguished Visiting Fellowships were awarded, and seven research projects were funded via the UK-China Urban Flooding Research Impact Programme.

#### Inspiring young people and nurturing educational skills

##### **Main public benefits:**

- Meeting the needs of the UK economy and society by encouraging more young people to study engineering.
- Promoting diversity and enabling underrepresented groups to take up a career in engineering.
- Enhancing teaching and learning in STEM subjects.

##### **Main achievements**

Inspiring young people

- Over the past year, the *This is Engineering* campaign has outperformed initial expectations and the campaign films have been viewed more than 35 million times.
- The Academy carries out rigorous quantitative evaluation after every season launch to test campaign effectiveness among the target audience of 13 to 18 year olds. The last exercise showed that the campaign:
  - raises understanding about engineering – 67% of those who have seen it understand what engineers do, up from 36% before its launch
  - raises the prestige of engineering – 66% of those who have seen the campaign believe that engineering is a prestigious career, up from 47% before its launch

- is encouraging young people to consider engineering careers – 72% of those who saw the campaign say they are considering a career in engineering, up from 39% before its launch.
- The campaign also provides a legacy for the Year of Engineering, the 2018 government-led initiative to inspire the next generation to become engineers. The Year built successfully on a multitude of national and regional initiatives that already promote engineering and associated skills, including the Academy's own activities such as *Ingenious*, education programmes and STEM learning resources.
- The Academy has worked closely with Engineering UK, both on *This is Engineering* and more broadly on the repositioning of the Tomorrow's Engineers programme.

Engineering education

- In the past year, the 41 teacher coordinators that the Academy supports led 185 regional network meetings that were attended by over 1,000 STEM teachers from 700 schools. It is estimated that nearly 84,000 students benefited from their teacher attending these training sessions, of which 48% were female.
- Nearly 8,000 resource boxes with associated training have been provided to primary and secondary schools across the UK in the last year alone. The resources are also free to download on a variety of platforms and have been downloaded 5,000 times in 2018/19.
- The Academy's regional STEM support programmes in Barrow-in-Furness and the Welsh Valleys continue to provide long-term, targeted interventions in areas of high socioeconomic deprivation. Together, they have supplied more than 10,000 STEM learning opportunities to students from 15 primary schools, 14 secondary schools and three post-16 colleges in the last academic year, with a gender ratio of exactly 50:50.
- The Welsh Valleys project, supported by the Panasonic Trust, also provides funding for the Panasonic Trust Future Engineers Awards. These support students from secondary schools, who will go on to do an engineering degree at university, to study either vocational engineering courses or STEM A levels at local colleges. In 2018/19, nine awards were made to promising future engineers and these students have also taken on an ambassadorial role, going back in to their schools to support teaching and learning and encourage other prospective engineers.
- In higher education, the Academy continues to support engineering undergraduate students through the Engineering Leaders Scholarship scheme. At present,

# Report of Trustee Board

the scheme supports 108 students, who each receive £5,000 for personal development, which will put them on an accelerated path to leadership positions within engineering, usually within five years of the end of their awards.

- In 2018/19, it awarded an additional three enhanced scholarships worth £10,000 each to students from underrepresented backgrounds with the launch of the Sir Ralph Robins Scholarship fund. These students will receive additional support, mentoring and internship opportunities from Rolls-Royce.
- In the last year, the Academy's Visiting Professors (VP) programme supported 78 leading engineers from industry to deliver 1,250 taught sessions to engineering undergraduates in 42 different universities across the UK, including nine post-92 universities. Their teaching reached more than 15,000 undergraduate engineering students.

## Diversity and inclusion

- Following the successful pilot of the Graduate Engineering Engagement Programme, the Academy launched a full programme in June 2018 with the first set of events taking place between September and December 2018.
- The programme's aim is to increase employment opportunities for underrepresented groups in engineering and focuses on students from post-92 universities. Over the past year, 184 students attended Graduate Engineering Engagement Programme events: 28% were female, 91% were from ethnic minority backgrounds and 80% were from newer universities or socioeconomically disadvantaged backgrounds.
- In June 2018, the Academy launched an Inclusive Recruitment Toolkit developed by its D&I Leadership Group (DILG), which aims to help employers refine their recruitment processes so they are more inclusive and reduce opportunities for bias.
- In November 2018, the toolkit was followed by the *D&I in engineering measurement* booklet, which provides a framework for organisations to measure D&I from an employee lifecycle perspective, looking at leadership, recruitment and attraction, retention and progression.

## Leading and shaping engineering policy

### Main public benefits:

- Acting as a leadership body and collaborating with professional engineering organisations to promote engineering's value.
- Providing responses and advice to parliamentary, governmental and other national bodies on a range of engineering topics.

### Main achievements

#### National Engineering Policy Centre

- The beginning of 2019 saw the launch of the National Engineering Policy Centre, an ambitious partnership led by the Academy between the 39 different engineering organisations, representing 450,000 engineers. The centre allows partners to work collaboratively on issues that affect, or should be informed by, the whole profession, while respecting the distinct expertise of each institution.
- Early work includes policy studies on the ethics of autonomous systems and sustainable housing infrastructure, and a pilot for the development of a network of Policy Fellows.

#### Policy

- Over the year, the Academy has also published several policy reports.
  - In partnership with The Royal Society, it published *Greenhouse Gas Removal (GGR)*, a report that presents an ambitious plan for the UK to lead the way in deploying GGR methods to avoid the devastating impacts of climate change. The report has influenced the BEIS Carbon Capture Utilisation and Storage Action Plan and encouraged research funding.
  - In October 2018, it launched *Increasing R&D investment: business perspectives*, which was based on findings from interviews with engineering chief technology officers. The report aimed to ensure that engineering businesses are contributing to the discussion of how the UK can achieve its ambitious target of reaching 2.4% of GDP invested in R&D by 2027.
  - The Academy's first online policy resource *Towards trusted data sharing* uses a series of 10 case studies to illustrate emerging examples of data sharing and some of the key enablers and constraints, including governance, business

models, technologies and regulation. Drawing on learning from the case studies, a practical checklist for organisations was developed to support better data sharing in the public and private sectors.

#### Education policy

The Academy's education policy team also published several reports throughout the year, including:

- *Career Framework for University Teaching: background and overview* - an open-access resource to help universities evaluate and reward the teaching achievements of their academic staff.
- *Designing inclusion into engineering education* - a fresh, practical look at how diversity impacts on engineering and strategies for change within the education system.
- *Learning to be an engineer: the role of school leadership* - a look at the critical role of school leadership teams in the delivery of engineering education.
- *Tinkering for learning* - learning to teach engineering in the primary and Key Stage 3 classroom.
- *Engineering and manufacturing T level: Common core content* - Academy guidance for the employers who are drafting the content of the engineering and manufacturing T level.
- *Engineering the future: training today's teachers to develop tomorrow's engineers* - exploring the potential for supporting university students training to become primary teachers in computing, design and technology, and science, to understand more about engineering to increase the likelihood of them introducing engineering topics into their teaching.
- *Engineering skills for the future* - the 2013 Perkins review revisited to provide an overview of the current engineering skills landscape and make recommendations for improvement.
- *Evaluation of university technical colleges: final report* - evaluating project-based learning and employer-informed curriculum development and delivery aspects of university technical colleges between January 2017 and December 2018 to understand effective practice as well as the broader challenges.

## Engaging the public with engineering

### Main public benefits:

- Engaging the public in debate on engineering and its impact on society.
- Communicating the excitement and breadth of engineering to diverse audiences.
- Recognising great engineering through prizes and awards.

### Main achievements

#### Awards

- The MacRobert Award for innovation in UK engineering for 2018 was awarded to Owlstone Medical for its breath biopsy platform, a non-invasive procedure that aims to identify a range of diseases through a simple, quick and painless breathalyser test.
- Other awards in 2018 were:
  - Sir Frank Whittle Medal - awarded to John Bartlett CBE FREng, an outstanding tunnelling engineer whose responsibilities included the Dartford Tunnel, London Underground's Victoria Line and the Channel Tunnel.
  - Sir George Macfarlane Medal - awarded to Khoulood El Hakin, Project Manager at Bechtel Ltd. for her role in the development of Crossrail's Farringdon Station.
  - Colin Campbell Mitchell Award - University of Nottingham and Teledyne e2v, whose collaborative work led to transformative approaches to minerals processing using high-power microwave energy.
  - Silver Medals - awarded to: Dr Jade Alglave, Reader in Computer Science at University College London; Dr Iain Scott, Capability Manager at Leonardo; and Professor Chris Sutcliffe, Professor of Additive Manufacturing at the University of Liverpool and Research and Development Director at Renishaw.
  - Major Project Award - awarded to the team behind the Ordsall Chord, a new railway line connecting Manchester's Piccadilly and Victoria stations for the first time.
  - President's Medal - awarded to Professor Sir William Wakeham FREng, former Senior Vice-President of the Academy, for his role leading the 2013 Governance Review, which has had a huge and significant impact on the organisation.
  - Prince Philip Medal - awarded to Lucien Bronicki, Founder of Ormat Industries Ltd., for his contribution to cost-effective power recovery by successfully developing power plants using organic fluids.

# Report of Trustee Board

- ERA Foundation Entrepreneurs Award - awarded to Jack Pearson, CEO of EngX, which is automating manufacturing production processes through 3D printing technologies.
- Owlstone Medical received extensive media coverage in outlets including the *Daily Mail*, *Daily Telegraph* and *Metro*, local radio and newspapers, and engineering trade press, while all the finalists generated interest with coverage in Reuters, local media and trade publications.
- A number of significant events were held throughout the year, including the annual Academy Awards Dinner and *In conversation with MacRobert Award 2018 winner: Owlstone Medical.*

## Public engagement

- In 2018, the *Ingenious* public engagement grant scheme awarded funding to 26 projects that focus on underserved communities, including women and girls, BAME groups, and communities in socially deprived areas.
- To date, the scheme has funded more than 200 projects and provided opportunities for almost 6,000 engineers to take part in public engagement activities that have reached over 2.5 million people.
- As part of its drive to encourage engineers to engage with the public, the Academy ran a communications training pilot for engineers and STEM professionals in collaboration with the Trans-Pennine STEM Ambassadors Hub. Workshops were held in Bradford, Manchester and York, attended by nearly 40 engineers and STEM professionals who were then invited to participate in public engagement events to put their learning into practice.
- Throughout 2018, the Academy was also an active partner in the government's Year of Engineering. Collaborative activities included a screening of *Black Panther* at the Science Museum to mark International Women in Engineering Day, which was attended by more than 400 people.

## Communications

- The Academy continues to extend its coverage in traditional and social media. It has over 248,000 followers across its social media channels and its posts are seen more than 1.4 million times every month. Over the past year, it has also received 2,215 media mentions, averaging to 184 pieces per month. This includes 189 broadcasts on radio and TV.

- The Academy's flagship magazine *Ingenia* is distributed to more than 11,400 readers each quarter, of which 4,500 copies are sent to schools, colleges and sixth forms. The magazine is being tailored towards a younger readership. To help achieve this, focus groups were held in 2018/19 with school students aged 14 to 16 years old. Feedback has informed development of the magazine.

## International engagement

- In February, the fourth Queen Elizabeth Prize for Engineering (QEPrize) was awarded to the four engineers responsible for creating GPS - the first truly global, satellite-based positioning system. The four winners, Dr Bradford Parkinson, Professor James Spilker, Hugo Fruehauf and Richard Schwartz, were awarded the £1 million prize, at an event held at the Academy's headquarters by Lord Browne of Madingley FRS, Chairman of the QEPrize Foundation, in the presence of HRH The Princess Royal.
- The announcement received worldwide media coverage, reaching approximately 2.4 billion people and increasing awareness of the prize across the world. It was featured by a range of global media including the BBC, and in *The Times*, the *Daily Telegraph*, *CBC*, *Forbes*, *Mail Online*, *Financial Times* and *The Economist*. It was covered across the UK, US, Canada, France, Germany, Italy, Japan, Korea, Argentina, and Australia.

## Plans for future periods

As set out in its strategic plan, the Academy will focus on the following strategic challenges.

### Strategic challenge 1: *make the UK the leading nation for engineering innovation and businesses*

**Our aim** is to support the development of successful engineering research, innovation and businesses in the UK in order to create societal benefit.

#### We will achieve this by:

- marshalling the expertise in our Fellowship and networks to deliver substantial improvement in the environment for the creation of successful, innovative, wealth-creating UK businesses at scale
- growing our investment in research that brings together industry and the best engineering researchers
- developing our Enterprise Hub as an engine for a vibrant, well-networked and supportive community for growing innovative businesses, and as an exemplar of support for innovation and entrepreneurship in engineering and technology
- encouraging international engineering collaborations, supporting the expansion of international networks, and allowing researchers to gain international experience and access world-class expertise
- deploying our Fellows and networks to bring a strong engineering influence to bear on EU, national, regional and local industrial policy.

### Strategic challenge 2: *address the engineering skills crisis*

**Our aim** is to develop an education and skills system that inspires people from all backgrounds and promotes UK engineering excellence, and engage the next generation in the opportunities presented by a career in engineering, to increase the number of young people joining the profession.

#### We will achieve this by:

- working with partners to recruit many more women and other underrepresented groups to engineering
- influencing positive structural change and innovation in the education, training, recruitment and retention of engineers and technicians

- working with partners to transform the effectiveness of engagement activities that bring an understanding of and aspiration for engineering to young people
- helping teachers to embed engineering in schools and colleges through programmes that support teaching and learning, and bring real-world engineering into all stages of the formation of engineers
- promoting the importance of environmental, economic and social sustainability in engineering practice and education
- recognising and nurturing future engineering leaders.

### Strategic challenge 3: *position engineering at the heart of society*

**Our aim** is to improve public awareness and recognition of the crucial role of engineers everywhere.

#### We will achieve this by:

- engaging with the public and other professions and sharing the value of engineering
- increasing the media profile and impact of the Academy and engineering
- undertaking communications and engagement activities that create a cultural shift in how engineers are perceived across the whole of society
- convening the most influential people for debate and discussion to find and shape engineering solutions, and provide a clear and consistent voice for engineering
- developing our network of engineers into powerful advocates for the profession
- advising UK and EU governments in all areas of policy that have an engineering dimension to delivery
- recognising, celebrating and promoting excellence through awards and prizes
- supporting the Queen Elizabeth Prize for Engineering in raising its profile to the level of a Nobel Prize.

# Report of Trustee Board

## Financial Review

### Results for the Year

The Academy has produced group accounts for the year, having consolidated its accounts with those of its two subsidiaries: the Queen Elizabeth Prize for Engineering (QEPrize) Foundation and RAE Trading Limited. The group accounts were prepared under the Statement of Recommended Practice 2015 as defined in the Financial Reporting Standard 102.

Group income for the year was £36.7 million (2017/18 £31.5 million). During the year, donations totalled £1.6 million (2017/18 £1.5 million), of which £0.2 million was to the Queen Elizabeth Prize for Engineering Foundation. Other major sources of income during the year were: investments, subscriptions, events and facilities hire income at a total of £3.2 million compared to £3.1 million in the previous year.

Group expenditure on charitable activities was £36.0 million (2017/18 £30.2 million), 96% of total resources expended. Of this total, £32.1 million represented charitable activities and grants paid under various programmes and £3.9 million represented the costs of operating those programmes.

The cost of generating funds across the group was £1.6 million, 4% of total resources expended. The cost of generating funds consists of fees paid to investment managers, facilities hire and catering, and the staff costs and expenses associated with fundraising. The Academy is continuing with major fundraising activity aimed at obtaining funds for the enhancement and expansion of the Academy's educational programmes and public engagement activities.

### Royal Academy of Engineering

Total income for the year was £35.0 million (2017/18 £29.9 million). The Academy is grateful to the Department for Business, Energy and Industrial Strategy for providing the government core grant to support activities aimed primarily at promoting engineering research in the UK. The core grant at £11.9 million (2017/18 £11.4 million) was the largest contribution to funds and represented 32% of total group incoming resources.

Income from other grants and contracts increased by 28% to £20.0 million. Included in this amount were grants received from the Department for Business, Energy and

Industrial Strategy. £5.5 million was received from the Newton Fund for Academy programmes. £5.5 million was received from the Global Challenges Research Fund for Academy programmes. £4.6 million was received from the Investment in Research Talent fund for Academy programmes.

Expenditure on charitable activities was £34.4 million compared to £29.5 million in the previous year. An analysis based upon the principal objective of each activity shows that, of the total charitable expenditure of £34.4 million: 77% on enhancing engineering capacity; 10% on promotion of and leadership in engineering; 8% on inspiring young people; and 4% on leading and shaping engineering policy. Employment costs increased from the previous year by 4% to £5.9 million due to additional recruitment to deliver activities such as the Global Challenges Research Fund and Investment in Research Talent programmes.

### The Queen Elizabeth Prize for Engineering Foundation

Total income for the year was £0.9 million (2017/18 £0.8 million). Expenditure on charitable activities was £1.8 million compared to £0.8 million the previous year. The Queen Elizabeth Prize for Engineering is awarded biennially and an award was made in 2018/19. The Foundation pays a management fee to the Academy for services, which includes staff employed and office space.

### RAE Trading Limited

The commercial activity undertaken by the company during the year was the provision of rooms and catering services within Prince Philip House, primarily to corporate customers. Catering services are also provided to the Academy at cost. Revenue for the year was £1.4 million (2017/18 £1.1 million). Operating expenditure, including the cost of providing a service to the Academy, was £1.1 million (2017/18 £1.0 million). The net profit for the year before gift aid was £269,000 compared to £74,000 in the previous year.

### Group asset value

The carrying value of the group's net assets was £65.2 million (2017/18 £64.0 million). Investments were valued at £50.2 million, with the Academy holding £25.5 million and the Foundation holding £24.7 million. Tangible fixed assets net book value at £24.8 million included the £11.2 million net book value of the Carlton House Terrace lease and the £12.8 million of leasehold improvements to Prince

Philip House. The main liability was a bank loan of £11.5 million, which funded the extension of Academy's property lease secured in 2017. The loan also funded part of the lower ground floor extension and settled the previous loan with NatWest. The value of the group's restricted funds increased over the year by £1.0 million. The Academy's general fund value increased over the year by £0.2 million.

### Fixed Assets

Capital expenditure during the year amounted to £0.3 million, which was almost entirely on computer systems and equipment and office fixtures and fittings.

### Investments

The value of the Academy's investment portfolio increased over the year by £1.9 million to £25.5 million. Realised and unrealised investment gains during the year were £1.0 million. 38% of the Academy's investment portfolio is held in UK equities, 34% in global equities, 16% in fixed interest bonds and 12% in asset backed and alternative investments. Income to the Academy from dividends decreased by 8% during the year to £811,000 while bank interest stayed flat at £9,000. Group investment income decreased by £32,000 to £1.6 million, of which £694,000 was income from the Foundation's investments, which are managed separately from those of the Academy.

The Academy's investments are held in a managed investment fund, index funds and designated charity income funds. The Queen Elizabeth Prize for Engineering Foundation's investments are held in a managed investments fund.

### Reserves

The Finance Committee has considered the level of Academy's general reserves as part of the twice-yearly risk assessment review procedure. The Committee has concluded that the required level of reserves is such as would enable the Academy to continue as a going concern in the event of a major reduction in income from existing sources. The Trustee Board, taking into account the recommendation of the Committee, has agreed the following reserves policy:

The Academy should maintain a minimum level of free reserves of £6 million. The Academy's free reserves should not exceed a maximum level of £40 million.

The reserves policy will continue to be monitored and reviewed by the Finance Committee who forward

recommendations to the Trustee Board for their consideration should any amendments be required to the policy.

The free reserves of the Academy are made up as follows:

Year ended 31 March	2019 £000	2018 £000
Total funds as per group balance sheet	65,177	63,975
Exclude:		
Restricted funds	34,085	33,102
Unrestricted funds tied up in tangible fixed assets	12,152	12,300
Designated and special funds	408	390
<b>Free reserves</b>	<b>18,531</b>	<b>18,183</b>

The Trustees of the Queen Elizabeth Prize for Engineering Foundation consider the level of the Foundation's reserves as part of their risk assessment review process. These reserves are restricted within the group balance sheet. There are no reserves held by RAE Trading Limited as all profit arising is gift aided to the Academy.

The specific uses and needs of the restricted and designated funds held by the Academy are detailed separately in the notes to the accounts referred to above. The Academy's reserves are available and adequate to fulfil the current obligations of the Academy.

# Report of Trustee Board

## Recipients of Academy grants

The Academy made over 1,000 grants and awards to organisations and individuals in 2018/19 totalling £19.2 million. The first 50 organisations, in order of total amount of cash paid to recipients, are listed below.

Amount in £	Visiting Professors and other programmes			Industrial secondments	Total
	Research				
1	Imperial College London	1,488,071	21,863	116,991	1,626,925
2	University College London	1,221,048	92,079	54,250	1,367,377
3	University of Oxford	1,001,716	7,500	54,250	1,063,466
4	University of Southampton	608,879	24,242	8,886	642,006
5	University of Manchester	556,161	56,940		613,102
6	University of Glasgow	490,099	26,495	94,084	610,678
7	University of Bristol	472,947	2,400	91,250	566,597
8	University of Strathclyde	476,663	21,581	11,461	509,705
9	University of Cambridge	460,272	43,599		503,871
10	University of Sheffield	378,374	93,838	26,536	498,747
11	Queen's University Belfast	443,720	37,197	14,552	495,468
12	Heriot Watt University	363,162	30,077	54,250	447,490
13	University of Edinburgh	349,193	27,239	66,250	442,682
14	City, University of London	377,800	7,167	25,000	409,967
15	University of Leeds	312,874	67,157		380,031
16	Kings College London	264,433	10,000		274,433
17	Queen Mary, University of London	257,051		12,000	269,051
18	University of Warwick	170,422	94,684		265,106
19	University of York	181,234	20,520	54,250	256,004
20	University of Exeter	215,702	19,900	14,500	250,102
21	University of Birmingham	202,187	20,700	25,653	248,540
22	Aston University	181,493	57,274		238,767
23	University of Liverpool	98,160	64,250	54,250	216,660
24	University of Sussex	155,000		54,250	209,250
25	Loughborough University	126,987	48,520	29,769	205,276
26	University of Nottingham	100,085	59,437		159,522
27	Cranfield University	81,422	77,739		159,161
28	WomEng	156,633			156,633
29	University of Bath	106,247	26,314	11,438	143,998
30	Universidad EIA		119,692		119,692
31	SEO London Ltd		117,600		117,600
32	Universidad Nacional de Colombia		114,315		114,315
33	REDR UK	114,150			114,150
34	Lancaster University	90,639	13,600		104,239
35	University of Kent	84,000	14,825		98,825
36	University of Chester	80,112			80,112

Amount in £	Visiting Professors and other programmes			Industrial secondments	Total
	Research				
37	Uganda Institution of Professional Engineers (UIPE)	77,867			77,867
38	Engineers for Change Sierra Leone	75,405			75,405
39	Midland State University		70,000		70,000
40	Federal University of Petroleum Resource Effurun	-	70,000		70,000
41	University of Namibia (UNAM)		70,000		70,000
42	Institutue Of Saint Jean		69,870		69,870
43	University of Zambia - School of Engineering		69,808		69,808
44	Institution of Engineers Rwanda	69,500			69,500
45	University of Port Harcourt		69,321		69,321
46	University of Surrey	46,250	8,000	15,000	69,250
47	University of Malawi		68,783		68,783
48	Kingston University		65,286		65,286
49	Federation Of African Engineering Organizations	64,386			64,386
50	SAICE Professional Development and Projects	62,713			62,713
<b>Total</b>		<b>12,063,059</b>	<b>1,999,812</b>	<b>888,868</b>	<b>14,951,739</b>

Notes:

1. Research comprises personal Research Chairs, Senior Research Fellowships, Research Fellowships, Distinguished Visiting Fellowships, Public Engagement Awards, Newton International Fellowships, Engineering Enterprise Fellowships and other research programmes.
2. Visiting Professorships and other programmes include Visiting Professorships in areas such as sustainable development and systems design, Visiting Teaching Fellowships and other engagement and education programmes.

# Report of Trustee Board

## Reference and administrative details

<b>NAME AND REGISTERED OFFICE</b>	The Royal Academy of Engineering is a registered charity No. 293074. It is a corporate body governed by Royal Charter. The registered office is Prince Philip House, 3 Carlton House Terrace, London SW1Y 5DG.	
<b>PROFESSIONAL ADVISERS</b>	<b>Bankers</b>	National Westminster Bank plc Charing Cross, London Branch PO Box 113, Cavell House 2a Charing Cross Road London WC2H 0NN
	<b>Solicitors</b>	Bristows 100 Victoria Embankment London EC4Y 0DH
		Womble Bond Dickinson 4 More London Riverside London SE1 2AU
	<b>Auditor</b>	BDO LLP 55 Baker Street London W1U 7EU
	<b>Investment advisers</b>	OLIM Limited Pollen House 10-12 Cork Street London W1X 1PD
		Waverton Investment Management Limited 16 Babmaes Street London SW1Y 6AH

## Structure, governance and management

**TRUSTEE BOARD MEMBERS** The Academy's Trustee Board comprises 13 members elected by and from the Fellowship with the discretion to co-opt up to two additional members. Trustee Board members are the trustees of the Academy as defined under its status as a registered charity. The Trustee Board meets six times a year and it is responsible for the governance of the Academy. At these meetings, the Trustee Board will discuss issues of strategy and policy and also matters referred to it by the governance committees for Finance, Audit and Risk, Membership, Nominations and Remuneration.

All Trustee Board members and other Fellows who take part in Academy activities give their time freely; no remuneration was paid in the year beyond the reimbursement of reasonable expenses. The majority of Academy activities are controlled by committees composed of Fellows. The members of the Trustee Board during the year were:

<b>OFFICERS</b>	<b>President and Chair of Trustee Board</b>	Professor Dame Ann Dowling OM DBE FREng FRS
	<b>Vice-Presidents</b>	Naomi Climer CBE FREng Vice-President for Fellowship Engagement Professor Iain Gray CBE FREng FRS Vice-President for Committee Coordination
	<b>Chair of Finance Committee</b>	Professor Stephen Young FREng

### **TRUSTEE BOARD Members of the Trustee Board at the date the report was approved:**

Professor Dame Ann Dowling OM DBE FREng FRS  
Naomi Climer CBE FREng  
Professor Iain Gray CBE FREng FRSE  
Professor Colin Bailey FREng  
Professor Peter Goodhew CBE FREng (appointed 18 September 2018)  
Dr Martin Grant FREng (appointed 18 September 2018)  
Dame Judith Hackitt DBE FREng (appointed 18 September 2018)  
Dr David Hughes FREng  
Dr Bob Joyce FREng  
Professor Geoffrey Maitland CBE FREng  
Professor Liz Tanner OBE FREng FRSE  
Professor Stephen Williamson FREng (appointed 18 September 2018)  
Professor Stephen Young FREng

### **Other Trustees who served during the period of the report:**

Norman Haste OBE FREng (retired 18 September 2018)  
Professor Elaine Martin OBE FREng (retired 18 September 2018)  
Dr Frances Saunders CB FREng (retired 18 September 2018)  
Paul Westbury CBE FREng (retired 18 September 2018)  
Professor Richard Williams OBE FREng (retired 18 September 2018)



# Report of Trustee Board

## Election to the Trustee Board

Trustee Board members are elected for a term of three years with the exception of the President who is elected for a term of up to five years. Trustees with the exception of the President are eligible for re-election of one further three year term. The trustee election is by a ballot of Fellows each year. The Nominations Committee meets annually to draw up a list of candidates willing to stand in the trustee election and, if elected, to serve as either a Vice-President or a chair of a governance committee.

## Induction and training of Trustee Board members

A comprehensive training and induction process takes place for all new Trustees. Following election, trustees are provided with an information pack comprising the Charter, Statutes and Regulations of the Academy, a Charity Commission publication on the responsibilities of charity trustees and the strategic plan. Trustee Board members are encouraged to attend recommended external training courses for charity trustees.

## Charity Governance Code

The Trustees have undertaken a review of current Academy practice mapped against the recommended practice of the Charity Governance Code. The majority of Academy practices correspond with the recommended practices set out in the Code. There are some areas where there are recommended actions to bring the Academy into line with the Code and these will be addressed in 2019/20.

## Internal control

The Finance Committee is mandated by and reports to the Trustee Board on the following issues:

- Setting a budget prior to each financial year for approval by the Trustee Board.
- Appointing and monitoring the performance of independent investment advisers.
- Approving authorised signatories and setting limits on delegated financial authorities.
- Monitoring actual financial performance against budget.
- Reviewing the reserves policy annually.
- Ensuring that accounting rules are followed.

Detailed management accounts are prepared monthly within 10 working days of the month end and submitted quarterly to the Finance Committee. Summarised accounts are submitted at each Trustee Board meeting.

The Finance Committee meets at least four times during each financial year. Included in the items considered by the Committee during the year were the Academy's investment strategy and the performance of RAE Trading Ltd.

## MEMBERS OF THE FINANCE COMMITTEE

Professor Stephen Young FREng (Chair)  
Naomi Climer CBE FREng  
Norman Haste OBE FREng (retired 18 September 2018)  
Graeme Hobbs FREng  
Dr David Hughes FREng  
Dr Bob Joyce FREng (retired 19 November 2018)  
Professor David Lane CBE FREng FRSE (retired 18 September 2018)

## INVESTMENT POLICY

The Trustee's general powers of investment derive from and are restricted by the Trustee Act 2000. These powers are not restricted by the Academy's Royal Charter, which states that "the Board may invest any moneys of the Academy not immediately required for the purposes of the Academy".

During 2018/19 a change in the investment policy of the Academy charitable parent was implemented.

The investment objective is to generate a total return of inflation (Consumer Price Index) plus 4% per annum over the long term, after expenses. This will allow the Academy to maintain the real value of the assets, whilst funding annual expenditure at the level generally not exceeding 4% per annum.

The funds have been invested in a diversified portfolio of assets. The core of the portfolio has been invested in the income and return generating assets. Asset classes include domestic and international equities, fixed income instruments, property, commodities, cash and any other assets deemed suitable for the Academy.

## FUNDRAISING STATEMENT

Section 162a of the Charities Act 2011 requires charities to make a statement regarding fundraising activities. Although the Academy does not undertake widespread fundraising from the general public, the legislation defines fund raising as "soliciting or otherwise procuring money or other property for charitable purposes." Such amounts receivable are presented in the Academy's accounts as "voluntary income" and includes legacies and grants.

In relation to the above, the Academy confirms that all solicitations are managed internally, without involvement of commercial participators or professional fundraisers, or third parties. The day-to-day management of all income generation is delegated to the senior leadership team, who are accountable to the Trustees.

The charity adheres to the Institute of Fundraising Code of Fundraising Practice, which outlines standards expected of all charitable fundraising organisations in the UK.

# Report of Trustee Board

The Academy has received no complaints in relation to fundraising activities. Its terms of employment require staff to behave reasonably at all times.

## GRANT-MAKING POLICY

The grant and award programmes are run by committees or steering groups of Fellows of the Academy chosen based on their experience and expertise. Fellows of the Academy offer their time freely; no remuneration was paid in the year beyond the reimbursement of reasonable expenses. There is a policy of strict impartiality and no Fellow may participate in a group/award decision if there is a conflict of interest. The role of Academy staff is solely one of administration of programmes.

Grant awardees are issued with contracts and progress is monitored and recorded via a grant management system.

## REMUNERATION POLICY

The Academy's policy is to pay staff salaries at the market mid-point. Salaries are reviewed in alternate years following a market benchmarking exercise conducted by an independent consultancy. The last independent review was undertaken early 2019 to inform the salary review implemented with effect from 1 April 2019.

The remuneration of the Chief Executive and directors is set annually by the Remuneration Committee. In setting appropriate levels of senior management pay, the Remuneration Committee considered the skills, experience and competencies required for each role, and the remuneration level for those roles in sectors where suitable candidates would be found.

## RISK MANAGEMENT

The Trustees have agreed a risk appetite statement and associated risk management policy. The Audit & Risk Committee reviews the risk register four times per year. The Chair of the Audit & Risk Committee provides updates to the Trustee Board. Risk management is supported by the work of the Audit & Risk Committee as well as various Operating Committees. The most significant risks currently faced by the Academy are shown in the table below.

Risk	Principal Mitigation
Adverse outcome from expected Spending Review in 2019	Joined up approach taken with sister Academies on priorities and activities. We are building evidence of impact across our programmes.
<i>This is Engineering</i> Campaign fails to deliver expected impact	A strong governance framework is in place to address quality, reputation and finances. A development plan is in place to broaden campaign funding.
The Queen Elizabeth Prize for Engineering Foundation has yet to raise sufficient funds to sustain the prize in perpetuity	An international fundraising strategy is in place. Progress against that strategy is reviewed regularly.

## SENIOR MANAGEMENT TEAM

Day-to-day management of the Academy is the responsibility of the Chief Executive who with the directors comprise the senior management team listed below, which meets weekly. Strategy is set by the Trustee Board, implemented by the senior management team and oversight is provided by Academy Committees.

The directors who served during the period of the report are as follows:

Chief Executive	Dr Hayaatun Sillem
Director, Finance and Corporate Services	Stuart Anthony (resigned 13 August 2018)
Director, Development	Samantha Bagchi
Director, Operations and Finance	Chris Boyle (appointed 25 March 2019)
Director, Programmes	Dr Andrew Clark
Director, Engineering and Education	Dr Rhys Morgan
Director, Policy	Dr Nick Starkey
Director, Queen Elizabeth Prize for Engineering	Keshini Navaratnam

## STATEMENT OF TRUSTEE BOARD'S RESPONSIBILITIES

The Trustee Board, as charity trustees, are responsible for preparing the Report of Trustee Board and the financial statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

Charity law requires the trustees to prepare financial statements for each financial year that give a true and fair view of the state of affairs of the group and parent charity and of the incoming resources and application of resources of the group for the year. In preparing those financial statements, the trustees are required to:

- select suitable accounting policies and then apply them consistently
- observe the methods and principles in the charities SORP
- make judgements and accounting estimates that are reasonable and prudent
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the charity will continue in business.

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

Signed under delegated authority on behalf of Trustee Board on 15 July 2019.

**Professor Dame Ann Dowling OM DBE FREng FRS, President**

**Professor Stephen Young FREng, Chair of Finance Committee**

# Auditor's report

## Independent auditor's report to the Trustee Board of the Royal Academy of Engineering

### OPINION

We have audited the financial statements of the Royal Academy of Engineering ("the Parent Charity") and its subsidiaries ("the Group") for the year ended 31 March 2019 which comprise the consolidated statement of financial activities, the group 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).

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 2019 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.

### 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 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. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### CONCLUSIONS RELATED TO GOING CONCERN

We have nothing to report in respect of the following matters in relation to which the ISAs (UK) require us to report to you where:

- the Trustees' use of the going concern basis of accounting in the preparation of the financial statements is not appropriate; or
- the Trustees have not disclosed in the financial statements any identified material uncertainties that may cast significant doubt about the Group or the Parent Charity's ability to continue to adopt the going concern basis of accounting for a period of at least twelve months from the date when the financial statements are authorised for issue.

### OTHER INFORMATION

The other information comprises the information included in the Financial Report, other than the financial statements and our auditor's report thereon. The other information comprises the Chair of the Finance Committee's statement and the Report of Trustee Board. The Trustees are responsible for the other information.

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.

In connection with our audit of the financial statements, 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.

### OPINION ON OTHER MATTER AS REQUIRED BY BEIS GRANT LETTERS

In respect of the core grant, dated 17 June 2016, and Investment in Research Talent, dated 26 July 2017 and 3 July 2018, from the Department for Business, Energy and Industrial Strategy (BEIS), in our opinion, in all material aspects, the grant payments received from BEIS have been applied for the purposes set out in the Grant Letters and in accordance with the terms and conditions of the agreement.

### 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 Act 2011 requires us to report to you if, in our opinion;

- the information contained in the financial statements is inconsistent in any material respect with the Trustees' Annual Report; 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 Board's 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 determines 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.

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.

### Jill Halford (Senior Statutory Auditor)

For and on behalf of BDO LLP, statutory auditor  
London

Date

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

Year ended 31 March 2019	Notes	Unrestricted funds	Restricted funds	Total 31 March 2019	Unrestricted funds	Restricted funds	Total 31 March 2018
		£	£	£	£	£	£
<b>Income from:</b>							
Charitable activities	2, 3, 4	-	31,896,041	31,896,041	-	27,007,607	27,007,607
Donations and legacies	5	75,222	1,550,000	1,625,222	78,397	1,378,795	1,457,192
Other trading activities	6a	1,652,024	-	1,652,024	1,452,583	-	1,452,583
Investments	6	819,798	755,779	1,575,577	889,586	718,021	1,607,607
<b>Total income</b>		<b>2,547,044</b>	<b>34,201,820</b>	<b>36,748,864</b>	<b>2,420,566</b>	<b>29,104,423</b>	<b>31,524,989</b>
<b>Expenditure on:</b>							
Raising funds		1,426,897	165,758	1,592,655	1,370,164	155,697	1,525,861
Charitable activities	7	2,251,616	33,780,352	36,031,968	2,434,863	27,752,445	30,187,308
Other	8	89,258	3,563	92,821	72,151	17,298	89,449
<b>Total expenditure</b>		<b>3,767,771</b>	<b>33,949,673</b>	<b>37,717,444</b>	<b>3,877,178</b>	<b>27,925,440</b>	<b>31,802,618</b>
Net gains/(losses) on investment	11	1,004,119	1,166,605	2,170,724	(150,578)	(17,773)	(168,351)
<b>Net income / (expenditure)</b>		<b>(216,608)</b>	<b>1,418,752</b>	<b>1,202,144</b>	<b>(1,607,190)</b>	<b>1,161,210</b>	<b>(445,980)</b>
<b>Transfer between funds</b>		<b>435,718</b>	<b>(435,718)</b>	<b>-</b>	<b>713,884</b>	<b>(713,884)</b>	<b>-</b>
<b>Net movement in funds</b>		<b>219,110</b>	<b>983,034</b>	<b>1,202,144</b>	<b>(893,306)</b>	<b>447,326</b>	<b>(445,980)</b>
<b>Fund balances brought forward 1 April</b>		<b>30,872,548</b>	<b>33,102,234</b>	<b>63,974,782</b>	<b>31,765,854</b>	<b>32,654,908</b>	<b>64,420,762</b>
<b>Fund balances carried forward 31 March</b>	16, 17	<b>31,091,658</b>	<b>34,085,268</b>	<b>65,176,926</b>	<b>30,872,548</b>	<b>33,102,234</b>	<b>63,974,782</b>

All the above results are derived from continuing activities. There are no gains and losses other than those stated above.

# Balance sheets

At 31 March 2019	Notes	Group 2019	2018	Charity 2019	2018
		£	£	£	£
<b>Tangible fixed assets</b>	10	24,826,390	25,076,616	24,826,390	25,076,616
<b>Investments</b>	11	50,172,811	47,418,565	25,515,903	23,606,216
<b>Total fixed assets</b>		<b>74,999,201</b>	<b>72,495,181</b>	<b>50,342,293</b>	<b>48,682,832</b>
<b>Current assets:</b>					
Debtors	12	5,043,302	5,843,700	5,268,295	5,894,261
Stock	13	1,276	1,341	1,278	1,343
Cash at bank		2,339,786	2,496,390	1,684,136	1,719,693
Short term deposits		407,052	1,755,090	121,147	1,239,088
		<b>7,791,416</b>	<b>10,096,521</b>	<b>7,074,856</b>	<b>8,854,385</b>
<b>Liabilities</b>					
Creditors (amounts falling due within one year)	14a	(6,113,691)	(7,116,920)	(5,542,437)	(6,740,265)
<b>Net current assets</b>		<b>1,677,725</b>	<b>2,979,601</b>	<b>1,532,419</b>	<b>2,114,120</b>
Total assets less current liabilities		76,676,926	75,474,782	51,874,712	50,796,952
Creditors (amounts falling due beyond one year)	14b	(11,500,000)	(11,500,000)	(11,500,000)	(11,500,000)
<b>Total net assets</b>		<b>65,176,926</b>	<b>63,974,782</b>	<b>40,374,712</b>	<b>39,296,952</b>
<b>The funds of the charity:</b>					
<b>Restricted income funds</b>	16	34,085,268	33,102,234	9,307,300	8,433,683
<b>Unrestricted funds</b>					
Special funds		78,639	78,639	78,639	41,204
Designated fund		329,256	311,300	311,300	298,186
General fund		30,683,763	30,482,609	30,677,473	30,523,879
<b>Total unrestricted funds</b>		<b>31,091,658</b>	<b>30,872,548</b>	<b>31,067,412</b>	<b>30,863,269</b>
<b>Total charitable funds</b>		<b>65,176,926</b>	<b>63,974,782</b>	<b>40,374,712</b>	<b>39,296,952</b>

These financial statements were approved and authorised for issue by the President and Chair of the Finance Committee under delegated authority from the Trustee Board.

Signed on behalf of the Trustee Board on 15 July 2019

**Professor Dame Ann Dowling OM DBE FEng FRS,**  
President

**Professor Stephen Young FEng,**  
Chair of the Finance Committee

# Consolidated statement of cash flows

Year ended 31 March 2019

	2019 £	2018 £
<b>Cash flows from operating activities:</b>		
Net cash expended by operating activities	(2,203,906)	(1,770,062)
Cash flows from investing activities:		
Dividends, interest and rents from investments	1,575,577	1,607,608
Purchase of property, plants and equipment	(292,790)	(620,313)
Proceeds from the sale of investments	33,643,576	3,329,414
Purchase of investments	(34,227,099)	(3,048,509)
Net cash provided by investing activities	699,264	1,268,200
Change in cash and cash equivalents in the reporting period	(1,504,642)	(501,862)
Cash and cash equivalents at 1 April	4,251,480	4,753,342
<b>Cash and cash equivalents at 31 March</b>	<b>2,746,838</b>	<b>4,251,480</b>

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

Net income for the reporting periods (as per the statement of financial activities)	1,202,144	(445,980)
Net (gains)/losses on investments	(2,170,724)	168,351
Adjustments for:		
Depreciation charges	543,011	469,476
Dividends, interest and rents from investments	(1,575,577)	(1,607,608)
Decrease in stocks	65	966
Decrease /(increase) in debtors	891,273	(948,715)
(Decrease)/increase in creditors	(1,094,098)	593,448
<b>Net cash expended by operating activities</b>	<b>(2,203,906)</b>	<b>(1,770,062)</b>

## Analysis of cash and cash equivalents

Cash in hand	2,339,786	2,496,390
Notice deposits	407,052	1,755,090
<b>Total cash and cash equivalents</b>	<b>2,746,838</b>	<b>4,251,480</b>

# Notes to the accounts

For the year ended 31 March 2019

## Note 1 - Accounting policies

### (a) Basis of preparation of the accounts

The annual report, incorporating the financial statements for the year ended 31 March 2019, has been prepared in accordance with the Academy's Royal Charter, and in compliance with Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS102) (effective 1 January 2015) - (Charities SORP (FRS102)), the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS102). The Academy meets the definition of public benefit entity under FRS102. These financial statements are prepared under FRS102.

### (b) Historical cost convention

The financial statements have been prepared under the historical cost convention, as modified for the inclusion of investment assets at market value.

### (c) Consolidation

The financial statements consolidate the results of the Academy and its own wholly owned subsidiaries, RAE Trading Limited and The Queen Elizabeth Prize for Engineering Foundation, on a line-by-line basis. Transactions and balances between the Academy and its subsidiaries have been eliminated from the consolidated financial statements. Balances between the Academy and the subsidiaries are disclosed in the notes of the Academy's balance sheet. A separate statement of Financial Activities and Income and Expenditure Account for the Academy has not been presented

because the Academy has taken advantage of the exemption afforded by section 408 of the Companies Act 2006.

### (d) Income

The specific bases for accounting for income are described below. In general terms, income is accounted for on a receivable basis, gross of related expenditure. Income is only recognised where there is evidence of entitlement, where it is probable that income will be received and recognised only when income can be measured.

- Grants receivable are recognised when entitlement to the grant is confirmed, and also include returned grants that are accounted for on receipt.
- Gifts and donations and legacies are included in full in the statement of financial activities when receivable.
- For legacies, entitlements is taken as the earlier of the date on which either: the Academy is aware that probate has been granted, the estate has been finalised and notification has been made by the executor(s) to the Academy that a distribution will be made; or when a distribution is received from the estate. Receipt of a legacy, in whole or in part, is only considered probable when the amount can be measured reliably and the Academy has been notified to the executor's intention to make a distribution.
- Income from sales of goods or contracts for services is recognised when the goods and services are delivered.
- Investment income is included in the Statement of Financial Activities in the year in which it is receivable.
- Other incoming resources

consist of subscriptions, including income tax recoverable.

### (e) Donated services and facilities

Donated professional services and donated facilities are recognised as income when the Academy has control over the item, any condition associated with the donated item has been met, the receipt of economic benefit from the use by the Academy of the item is probable and that economic benefit can be measured reliably. On receipt, donated professional services and donated facilities are recognised on the basis of the value of the gift to the Academy which is the amount the Academy would have been willing to pay to obtain services or facilities of equivalent economic benefit on the open market; a corresponding amount is then recognised in expenditure in the period of receipt.

### (f) Expenditure

Expenditure is recognised on an accruals basis, gross of any related income. Costs are allocated to activities as described below. Indirect costs are apportioned to activities on a basis consistent with the use of the resources.

- Costs of raising funds comprise direct costs and expense of staff involved with fundraising, fees paid to investment fund managers, and trading costs.
- Charitable activities - grants. Grants payable are charged in the year in which the commitments to pay the grants are made.
- Charitable activities - other. Other charitable expenditure includes all direct expenditure, including staff costs, which is directly attributable to activities. Indirect costs are allocated to each charitable

# Notes to the accounts

activity based on the number of staff directly supporting the activity.

**(g) Support costs**  
Support costs are those functions that assist the work of the Academy and mainly comprise of staff costs and overheads. Support costs are assigned to the Academy's charitable objectives in line with the direct expenditure under each heading.

**(h) Operating leases**  
Rental costs under operating leases are charged to the Statement of Financial Activities evenly over the term of the lease.

**(i) Tangible fixed assets**  
Depreciation is provided on all tangible fixed assets at rates calculated to write off the cost of each asset over its expected useful life, as follows:  
**Office fixtures and fittings** - over five years  
**Computer equipment** - over three years  
**Leasehold cost** - over term of lease  
**Carlton House Terrace** - over the term of lease

**(j) Investments**  
Listed investments are included in the financial statements at market value at the balance sheet date. Gains/losses on disposal of investments and revaluation of investments are recognised in the year of gain or loss and are allocated to the funds to which the investments relate. Investments in subsidiaries are included in the financial statements at cost.

**(k) Pensions**  
The Academy operates a defined contribution pension scheme. The assets of the scheme are held separately from those of the Academy in independently administered funds. The pensions cost charge represents contributions payable to the scheme in the year. The Academy has no liability under the scheme other than the payment of those contributions.

**(l) Funds**  
General funds are those that are available for use at the Council's discretion in the furtherance of the Academy's objectives. Designated funds are unrestricted funds set aside for unrestricted purposes and which would otherwise form part of general funds. Details of the nature and purpose of each designated fund are set out in note 16. Restricted funds are funds that are subject to restrictions imposed by donors and are applied in accordance with these restrictions. Details of the nature and purpose of each restricted fund are set out in note 16.

**(m) Debtors**  
Trade and other debtors are recognised at the settlement amount due after any trade discount offered. Prepayments are valued at the amount prepaid net of any trade discounts due.

**(n) Stock**  
Stock is included at the lower of cost or net realisable value.

**(o) Cash and cash equivalents at bank**  
Cash and cash equivalents at bank includes cash and short term highly liquid investments obtainable within 3 months.

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

after allowing for any trade discounts due.

**(q) Financial instruments**  
The Academy only has financial assets and financial liabilities of a kind that qualify as basic financial instruments. Basic financial instruments are initially recognised at transaction value and subsequently measured at their settlement value with the exception of bank loans which are subsequently measured at amortised cost using the effective interest method.

**(r) Corporation taxation**  
The Academy is exempt from tax on income and gains falling within section 505 of the Taxes Act 1988 or section 252 of the Taxation of Chargeable Gains Act 1992 to the extent that these are applied to its charitable objectives.

**(s) Going Concern**  
The Academy's accounts have been prepared on the basis of being a going concern. The trustees have made their own assessment of the Academy's ability to continue as a going concern and assured themselves of the validity of this assumption. In making this assessment, the Academy's Trustees have taken into account all available information about the future for at least, but not limited to, 12 months from the date the accounts are approved. Sufficient reserves and funding is secured for the Academy to continue to fulfil its charitable objectives.

**(t) Government Grants**  
Government grants are recognised in the year in which they are committed to.

Year ended 31 March 2019	Unrestricted funds	Restricted funds	Totals 31 March 2019	Unrestricted funds	Restricted funds	Totals 31 March 2018
	£	£	£	£	£	£
<b>Note 2 - Grants</b>						
Government grant (See note 3)	-	(11,890,433)	(11,890,433)	-	(11,418,047)	(11,418,047)
<b>Note 3 - Government grant</b>						
Grant was expended on:						
Programme expenditure	-	(10,491,000)	(10,491,000)	-	(10,491,000)	(10,491,000)
Cost of managing programmes	-	(1,399,433)	(1,399,433)	-	(927,047)	(927,047)
	-	<b>(11,890,433)</b>	<b>(11,890,433)</b>	-	<b>(11,418,047)</b>	<b>(11,418,047)</b>
<b>Note 4 - Other grants and contracts</b>						
Newton Fund	-	(5,539,859)	(5,539,859)	-	(5,493,678)	(5,493,678)
Global Challenge Research Fund	-	(5,505,812)	(5,505,812)	-	(3,923,633)	(3,923,633)
Investment in Research Talent	-	(4,627,688)	(4,627,688)	-	(2,967,080)	(2,967,080)
UK Intelligence Community (IC) Postdoctoral Research Fellowships	-	(1,033,000)	(1,033,000)	-	(557,000)	(557,000)
Sainsbury Management Fellowships	-	(585,000)	(585,000)	-	(319,755)	(319,755)
Connecting STEM Teachers	-	(564,150)	(564,150)	-	(488,646)	(488,646)
Leverhulme Fellowships	-	(356,688)	(356,688)	-	(346,966)	(346,966)
Africa Prize for Engineering Innovation	-	(308,000)	(308,000)	-	(104,625)	(104,625)
Sir Ralph Robins Scholarships	-	(285,601)	(285,601)	-	-	-
Welsh Valleys Bursaries Scheme	-	(221,100)	(221,100)	-	-	-
RAEng/EPSC Research Fellowships	-	(188,558)	(188,558)	-	(157,332)	(157,332)
1851 Royal Commission Enterprise Fellowships	-	(187,500)	(187,500)	-	(159,522)	(159,522)
Enterprise Hub	-	(179,533)	(179,533)	-	(142,253)	(142,253)
Tier 1 Visa Applications	-	(89,445)	(89,445)	-	(63,200)	(63,200)
MSc Aerospace Bursary Programme	-	80,507	80,507	-	(159,668)	(159,668)
KS2 STEM Resources & CPD Programme	-	(75,000)	(75,000)	-	(152,370)	(152,370)
RAF Centenary Programme	-	(62,500)	(62,500)	-	(74,567)	(74,567)
Barrow Engineering Programme	-	(55,735)	(55,735)	-	(50,254)	(50,254)
Policy Centre	-	(54,515)	(54,515)	-	-	-
Education Studies and Support	-	(29,493)	(29,493)	-	(2,250)	(2,250)
MacRobert Award	-	(26,238)	(26,238)	-	(26,000)	(26,000)
RAEng/WCE Awards	-	(17,750)	(17,750)	-	(17,750)	(17,750)
Lowestoft Engineering Programme	-	(11,570)	(11,570)	-	(25,942)	(25,942)
Biomedical Engineering	-	(11,000)	(11,000)	-	(29,000)	(29,000)
FE Entrepreneurship - CET	-	(7,380)	(7,380)	-	(2,390)	(2,390)

# Notes to the accounts

Year ended 31 March 2019	Unrestricted funds	Restricted funds	Totals 31 March 2019	Unrestricted funds	Restricted funds	Totals 31 March 2018
	£	£	£	£	£	£
Enriching Engineering Education Programme	-	-	-	-	(234,666)	(234,666)
Engineering FE	-	-	-	-	(29,561)	(29,561)
Visiting Professors	-	-	-	-	(12,831)	(12,831)
Industrial Secondment	-	-	-	-	(11,622)	(11,622)
Other awards and contracts	-	(63,000)	(63,000)	-	(37,000)	(37,000)
	-	(20,005,608)	(20,005,608)	-	(15,589,560)	(15,589,560)
<i>MSc Aerospace Bursary Programme showing negative income due to release of provision following the end of the scheme</i>						
<b>Total charitable activities</b>	<b>-(31,896,041)</b>	<b>(31,896,041)</b>		<b>-(27,007,607)</b>	<b>(27,007,607)</b>	

## Note 5 - Donations and legacies

Development appeal	-	-	-	431	-	431
Annual appeal	49,533	-	49,533	26,537	-	26,537
Connecting STEM Teachers	-	250,000	250,000	-	-	-
Enterprise Hub capital project	-	-	-	-	10,000	10,000
Engineering Talent Project	-	1,100,000	1,100,000	-	1,168,795	1,168,795
Queen Elizabeth Prize for Engineering	-	200,000	200,000	-	200,000	200,000
Other	25,689	-	25,689	51,429	-	51,429
	<b>75,222</b>	<b>1,550,000</b>	<b>1,625,222</b>	<b>78,397</b>	<b>1,378,795</b>	<b>1,457,192</b>

## Note 6 - Investment income

Dividends and income from equity investments and fixed interest bonds	811,104	755,072	1,566,176	886,284	717,794	1,604,079
Interest on bank deposits	8,694	707	9,401	3,302	227	3,529
	<b>819,798</b>	<b>755,779</b>	<b>1,575,577</b>	<b>889,586</b>	<b>718,021</b>	<b>1,607,607</b>

## Note 6a - Other trading income

Sponsorship and events	163,540	-	163,540	256,821	-	256,821
Subscription income	363,554	-	363,554	313,492	-	313,492
Advertising income and merchandising	32,493	-	32,493	52,557	-	52,557
Conferencing business	1,092,437	-	1,092,437	829,712	-	829,712
	<b>1,652,024</b>	<b>-</b>	<b>1,652,024</b>	<b>1,452,583</b>	<b>-</b>	<b>1,452,583</b>

Promotion of, and leadership in, engineering	Leading and shaping engineering policy	Enhancing engineering capacity	Inspiring young people and nurturing educational skills	Queen Elizabeth Prize for Engineering Foundation	Total 31 March 2019	Total 31 March 2018
£	£	£	£	£	£	£

## Note 7 - Charitable activities

### Unrestricted

Charitable activities	71,073	-	-	-	71,073	101,937
Charitable grants	50,000	-	-	-	50,000	42,104
Direct salaries	365,159	-	-	-	365,159	444,101
Support costs	1,765,384	-	-	-	1,765,384	1,846,722
	<b>2,251,616</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2,251,616</b>	<b>2,434,863</b>

### Restricted

Charitable activities	273,267	309,576	6,189,732	1,719,159	1,347,197	9,838,931	6,405,944
Charitable grants	485,955	179,897	17,084,377	666,972	-	18,417,201	15,966,282
Direct salaries	507,978	914,652	1,410,859	300,587	263,264	3,397,340	3,225,236
Support costs	87,620	97,088	1,706,832	185,772	49,568	2,126,879	2,154,985
	<b>1,354,819</b>	<b>1,501,213</b>	<b>26,391,801</b>	<b>2,872,489</b>	<b>1,660,030</b>	<b>33,780,352</b>	<b>27,752,446</b>

### Total charitable

<b>activities</b>	<b>3,606,435</b>	<b>1,501,213</b>	<b>26,391,801</b>	<b>2,872,489</b>	<b>1,660,030</b>	<b>36,031,968</b>	<b>30,187,308</b>
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Total support costs of £3,892,264 are made up of indirect staff costs totalling £1,479,063 and accommodation costs and overheads totalling £2,413,201

### 2018 Total charitable

<b>activities</b>	<b>3,816,206</b>	<b>1,337,700</b>	<b>22,147,790</b>	<b>2,250,440</b>	<b>635,173</b>		<b>30,187,308</b>
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In 2018 £2,434,863 of charitable activities expenditure related to unrestricted funds and £27,252,446 related to restricted funds

# Notes to the accounts

	2019 £	2018 £
<b>Note 8 - Other costs</b>		
Auditor's fees:		
- Audit	21,400	18,503
- Other services	1,265	14,120
Legal and professional fees	70,155	56,826
	<b>92,821</b>	<b>89,449</b>
£6,159 was charged to the Academy in relation to operating leases		

## Note 9 - Staff and pensions costs

Gross salaries	4,426,433	4,084,226
Employer's National Insurance less NI Allowance	492,081	457,680
Benefits in kind	23,020	31,073
Pension charge	442,995	386,947
Recruitment costs	86,249	147,739
Temporary staff costs	252,125	395,989
Training costs	45,757	73,822
Other costs	147,610	131,551
	<b>5,916,271</b>	<b>5,709,027</b>

Average number of staff in the year by activity:	Number	Number
- Engineering and education	15	15
- Programmes and fellowship	30	33
- Policy and external affairs	19	11
- Executive, development, finance and administration	29	27
- Queen Elizabeth Prize for Engineering Foundation	6	6
	<b>100</b>	<b>92</b>

No remuneration is paid to the President or members of the Trustee board of the Academy. Travelling expenses to attend Trustee Board meetings were reimbursed to 10 board members in 2018/19 amounting to £6,361 (2017/18 £5,473 - eleven members).

Ex gratia payments of £21,287 were made in 2018/19.

The emoluments of higher paid staff within the following scales were:	Number	Number
£60,001 - £70,000	5	3*
£70,001 - £80,000	1	-
£80,001 - £90,000	3	3
£90,001 - £100,000	-	1
£100,001 - £110,000	2	2
£120,001 - £130,000	1	-
£130,001 - £140,000	-	1
£170,001 - £180,000	-	1*
£190,001 - £200,000	1	-

Emoluments include salary, bonuses and benefits in kind but exclude pension scheme contributions. Staff numbers are based on full time equivalent.

The senior leadership team comprises of a chief executive and six directors who manage the day-to-day operations of the charity. Their aggregate remuneration in the year was £864,486 (2017-18 £1,004,828).

Note: There were resignations and appointments among higher paid staff during the year.

\* One member of staff from each of these payment scales did not benefit from pension scheme contributions.

## Note 9(b) - Pensions

The Academy operates a defined contribution pension scheme for staff that joined after 1 January 2000 that is compliant with auto-enrolment legislation. The assets of the scheme are held separately from those of the Academy in independently administered funds. The Academy has no liability under the scheme other than the payment of contributions.

Note 10	Computer systems and equipment	Office fixtures and fittings	Leasehold	Carlton House Terrace improvement	Total
	£	£	£	£	£
<b>Tangible fixed assets (group and charity)</b>					
<b>Cost</b>					
At 1 April 2018	1,149,217	609,759	12,509,790	13,868,807	28,137,573
Additions	74,331	218,454	-	-	292,785
<b>At 31 March 2019</b>	<b>1,223,548</b>	<b>828,213</b>	<b>12,509,790</b>	<b>13,868,807</b>	<b>28,430,358</b>

## Depreciation

At 1 April 2018	(736,121)	(231,796)	(1,193,900)	(899,140)	(3,060,957)
Charge for year	(207,867)	(118,796)	(91,505)	(124,843)	(543,011)
<b>At 31 March 2019</b>	<b>(943,988)</b>	<b>(350,592)</b>	<b>(1,285,405)</b>	<b>(1,023,983)</b>	<b>(3,603,968)</b>

## Net book value

At 31 March 2019	279,560	477,621	11,224,385	12,844,824	24,826,390
At 31 March 2018	413,096	377,963	11,315,890	12,969,667	25,076,616

All assets are used for charitable purposes.

## Medal collections

- The Whittle Medals Collection are on loan from the family of Sir Frank Whittle, who patented the jet propulsion engine in 1930. The medals relate to his achievements in engineering and celebrate his successes.
- The Warner Medals Collection was a personal gift by Professor Sir Frederick Warner after his death in 2010. The medals relate to his achievements in engineering and celebrate his successes.
- The Rooke medals collection was received during the 2018/19 financial year, some of which will be displayed at the Academy. The medals were presented to Sir Denis Rooke FREng OM CBE FRS FREng (1924-2008) during his career in recognition of his distinguished achievements in engineering.

These medal collections are not held on the balance sheet, the Trustees consider that it is not practicable to obtain a valuation, but are satisfied that the value of the medals collections is not material.



# Notes to the accounts

## Note 11 - Investments (group and charity)

Investments held in the general fund portfolio represent those held by the Royal Academy of Engineering with the objective of generating income for the Academy's charitable object while preserving the capital value of the portfolio.

Investments held in the restricted fund portfolio represent those held by the Queen Elizabeth Prize for Engineering Foundation with the objective of generating income for the Foundation's charitable object.

	2019	2019	2019	2019	2019
	General fund (Charity)	Designated income funds (Charity)	Total funds (Charity)	Restricted fund (Subsidiary)	Total Portfolio (Group)
Market value at 1 April	21,864,343	1,741,773	23,606,116	23,812,449	47,418,565
Add acquisitions at cost	31,642,886	-	31,642,886	2,584,213	34,227,099
Less: sales proceeds	(30,733,204)	-	(30,733,204)	(2,910,372)	(33,643,576)
Net investment (losses)/gains for the year	1,004,119	(4,114)	1,000,005	1,170,719	2,170,724
<b>Market value at 31 March</b>	<b>23,778,144</b>	<b>1,737,659</b>	<b>25,515,803</b>	<b>24,657,009</b>	<b>50,172,812</b>

Investments in the general fund (charity) consist of securities listed on the London Stock Exchange (34% of portfolio), global stock markets excluding UK (36% of portfolio) and fixed interest bonds/diversified assets (30% of portfolio).

The designated income funds consists of funds invested in a charity common investment fund to support the MacRobert and the Colin Campbell-Mitchell Awards.

Investments in the restricted fund (subsidiary) consist of securities listed on the London Stock Exchange (23% of portfolio), global stock markets excluding UK (50% of portfolio) and fixed interest bonds/diversified assets (27% of portfolio).

	Group		Charity	
	2019	2018	2019	2018
	£	£	£	£
<b>Note 12 - Debtors</b>				
Grants and sponsorship receivable	4,094,002	4,769,765	4,094,003	4,769,765
Prepayments	186,075	179,228	186,075	179,228
Other debtors	763,226	894,706	545,895	565,701
Gift aid receivable from RAE Trading Limited	-	-	268,838	74,372
Amounts due for subsidiary undertakings	-	-	173,484	230,823
Other taxes and social security costs	-	-	-	-
	<b>5,043,303</b>	<b>5,843,700</b>	<b>5,268,295</b>	<b>5,819,889</b>

## Note 13 - Stocks (Group and Charity)

Publications, Academy ties, presentation plates and medals	1,278	1,343	1,278	1,343
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## Note 14a - Creditors (amounts falling due within one year)

Committed grants and prizes	4,185,697	4,906,745	4,185,698	4,906,746
Deferred income	548,061	1,345,871	548,061	1,345,871
Subscriptions in advance	201,566	176,006	201,566	176,006
Other creditors	1,178,367	688,298	578,723	305,290
Amounts due to subsidiary undertakings	-	-	28,389	6,352
Social security and other costs	-	-	-	-
Bank loan	-	-	-	-
	<b>6,113,691</b>	<b>7,116,920</b>	<b>5,542,437</b>	<b>6,740,265</b>

## Note 14b - Deferred income

Deferred income comprises of advance funding for the provision of the MSc Aerospace Bursary Programme, sponsorship of the Academy Awards ceremony, Connecting STEM Teachers Programme and Research Fellowships.

Balance at 1 April	1,345,871	965,552	1,345,871	965,552
Amount released to income earned from charitable activities	(1,018,299)	(403,969)	(1,018,299)	(403,969)
Amount deferred in year	220,489	784,288	220,489	784,288
Balance as at 31 March	<b>548,061</b>	<b>1,345,871</b>	<b>548,061</b>	<b>1,345,871</b>

## Note 14c - Creditors (amounts falling beyond one year)

Bank loan*				
- Due one to two years	-	-	-	-
- Due within two to five years	-	-	-	-
- Due after five years	11,500,000	11,500,000	11,500,000	11,500,000
	<b>11,500,000</b>	<b>11,500,000</b>	<b>11,500,000</b>	<b>11,500,000</b>

\*The Academy has a secured loan of £11.5 million with Aviva, the capital sum is repayable 2nd February 2027, an interest rate of 3.11% fixed being applied. The loan is secured against 3 Carlton House Terrace which was valued at £29.5m 7th November 2016. There is currently a 39% loan to value ratio. There is a maximum 45% loan to value ratio set out in the terms of the loan.

## Note 15 - Future commitments

### Total minimum commitments under operating leases

Maturing between one and five years (equipment)	13,679	1,908	13,679	1,908
<b>Total</b>	<b>13,679</b>	<b>1,908</b>	<b>13,679</b>	<b>1,908</b>

# Notes to the accounts

## Note 16 - Statement of changes in reserves

### (a) Restricted funds

The Academy's restricted funds consist of the monies received under grants, corporate donations and contracts to support specific schemes as follows:

- **Department of Business, Energy and Industrial Strategy (BEIS)** provides a government grant to fund programmes in the areas of engineering research and promoting the public understanding of engineering.
- **Investment in Research Talent** recognises the importance of engineering research to the UK. The government has provided the Royal Academy of Engineering with a significant increase in funding over the next four years to attract the best research talent to the UK and support their work.
- **Gatsby Charitable Foundation** supports Sainsbury Management Fellowships.
- **RAEng/EPSRC Research Fellowships** are administered by the Academy and funded jointly by the Academy and the Engineering and Physical Sciences Research Council.
- **Leverhulme Trust** supports senior research fellowships of one-year duration.
- **ExxonMobil** provides funds for Engineering Teaching Fellowships, which support able young university engineering lecturers.
- **Engineering Leadership Scheme** assists undergraduate engineering students to realise their full potential and achieve their career goals.
- **Connecting STEM Teachers Programme** is building a national network of support for STEM leaders in secondary schools and is supported by BG Group and Petrofac.
- **Further Education Fund** is made up of various donations that are used to support the development of new and the extension of existing programmes in further education.
- **MSc Aerospace Bursary Programme** for students studying for MSc degrees in aerospace engineering is funded by BEIS and delivered in collaboration with the Royal Aeronautical Society.
- **Barrow Engineering Programme** is a regional programme to enhance and enrich STEM teaching and learning in a network of primary schools, secondary schools and further education colleges.
- **KS2 STEM Resources and CPD Programme** is funded by BAE Systems and supports the development and dissemination of contextualised resource boxes for use in primary and secondary schools.
- **The Enterprise Hub** harnesses the expertise, insight and networks of Academy Fellows, who include some of the UK's most successful entrepreneurs and business leaders, to support the country's most promising engineering entrepreneurs.
- **Africa Prize for Engineering Innovation** aims to stimulate, celebrate and reward innovation and entrepreneurship in sub-Saharan Africa.
- **Carlton House Terrace Fund** will be used to develop 3 Carlton House Terrace into a national forum of engineering excellence.
- **Colin Campbell Mitchell Award** is to be used to fund an award for an individual or group of outstanding engineers.
- **Newton Fund** schemes promote research and innovation intended to have a direct and long-term impact on the economic development and social welfare of countries participating with the UK in the Newton Fund.
- **The Enterprise Hub capital project** funding has been used to create a base for the Academy's enterprise activities and contribute to the development of the lower ground floors of Prince Philip House.
- **Engineering Talent Project** is the working title of a major project designed to address the engineering skills gap over the next ten years. The project involves detailed analysis of the engineering skills landscape and the development of a strategy to ensure that the UK has the engineers and technicians.
- **Enriching Engineering Education Programme** is centred on a combination of two way secondments and collaborative workshops. These secondments and workshops lead to improved industry-academia links and result in wide-ranging benefits for both parties.
- **The Sir Angus Paton Bequest Fund** is used to provide a bursary for a postgraduate student to undertake a full-time MSc course in a subject related to environmental engineering.
- **The Hinton Bequest Fund** is used to contribute towards the cost of the annual Hinton Lecture.
- **Stoke Engineering Programme** is a regional programme to enhance and enrich STEM teaching and learning in a network of secondary schools and further education colleges.

- **Global Challenge Research Fund** is part of a £1.5 billion UK Government fund to support cutting-edge research that addresses the challenges faced by developing countries through collaborative research and innovation, and research and innovation capacity building within both the UK and developing countries.
- **UK Intelligence Community (IC) Postdoctoral Research Fellowships** are offered by the Government Office for Science with the Academy acting as academic engagement partner, support outstanding early career science or engineering researchers to promote unclassified basic research in areas of interest to the intelligence, security and defence community.
- **The National Engineering Policy Centre**, led by the Royal Academy of Engineering, brings together 39 organisations representing the profession to ensure that engineering expertise is applied to the issues that matter, and policy makers have easy access to the best of UK engineering expertise, for the benefit of society.
- **Welsh Valleys Bursaries Scheme** supports ambitious Year 11 students applying for A level and Vocational Level 3 qualifications in engineering or STEM related subjects.
- **The Sir Ralph Robins Scholarships** scheme assists undergraduate engineering students from underrepresented and underprivileged backgrounds to realise their full potential and achieve their career goals.
- Other awards and contracts are donations and contracts by a number of companies for specific programmes each year.

### (b) Designated funds

- **The Building Maintenance Fund** is used for major items of building repair and redecoration.
- **The Education Support Fund** is a gift from the Gatsby Charitable Foundation to support education and engagement activities.
- Other designated funds represent general funds earmarked for specific activities such as awards and engagement activities.

	Balance at 1 April 2018	Incoming resources	Resources expended	Transfers between funds	Net investment gains/ (losses)	Balance at 31 March 2019
	£	£	£	£	£	£
Restricted funds						
Government grant	-	11,890,433	(11,890,433)	-	-	-
Investment in Research Talent	-	4,627,688	(4,627,688)	-	-	-
Sainsbury Management Fellowships	-	585,000	(585,000)	-	-	-
RAEng/EPSRC Research Fellowships	-	188,558	(188,558)	-	-	-
Leverhulme Fellowships	-	356,688	(356,688)	-	-	-
Engineering Leadership Scheme	223,646	-	-	-	-	223,646
Connecting STEM Teachers	208,429	814,150	(495,683)	-	-	526,896
Sir Ralph Robins Scholarships	-	285,601	-	-	-	285,601
Welsh Valleys Engineering Project	-	221,100	-	-	-	221,100
National Engineering Policy Centre	-	54,515	-	-	-	54,515
Engineering FE	215,035	-	(46,000)	-	-	169,035
MSc Aerospace Bursary Programme	-	(80,507)	80,506	-	-	-
Barrow Engineering Programme	26,644	55,735	(58,517)	-	-	23,862
KS2 STEM Resources & CPD Programme	71,219	75,000	(75,000)	-	-	71,219
Enterprise Hub	335,126	179,533	(136,918)	-	-	377,741
Africa Prize for Engineering Innovation	147,973	308,000	(83,478)	-	-	372,495
Colin Campbell Mitchell Award	447,408	14,744	(1,466)	-	(995)	459,692

# Notes to the accounts

	Balance at 1 April 2018	Incoming resources	Resources expended	Transfers between funds	Net investment gains/ (losses)	Balance at 31 March 2019
	£	£	£	£	£	£
Newton Fund	-	5,539,859	(5,539,859)	-	-	-
Enterprise Hub capital project	3,537,572	-	-	(292,785)	-	3,244,787
Engineering Talent Project	669,755	1,100,000	(1,474,755)	-	-	295,000
Lowestoft Engineering Programme	-	11,570	(11,570)	-	-	-
Enriching Engineering Education Programme	431,564	-	(67,003)	-	-	364,561
Education Studies and Support	-	29,493	(29,493)	-	-	-
Sir Angus Paton Bequest Fund	56,603	-	-	-	-	56,603
MacRobert Award	1,346,280	72,313	(66,576)	-	(3,117)	1,348,900
MacFarlane Award	18,038	-	-	-	-	18,038
Other awards and contracts	55,459	63,000	-	-	-	118,459
Stoke Engineering Programme	-	-	(8,000)	8,000	-	-
RAEng/WCE Awards	-	17,750	(17,750)	-	-	-
Biomedical Engineering	-	11,000	(11,000)	-	-	-
1851 Royal Commission Enterprise Fellowships	-	187,500	(187,500)	-	-	-
Global Challenge Research Fund	-	5,505,812	(5,505,812)	-	-	-
Tier 1 Visa Applications	-	89,445	(89,445)	-	-	-
UK Intelligence Community (IC) Postdoctoral Research Fellowships	543,676	1,033,000	(525,771)	-	-	1,050,905
RAF Centenary Programme	-	62,500	(62,500)	-	-	-
Computing In Schools	-	-	(26,102)	26,102	-	-
FE Entrepreneurship - CET	-	7,380	(7,380)	-	-	-
History of the Royal Academy of Engineering	24,884	-	(24,884)	-	-	-
Queen Elizabeth Prize for Engineering	24,742,925	894,959	(1,829,351)	(177,036)	1,170,719	24,802,216
<b>Total restricted funds</b>	<b>33,102,234</b>	<b>34,201,820</b>	<b>(33,949,673)</b>	<b>(435,718)</b>	<b>1,166,605</b>	<b>34,085,268</b>
Designated funds						
Special funds						
- Building Maintenance Fund	78,639	-	-	-	-	78,639
<b>Total special funds</b>	<b>78,639</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>78,639</b>
Education Support Designated Fund	5,531	-	-	-	-	5,531
External Education Designated Fund	105,122	-	-	(34,102)	-	71,020
Ingenia Designated Fund	-	32,058	-	-	-	32,058
Forum Partnerships Programme Designated Fund	200,647	20,000	-	-	-	220,647
<b>Total designated and special funds</b>	<b>389,940</b>	<b>52,058</b>	<b>-</b>	<b>(34,102)</b>	<b>-</b>	<b>407,895</b>
<b>General fund</b>	<b>30,482,609</b>	<b>2,494,986</b>	<b>(3,767,771)</b>	<b>469,821</b>	<b>1,004,119</b>	<b>30,683,763</b>
<b>Total funds</b>	<b>63,974,782</b>	<b>36,748,864</b>	<b>(37,717,444)</b>	<b>-</b>	<b>2,170,724</b>	<b>65,176,926</b>

The general fund deficit of £1,272,785 is the difference between incoming resources of £2,494,986 and resources expended of £3,767,771

All other funds, other than the Queen Elizabeth Prize for Engineering, are funds of the parent charity.

	Balance at 1 April 2017	Incoming resources	Resources expended	Transfers between funds	Net investment losses	Balance at 31 March 2018
	£	£	£	£	£	£
Restricted funds						
Government grant	-	11,725,429	(11,725,429)	-	-	-
Investment in Research Talent	-	2,967,080	(2,967,080)	-	-	-
Sainsbury Management Fellowships	-	319,755	(319,755)	-	-	-
RAEng/EPSC Research Fellowships	-	157,332	(157,332)	-	-	-
Leverhulme Fellowships	-	346,966	(346,966)	-	-	-
ExxonMobil Fellowships	75,495	-	(75,495)	-	-	-
Engineering Leadership Scheme	260,915	-	(37,269)	-	-	223,646
Connecting STEM Teachers	208,428	488,646	(488,646)	-	-	208,429
Engineering FE	279,153	29,561	(93,678)	-	-	215,035
MSc Aerospace Bursary Programme	-	159,668	(159,668)	-	-	-
Barrow Engineering Programme	9,100	50,254	(32,710)	-	-	26,644
KS2 STEM Resources & CPD Programme	18,949	152,370	(100,100)	-	-	71,219
Enterprise Hub	362,608	142,253	(169,735)	-	-	335,126
Africa Prize for Engineering Innovation	57,186	104,624	(13,837)	-	-	147,973
Carlton House Terrace Fund	152,703	-	-	(152,703)	-	-
Ms Morag Campbell-Nelder	471,822	19,948	(19,948)	-	(24,414)	447,408
Newton Fund	-	5,493,678	(5,493,677)	-	-	-
Enterprise Hub capital project	3,995,182	10,000	-	(467,610)	-	3,537,572
Engineering Talent Project	140,225	1,168,795	(639,266)	-	-	669,755
Industrial Secondment	-	11,622	(11,622)	-	-	-
Lowestoft Engineering Programme	-	25,942	(25,942)	-	-	-
Enriching Engineering Education Programme	197,217	234,666	(319)	-	-	431,564
Sir Angus Paton Bequest Fund	56,648	-	(45)	-	-	56,603
Hinton Bequest Fund	5,051	-	(5,051)	-	-	-
MacRobert Award	1,345,923	88,338	(69,078)	57,393	(76,295)	1,346,280
MacFarlane Award	18,038	-	-	-	-	18,038
Other awards and contracts	44,459	37,000	(26,000)	-	-	55,459
Stoke Engineering Programme	7,026	-	(7,026)	-	-	-
RAEng/WCE Awards	-	17,750	(17,750)	-	-	-
Biomedical Engineering	-	29,000	(29,000)	-	-	-
1851 Royal Commission Enterprise Fellowships	21,271	159,522	(180,793)	-	-	-
Global Challenge Research Fund	-	3,616,250	(3,616,250)	-	-	-
Tier 1 Visa Applications	-	63,200	(63,200)	-	-	-
Visiting Professors	-	12,831	(12,831)	-	-	-
UK Intelligence Community (IC) Postdoctoral Research Fellowships	101,985	557,000	(115,309)	-	-	543,676
RAF Centenary Programme	-	74,567	(74,567)	-	-	-
Computing In Schools	-	-	(14,621)	14,621	-	-

# Notes to the accounts

	Balance at 1 April 2017	Incoming resources	Resources expended	Transfers between funds	Net investment losses	Balance at 31 March 2018
	£	£	£	£	£	£
History of the Royal Academy of Engineering	40,000	-	(15,116)	-	-	24,884
Queen Elizabeth Prize for Engineering	24,785,524	835,736	(795,688)	(165,585)	82,937	24,742,923
<b>Total restricted funds</b>	<b>32,654,908</b>	<b>29,104,423</b>	<b>(27,925,440)</b>	<b>(713,884)</b>	<b>(17,773)</b>	<b>33,102,234</b>
Designated funds						
Special funds						
- Building Maintenance Fund	41,204	37,435	-	-	-	78,639
<b>Total special funds</b>	<b>41,204</b>	<b>37,435</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>78,639</b>
Education Support Designated Fund	26,017	-	-	(20,486)	-	5,531
External Education Designated Fund	105,122	-	-	-	-	105,122
Ingenia Designated fund	6,400	51,801	(58,201)	-	-	-
Forum Partnerships Programme Designated Fund	160,647	40,000	-	-	-	200,647
<b>Total designated and special funds</b>	<b>339,390</b>	<b>129,236</b>	<b>(58,201)</b>	<b>(20,486)</b>	<b>-</b>	<b>389,939</b>
<b>General fund</b>	<b>31,426,464</b>	<b>2,291,330</b>	<b>(3,818,977)</b>	<b>734,370</b>	<b>(150,578)</b>	<b>30,482,609</b>
<b>Total funds</b>	<b>64,420,762</b>	<b>31,524,989</b>	<b>(31,802,618)</b>	<b>-</b>	<b>(168,350)</b>	<b>63,974,782</b>

The general fund deficit of £1,527,647 is the difference between incoming resources of £2,291,330 and resources expended of £3,818,977

All other funds, other than the Queen Elizabeth Prize for Engineering, are funds of the parent charity.

## Note 17 - Analysis of net assets between funds

	Tangible fixed assets	Investments	Current assets	Liabilities	Total net assets
	£	£	£	£	£
Restricted funds	12,844,824	24,657,009	6,651,425	(404,006)	43,749,252
Special and designated funds	-	1,737,659	407,895	(1,737,659)	407,895
General funds	12,152,343	23,778,144	732,096	(15,472,026)	21,190,557
<b>Total funds</b>	<b>24,997,167</b>	<b>50,172,812</b>	<b>7,791,416</b>	<b>(17,613,691)</b>	<b>65,347,704</b>

## Note 18 - Subsidiary activities

The Academy has one wholly owned subsidiary, RAE Trading Limited (registered company number 08038360) and a charitable subsidiary company, the Queen Elizabeth Prize for Engineering Foundation (registered charity number 1147743, registered company number 8077332). RAE Trading Limited was formed in April 2012 and manages a conferencing business at Prince Philip House; all available trading profits are gift-aided to the charity. The Academy owns all 100 £1 shares in RAE Trading Limited.

The Queen Elizabeth Prize for Engineering Foundation was formed in May 2012 and advances the education of the public in the subject of engineering by awarding biennially a high-profile and internationally recognised prize for engineering.

All activities have been consolidated on a line-by-line basis in the statement of financial activities and these results have been adjusted to eliminate income and expenditure relating to conferencing activities to the Academy and the Queen Elizabeth Prize for Engineering, and management fees payable to the Academy.

At 31 March 2019	RAE Trading Ltd		Queen Elizabeth Prize for Engineering Foundation	
	2019 £	2018 £	2019 £	2018 £
Total incoming resources	1,365,884	1,079,219	894,959	835,736
Total resources expended	(1,097,046)	(1,004,847)	(2,006,387)	(961,273)
	268,838	74,372	(1,111,427)	(125,538)
Total investment (losses)/gains		-	1,170,719	82,937
Net funds before gift aid	268,838	74,372	59,292	(42,601)
Gift aid to Royal Academy of Engineering	(268,838)	-	-	-
Retained net funds for the year	-	74,372	59,292	(42,601)
The aggregate of the assets, liabilities and funds was:				
Assets	638,821	486,854	25,294,825	25,294,825
Liabilities	(369,883)	(477,474)	(582,421)	(582,421)
<b>Funds</b>	<b>268,938</b>	<b>9,380</b>	<b>24,712,405</b>	<b>24,712,405</b>

The parent charity's results for the year are disclosed as follows:

	Academy	
	2019 £	2018 £
Gross income	35,397,281	28,632,337
Retained net funds for the year	815,245	(548,988)

## Note 19 - Related party transactions

The Academy has the following transactions within its subsidiaries during the year:

	Sales £	Salary recharges £	Management charges £	Debtors £	Creditors £
Queen Elizabeth Prize for Engineering Foundation	-	325,420	177,036	70,823	-
RAE Trading Limited	273,447	-	155,180	102,661	28,389

All transactions in respect of trustees is provided for in Note 9.



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Royal Academy of Engineering  
Prince Philip House  
3 Carlton House Terrace  
London SW1Y 5DG