Royal Commission for the Exhibition of 1851

Annual Report and Accounts

For the year ended 31 December 2025

The Aims of the Royal Commission

The 1851 Royal Commission's governing document is its Supplemental Charter of 1851, which requires the Commission to "*increase the means of industrial education and extend the influence of science and art upon productive industry*".

This was originally interpreted as a requirement to create a centre of intellectual excellence, which resulted in the acquisition of the South Kensington estate and its subsequent development with museums, academic establishments and the Hall of Arts and Sciences (the Royal Albert Hall).

Later, in 1890, the emphasis was switched to the support of individuals, starting with the award of Science Research Scholarships from 1891.

Today the Commission runs its own schemes for:

Research Fellowships
Industrial Fellowships
Industrial Design Studentships
Built Environment Fellowships
Fellowships in Design

In partnership with others it supports:

Enterprise Fellowships
Technical Teaching Fellowships

It also supports worthy individuals and appropriate organisations by Special Awards.

The total number of individuals being supported in 2025 was 141

Registered Charity No. 206123

Contents

Chairman's Report	2 – 3
Secretary's Report	4 - 5
The Work of the 1851 Royal Commission	6
Public Benefit	7
Grant-making Policies	7 – 9
Achievements in 2025	9 – 13
Future Plans	14
Awards Granted in 2025	15 – 24
Awards Completed in 2025	25 – 45
Alumni Awards, Honours and Achievements	46 – 49
Report by the Chairman of the Finance Committee	50 – 52
Statement of Commissioners' Responsibilities	53
Independent Auditor's Report	54 – 57
Statement of Financial Activities	58
Balance Sheet	59
Cash Flow Statement	60
Notes to the Financial Statements	61 – 78
Administrative Information	79 – 80
Commissioners, Committee Members and Staff	81 – 83
Professional Advisers	84

Chairman's Report

I am pleased to present the Annual Report and Accounts of the Royal Commission for the Exhibition of 1851 for the year ended 31 December 2025.

175 years ago, in its founding year, Prince Albert, our first President, themed his inaugural speech to introduce the idea of an international exhibition with the hope that it would provide a benchmark of human development, allowing knowledge to be shared for common benefit. He proposed that modern knowledge should be widely distributed and used to improve society collectively. This is still a crucial driver of the charity's activity today.

The Commission continues to pursue its founding purpose: to increase the means of industrial education and to promote the application of science and the arts for the benefit of the United Kingdom. In a year marked by continued global uncertainty and rapid technological change, the Commission has remained focused on supporting exceptional talent, stewarding its assets responsibly, and ensuring that its activities deliver long-term public benefit.

During 2025, the Commission sustained its strong commitment to postgraduate education and research through the award of 49 Fellowships and Scholarships to outstanding individuals across science, engineering, design and the built environment as well as continuing our support to further education and new business innovation. Our award holders continue to demonstrate the intellectual curiosity, creativity and leadership that have long defined the Commission's impact.

We were particularly encouraged by the breadth of disciplines supported this year and by the growing emphasis on interdisciplinary work, reflecting the complex challenges facing society. The Commission remains committed to widening access to its awards and to ensuring that a diverse pool of talent is recognised and supported wherever it is found.

Encouraging the next generation to consider STEM careers and potentially become recipients of an award in the future, is one of the Royal Commission's key objectives, and its outreach programme aims to encourage young people, parents and general society to discover more about the scientific, design and engineering worlds. The charity's efforts have been consolidated over the past year and reflect targeted opportunities within east and west London schools, as well as wider community engagement through events such as the Great Exhibition Road Festival, where the Commission and its volunteers interacted with nearly 5,000 visitors over the weekend, as well as the broadcasting and recording of the 'The Engineers' by the BBC World Service in front of a live audience of over 600 people.

The Commission's estate and investment portfolio remain fundamental to our ability to fund educational support in perpetuity. During the year, the Commissioners and management team continued to prioritise prudent stewardship. Balancing income generation with long-term sustainability resulted in expenditure of over £6 million being made available for charitable activity.

Furthermore, progress was also made in the ongoing management and development of the estate, with a continued focus on maintaining high standards of governance, environmental performance and tenant engagement. The Commission's investment strategy remained aligned with its long-term objectives, taking account of market conditions while seeking to preserve and grow capital responsibly.

Strong governance remains central to the Commission's effectiveness. Throughout the year the Commissioners kept the Commission's strategy under regular review as well as its risk profile and internal controls. Key risks, including those relating to financial markets, operational resilience and regulatory compliance, were actively managed.

I would like to thank my Board of Management colleagues for their dedication and oversight, and the members of our four sub-committees for the rigour and selfless commitment they bring to the work they undertake on the charity's behalf. The Commission continues to operate to high standards of transparency and accountability as reflected in this report.

As we look forward to the 175th Anniversary year of the Great Exhibition itself, the Commission remains confident in its ability to fulfil its historic mission in a modern context. Demand for advanced skills, research excellence and innovation has never been greater, and the Commission is well placed to continue supporting exceptional individuals who will shape the future of industry, science and design.

I would like to record my thanks to the executive team, our partners in our collaborative projects and all those who support the Commission's work. Their professionalism and commitment are essential to our continued success. I also extend my congratulations to our award holders, past and present, whose achievements remain the clearest testament to the enduring value of the Commission. Finally, my fellow Commissioners and I remain indebted to our President, Her Royal Highness, the Princess Royal, for her continued support and interest in this charity's activity and contribution to the nation.

The Rt Hon Professor Lord Kakkar KG KBE PC FMedSci

Secretary's Report

The Royal Commission for the Exhibition of 1851 continued in 2025 to advance its founding purpose of investing in people, ideas and institutions that strengthen the United Kingdom's capacity in science, engineering, and innovation. One of the key aspects of this mission is the Commission's Special Awards programme, which enables the Commission to respond flexibly to emerging needs, support innovative projects, and reach audiences beyond traditional academic pathways. During the year, the Commission supported a diverse portfolio of organisations whose work aligns with the Commission's long-standing commitment to excellence in education, public engagement with science, and the application of scientific knowledge for societal benefit.

A significant focus of the 2025 awards was the development of technical and engineering skills at all stages of the education pipeline. The Royal Academy of Engineering received support for its Apprenticeship Development Awards, strengthening employer-led pathways into engineering careers and enhancing the quality and reach of advanced and higher apprenticeships. Complementing this work, the Baker Dearing Educational Trust was supported in its programme to develop engineering teaching talent, addressing a critical need for specialist expertise within the university technical college sector.

The Commission also prioritised initiatives designed to inspire curiosity and widen participation in science, technology, engineering and mathematics. We The Curious was supported for its Curious Collaborations programme, fostering creative partnerships that engage diverse audiences with contemporary science, whilst Physics Partners received funding for the Manchester Physics Programme, which attempts to improve access to high-quality physics education in underserved schools. The Smallpeice Trust was supported to deliver STEM discovery sessions in Coventry libraries, using informal learning environments to reach young people and families who may not otherwise engage with STEM activities.

Several awards focused on strengthening teaching practice and confidence across the sciences. The Association for Science Education was supported in its work on building mathematical confidence in science teachers, recognising the importance of quantitative skills across scientific disciplines. Funding was also provided for the Black Heroes of Mathematics Youth Festival with a programme highlighting underrepresented contributions to mathematics and providing inclusive role models for the over 42,000 young students who registered to participate.

The Commission was also pleased to support a range of large-scale public engagement initiatives and events. The University of Hull received an award towards Colliderfest 2026, an ambitious festival celebrating science, engineering and creativity. Event sponsorship was also provided to the Foundation for Science and Technology and the All-Party Parliamentary Engineering Group, supporting informed dialogue between researchers, policymakers and industry leaders.

Industry and cultural partnerships remained an important element of the programme. Sensor Coating Systems was supported to deliver a laboratory experience day, offering hands-on exposure to applied science in an industrial setting. The Natural History Museum received funding in support of its Children's Gallery, enhancing opportunities for young audiences to engage with scientific discovery in a national cultural institution. The Exhibition Road Cultural Group was supported for its SouthKenZEN+ project work, strengthening collaboration across the South Kensington cultural and scientific estate.

The Commission also continued to recognise the value of interdisciplinary approaches that connect science with the arts and performance. The Royal College of Music received support for an MSc studentship in performance science, reflecting the growing importance of scientific methods in musical training and wellbeing. In addition, the Royal Albert Hall was supported in the exploratory work to appointment of an Associate Scientist, hopefully embedding scientific expertise and communications within a major cultural venue in the future.

Collectively, these awards demonstrate the breadth and adaptability of the Commission's Special Awards programme which, in turn, is only one aspect of the Royal Commission's charitable activity in any given year. By supporting organisations across education, industry, culture and public engagement, the Commission continues to honour its founding legacy while addressing contemporary challenges. The Royal Commissioners, committee members and executive staff, remain committed to ensuring that all the charity's programmes deliver lasting impact and reach communities, disciplines and sectors that will shape the future of science and innovation in the United Kingdom.

John Lavery MVO

The Work of the 1851 Royal Commission

The Commission's aim is to 'make a difference' by providing educational fellowships and studentships to the very best early career scientists, engineers and designers. Success is hard to measure within the confines of a single year but looked at over the longer term the Commission's achievement is evident, with 13 Nobel Prize winners and over 150 Fellows of the Royal Society among its previous award winners. The case studies of completing fellows and summaries of alumni achievements later in this report also bear witness to the Commission's success.

In addition to its core fellowship schemes, the Commission also provides special awards to its legacy institutions, to other organisations working to encourage STEM (science, technology, engineering and mathematics) education and to organisations that can help facilitate access to its incredible archives. Details of some of these awards and the impact they have made can also be found later in this report.

As well as the grants that it makes, the Commission itself organises a number of educational and networking events for the benefit of its award holders, alumni, legacy institutions and the general public, which together make a significant contribution to STEM education.

The Commission was originally established by Royal Charter in 1850 under the Presidency of Prince Albert, to organise and stage the Great Exhibition. Held in the spectacular Crystal Palace, constructed in Hyde Park, it was the first ever World Fair, and the most successful. With over six million visitors, it also made a substantial profit.

Consolidated by Supplemental Charter, and enjoined to invest the surplus from the Great Exhibition *strictly in accordance with the ends of the Exhibition...[to] increase the means of industrial education and extend the influence of science and art upon productive industry* the Commission purchased 87 acres of land in South Kensington and helped establish its three great museums, the Royal Albert Hall and renowned institutions of learning, including Imperial College and the Royal Colleges of Art and Music.

When this huge undertaking was complete, there remained sufficient funds for the Commission to initiate, in 1891, a programme of fellowships and studentships to support pure research in science and engineering, applied research in industry, industrial design and other projects.

The Commission continues its work to this day, managing its freehold estate, organising STEM outreach and other events and awarding some £5m a year in research fellowships, design studentships and other grants. The provision of long leases to the legacy colleges and the Royal Albert Hall also makes a very substantial contribution to scientific, engineering and artistic education.

Public Benefit

The Commission ensures that its work is for the public benefit and takes full account of the published Charity Commission guidance. The Commission's events and awards programmes and support of the legacy institutions represent identifiable benefits and are available to all eligible members of the public. They satisfy the primary charitable purpose of the advancement of education.

Grant-making Policies

The Commission primarily pursues its charitable purposes through the award of grants to individuals and organisations. The Commission awards grants under a number of defined programmes. Full details of the terms and conditions for each programme, including application forms and deadlines where appropriate, are provided on the Commission's website. A brief summary of the major programmes which the Commission supports is provided below:

Schemes administered by the Commission:

Post-doctoral Research Fellowships in Science or Engineering

These are intended to give early career scientists or engineers of exceptional promise the opportunity to conduct a research project of their own instigation; an ultimate objective is to contribute to the knowledge base required for a healthy and innovative national culture. Around eight to ten awards are made each year, which may include one or more Brunel Fellowships for engineering projects addressing the primary infrastructure needs of modern society. The awards are for up to three years, subject to annual review and encompass an annual stipend and some support for travel and other expenses.

Industrial Fellowships

These are intended to encourage profitable innovation and creativity in British industry. Projects in any science or engineering discipline will be considered. A variable number of awards – usually around ten to fifteen - is available each year depending on the financial value of individual awards granted. An ERA Foundation Fellowship for the electro-technology sector is awarded as part of the scheme. Fellowships are awarded to selected exceptional graduates with the potential to make an outstanding contribution to industry, for a programme of research, supported by their employing / sponsoring company, leading to a patent, product or process improvement in conjunction with a higher academic award. Awards are for up to three years, subject to annual review, and include a contribution towards living costs, a travel allowance, an honorarium for the host university and in appropriate cases a contribution towards university fees or towards the cost of enhancing the research project.

Industrial Design Studentships

These are intended to stimulate industrial design capability among the country's most able science and engineering graduates. A variable number of awards – usually around ten to fifteen - are offered each year for outstanding engineers or scientists who wish to develop their capabilities in industrial design by taking a recognised master's course and who aspire to become leading designers in British industry. The award is for up to two years and includes a stipend, materials allowance, travel allowance and contribution towards tuition fees.

Fellowships in Design and the Built Environment

Awarded in alternate years, these Fellowships each provide a stipend for up to two years to enable those at a more advanced stage in their career to explore important current issues, selected by the Commission.

Schemes administered by other organisations:

Enterprise Fellowships

Awarded through the Royal Academy of Engineering (RAEng), these fellowships are open to outstanding UK-resident engineering graduates seeking entrepreneurial success. A package of tailored mentoring, training and grant funding will enable recipients to pursue commercialisation of their technological ideas. Up to six awards are available each year.

Technical Teaching Fellowships

Awarded through the Education and Training Foundation (ETF), these fellowships are open to outstanding UK-resident Further Education practitioners who are recognised for their high impact teaching practice. Fellows are expected to share their expertise and learning across the sector as part of the award with the aim of supporting quality improvement in technical teaching and learning. Fellows will receive an award of £5,000 – £15,000 to support knowledge transfer activity and to ensure remission time is guaranteed. They will also be allocated a programme mentor to support them for the duration of the Fellowship and will attend developmental workshops. Six to ten awards are available each year depending on the value of individual awards.

Special Awards:

Although the educational programmes described above represent the lion's share of its grant giving, the Commission also responds to all those requests for funding that commend themselves through the Special Awards procedure. Here the aim is to assist worthy individuals, organisations or projects whose aims in the broadest sense align to the Commission's, and all applications are carefully scrutinised at an appropriate level according to the amount of support requested. Grants range from a few hundred pounds to over a hundred thousand pounds. While Commissioners retain considerable flexibility in principle, in practice a majority of special awards are made either to institutions on the Commission's legacy estate or for educational outreach work by like-minded organisations seeking to draw the attention of the young to the opportunities presented by science, engineering and design. A small number of grants are also made to facilitate access to the Commission's archives.

In addition to the above schemes, the Commission also administers, in conjunction with the Sir Misha Black Awards Committee, two awards in the field of design education, for which nominations are sought each year. Full details are available on the Commission's website but in brief these are:

Sir Misha Black Medal for Distinguished Services to Design Education

Global in reach, the Medal acknowledges the important contribution of individuals to the teaching of design at all levels, from anywhere in the world – as designers, as champions, as mentors and as educators.

Sir Misha Black Awards for Innovation in Design Education

Salutes educators from across the United Kingdom and celebrates the innovative achievements of institutions and individuals. Recipients may receive a bursary of £10,000 to advance their work in innovative design education.

Together the Sir Misha Black Medal and Awards recognise those who by innovation, vision and contribution to theory or practice have measurably improved the education of designers and enhanced the profile of design education.

Achievements in 2025

The core activity – and primary achievement – of the Commission is identifying early career science and engineering graduates of exceptional promise and supporting their work with its prestigious fellowships and studentships. Full details of the awards made during the year are given on pages 15 to 24.

The true impact of the Commission's award holders will only emerge over time, but some evidence of the success of the various programmes can be gleaned from the achievements of those Fellows who completed their awards during the year and the positions they go on to secure. A representative sample of case studies is provided on pages 25 to 45.

Many completing Fellows comment on the importance of their Fellowship to their success:

The 1851 Research Fellowship has been transformative in my research career. The fellowship has resulted in authorship of nine publications so far in internationally recognised journals including Physical Review B, Nature Physics and Advanced Functional Materials, as well as being recognised in the "Emerging Leaders 2024/2025" edition by the Journal of Physics: Condensed Matter. Furthermore, the Fellowship enabled me to participate in the development of open-source software, which is used by hundreds of colleagues around the world.

Dr Harry Lane, Research Fellow 2022

Beyond funding, the Commission provided invaluable networking opportunities, support during my Warwick-Cambridge transition, training and opportunities for science communication, and the flexibility essential for early-career research development. I'm especially grateful for the generous permission to teach a course on quantum computing in Part III of the Mathematical Tripos at Cambridge, which contributed significantly to the development of my ongoing research and future vision.

Dr Sathyawageeswar Subramanian, Research Fellow 2022

The fellowship provided the freedom and protection to explore the academic potential of novel industrial tools, enabling focused development without the pressure of immediate project delivery. Without this support, the work would not have progressed at the pace or depth required to build a robust, scientifically rigorous platform for Motor Neurone Disease research.

Finbar Gaffey, Industrial Fellow 2022

The Royal Commission network, showcase opportunities and unwavering support have truly been pivotal in unlocking the opportunities that brought me to where I am today - spinning out a company to translate the technology developed during my Fellowship into real-world patient care.

Magdalene Ho, Industrial Fellow 2022

The 1851 Industrial Fellowship provided a unique and highly rewarding opportunity to undertake my PhD whilst working directly in industry, greatly enhancing both my research output and professional development. The invaluable combination of industrial focus and academic collaboration helped me to accelerate the development of high-value materials that address key industry challenges. The Fellowship's generous travel support also allowed me to present my work at leading international conferences and exhibitions, expanding my professional network, increasing the visibility of my research, and generating new commercial opportunities for my company. These experiences have been pivotal in fast-tracking my career progression, leading to promotion to Senior Chemist during my PhD and an offer of a Lead Chemist position upon completion. I would highly recommend the Industrial Fellowship to others seeking to bridge academic and industrial research whilst pursuing their PhD, and I am extremely grateful to the 1851 team for their support over the past three years.

Matt Diable, Industrial Fellow 2022

For some, it is clear that without the award from the Commission, their project would not have gone ahead or would have been much more difficult:

The project would not have been possible without 1851 funding, and for that reason its impact cannot be overstated.

Joe Ross, Industrial Fellow 2022

It is unlikely that this work would have reached its current level of maturity without the Fellowship. The Fellowship provided the dedicated time and resources to pursue early proof-of-concept work that would otherwise have competed with other commercial priorities. Without that support, the initial catalytic coating development may not have progressed beyond an idea. The Fellowship effectively de-risked the research and created the foundation on which everything that followed was built.

Augusto Bartolome, Industrial Fellow 2022

As the project aimed to explore alternatives to industry gold standards and required external expertise, it would not have been possible without the collaboration between Autolus Ltd and the Department of Biochemical Engineering at UCL.

Aleksandra Nikoniuk, Industrial Fellow 2022

Without the Studentship, I would not have been able to embark on the course at the Royal College of Art, make friendships with the other awardees, and have the confidence to produce my work. I am moving into a studio space in Blackhorse Workshop in Walthamstow later this month and will continue to make more work based on everything I have learned.

Saym Hussain, Industrial Design Student 2024

Academic and Industrial Supervisors are also very complimentary about the Commission's Fellowships:

The Fellowship has acted as a vital bridge between the two institutions. As academic supervisor I've seen firsthand how this partnership has deepened our relationship with the company, fostered new collaborative avenues, and enriched my team's understanding of industry priorities and translational pathways. The Fellow's placement enabled us to align academic rigour with real-world innovation, accelerating progress in areas of mutual interest. Beyond the scientific outcomes, the Fellowship has cultivated a culture of openness and knowledge exchange that will outlast the studentship itself.

Dr Richard Mead, Academic Supervisor

From this Industrial Fellowship, there will be three papers published, and we expect two patents filed. We expect to start implementing the technology later this year. Without the Fellowship, we would not have pursued this project and would have lost out on the mutual learning that the Fellowship fosters.

Stratos Chatzinikolaou, Industrial Supervisor

The Industrial Fellowship has made a big difference to James Mae Projects Limited. We had spent a lot of money trying to build a machine that could turn water alum sludge into dry powder continuously. Our first attempt failed because the machine wasn't designed properly. Without the Fellowship, we would have had to give up on the project. The Fellowship gave us the scientific knowledge we needed. Thanks to the Fellowship, we patented the process in the UK and internationally in Europe, the USA, Canada, India, Australia, and New Zealand. The Fellowship also helped us come up with a simpler drying method using conveyor belts and different air flows in the freezing and drying sections. With this new knowledge, we applied for and won an Innovate UK Smart Grant worth £774,000 to build a full-scale plant. The final product will help water companies avoid sending alum sludge to landfill. Instead, it will turn the waste into a useful dry material that Ardex UK Ltd needs for making industrial adhesives. We plan to build 200 machines over the next five years, which could generate £16 million in annual revenue

Roger Stow, Industrial Supervisor

A more complete picture of the impact of the Commission's awards comes from the honours and awards bestowed on more senior alumni – some highlights are given on pages 46 to 49.

Many comment on the importance of the 1851 Fellowship to their subsequent achievements:

Without the support and credibility provided by the 1851 Fellowship, it would have been far more challenging to establish my independence and gain the momentum needed to transition toward leading my own lab. The Fellowship truly accelerated my development as a researcher and opened doors to further opportunities, including my current Royal Academy of Engineering Fellowship and my recent appointment to an Assistant Professorship in Bioelectronic Systems at the University of Cambridge. I am extremely grateful for the support, guidance, and confidence the Fellowship provided.

Dr Amparo Güemes, Research Fellow 2021

Several months ago, I was awarded a £1.8 million EPSRC open fellowship to start my own research group as a theoretical condensed matter physicist at the University of St Andrews. If it weren't for the freedom that the 1851 Fellowship brought, I would not have been able to position myself so clearly at the theory-experiment interface which has been crucial for obtaining this fellowship and establishing my independent career. I'm truly grateful for it.

Dr Luke Rhodes, Research Fellow 2019

The 1851 Industrial Fellowship allowed me the freedom to shape my own research direction and has been instrumental in opening the next chapter of my career. The fellowship enabled the fundamental research that led to recognition on the UN COP28 stage in Dubai through the Data Science and AI Award from the Dubai Future Foundation and Prototypes for Humanity; recognition by the Oxford Museum of the History of Science through the acquisition of my award and a representative piece of my research into its permanent collection; and most recently, my new role working at the intersection of cutting-edge science, technology and climate policy at the United Nations Environment Programme.

Dr Maral Bayaraa, Industrial Fellow 2020

Receiving a studentship from the Royal Commission allowed me to transition from my career designing electric cars and recyclable shoes, to a career working with design and nature, by studying Biodesign at Central Saint Martins.

Recently, it felt like that transition had truly come true. For the last few months, visionary Dutch fashion

designer Iris Van Herpen and I have been collaborating to create a 'living look', inhabited by 125 million bioluminescent micro-algae, which illuminates in response to movement and touch. From Vogue, to the New York Times, this project will hopefully inspire many people around the world.

None of this would have been possible without the support of the Royal Commission - so I just wanted to say a huge thank you - and to show one of the many outcomes the Royal Commission helps to facilitate.
Chris Bellamy, Industrial Design Student 2023

Comprehensive data on the impact of the Commission's Fellowships is not yet available, but in respect of one programme, the Enterprise Fellowships awarded through the Royal Academy of Engineering, we do know that the awards offered to date, totalling some £2.2m, have resulted in at least 35 successful companies which have generated an additional £128m of external investment and created over 350 jobs, an impressive return on investment.

As well as its core fellowships and studentships, the Commission also runs a very successful Special Awards programme, supporting individuals and institutions with similar aims to the Commission. As in previous years, many of the awards reflect the Commission's continuing commitment to raising the awareness of the young to the opportunities presented by science and engineering. A number of this year's awards are highlighted in the Secretary's Report above.

The impact of such Special Awards may take some time to become apparent, but a brief look at some of the awards made in the last few years gives a flavour of what can be achieved.

In 2024, the Commission gave £12,000 to Number Champions, a charity which uses trained volunteers to engage Year 2 and 3 children in state-funded primary schools in Greater London in games and other creative activities in one-on-one sessions to enable them to overcome the 'maths barrier'. The Commission's support allowed Number Champions to expand its activities to an additional ten schools, training more volunteers and developing 25 new classroom resources for the volunteers to use. In total over 360 children were supported, with teachers reporting that in over 85% of cases the intervention improved a child's confidence, enjoyment and ability in maths.

Also in 2024, the Commission gave £13,400 to Fun Kids Radio for a series of 12 audio programmes, each c. 4 minutes in length, each exploring a different invention arising from World War II to mark the 80th Anniversary of VE Day. The programmes looked at the ingenuity, design and people behind the invention, the issues that needed to be overcome and how people created their concepts. The initial broadcasts reached an audience of over 336,000 children, with many inspired to access additional information online or re-listen to favourite episodes as podcasts.

In 2025, the Commission gave £14,000 to Big Ideas to organise the first Black Heroes of Mathematics Youth Festival in conjunction with the Black Heroes of Mathematics Conference organised by the London Mathematical Society. 42,382 pupils at 231 schools participated in at least one of the four online sessions across the two days of the Festival. Each session blended storytelling with interactive, hands-on exploration, helping pupils experience mathematics as something active, creative, and enjoyable. From uncovering hidden number patterns, to constructing magic squares and decoding binary messages, pupils were invited to think, question, and play like mathematicians. These activities demonstrated that mathematics is not confined to textbooks but is a living subject that rewards curiosity, collaboration, and perseverance. Teachers praised the balance of information and engagement, noting how the sessions captured pupils' attention and made abstract concepts feel tangible and exciting. Each workshop offered classes an opportunity to ask the expert guest questions, ensuring that mathematical role models were relatable and approachable. For most of the children participating, this was their first time meeting a working mathematician. Hearing from a NASA engineer, a computer scientist, and research mathematicians helped build students' awareness of maths-related careers. After attending the workshop, 83% of teachers reported increased enthusiasm for maths among their pupils, 92% said the workshop challenged stereotypes about who can become a mathematician, and 83% felt more confident discussing maths careers. 100% said they would be interested in attending the Festival again next year.

In 2023, the Commission gave £83,700 to the BSA. The BSA's CREST Awards offer a well-established and proven suite of practical, hands-on challenges which help children to explore STEM subjects through exciting, real-world challenges. While the CREST Awards are designed to be accessible, using easy to source materials, the BSA's previous research showed that purchasing and collating these resources can represent a barrier to participation for teachers lacking time or confidence, and to schools in deprived catchment areas. The Commission's grant enabled the BSA to pilot a funded strand to the CREST Awards, allowing approximately 70 targeted schools to receive pre-packed Kit Boxes containing all of the materials needed for a class to participate in the Awards. Feedback from teachers on the Kit Boxes was excellent. They were seen to offer a thoughtfully selected collection of high-quality resources which were both eye-catching and durable. So successful was the project that the BSA have a waiting list of over 1,500 teachers who would like a Kit Box. There is also demand from non-school settings such as libraries. The BSA are also keen to develop the boxes further to include information on STEM role models to help inspire and engage those currently underrepresented in STEM.

As the examples above illustrate, the Commission funds a wide range of innovative STEM initiatives at varying scales, recognising that not all will achieve huge success, but in the hope that most will transform individual lives, and some will go on to have considerable reach. Needless to say, not all Special Awards proceed completely smoothly. Nevertheless, anecdotal evidence suggests that it is interventions such as these that can make all the difference in stimulating young people to become the scientists and engineers of tomorrow and the Commission remains committed to doing what it can.

As well as funding STEM outreach projects, the Commission also provides Special Awards to enhance its legacy estate in South Kensington and help the world leading institutions of Albertopolis to extend their reach. Details of the main awards this year are again provided in the Secretary's Report above.

These awards, often for major capital projects, can take many years to complete but also have significant impact. To take one recent example, in 2023 the Commission gave £100,000 towards the reimagining of the Power Hall in Manchester, which is part of the Science Museum Group. The Commission's grant contributed to enabling the museum to harness the latest sustainable technologies to heat and light Power Hall, as well as power its historical collection in a greener way. As part of a sector-leading programme of decarbonisation, which places zero carbon technologies at the heart of the visitor experience, the museum has used the natural resource of water from an underground aquifer to heat its buildings and installed an electric boiler to produce the steam needed to run its historic steam engines. This work has been carried out in partnership with building service engineers, Max Fordham, and aims to save 515 tonnes of carbon site-wide per year. The full system is on display, alongside a new interpretation and interactives that enable visitors to explore this cutting-edge technology.

Future Plans

By the time this report is published, a number of new initiatives will already be underway or have taken place.

2026 marks the 175th Anniversary of the Great Exhibition and to celebrate the occasion the Commission's President, HRH The Princess Royal, kindly agreed to deliver the inaugural Prince Philip Lecture at St James's Palace on 5 May 2026 as well as hosting a reception for the Commission's Fellows and alumni the same day. The early part of the year has also seen the launch of a new history of the Commission, written by the distinguished author A.N. Wilson, at a special event at the Royal Albert Hall.

During 2025, the Commission engaged MetroDynamics to undertake research into the impact of the Commission's educational programmes and the results of this work will start to be analysed and acted upon during the coming year. In April 2026 the Commission recruited an Alumni Manager to carry forward this work. She will be conducting research with alumni into the ongoing support from the Commission they would value, considering how best to expand the offering for alumni and exploring the scope for alumni to support current Fellows.

To facilitate an expanded offering to Fellows and alumni, the Commission is negotiating increased office and meeting space within Imperial College. While the space is unlikely to become available until 2027, work on designing the new rooms, appointing contractors and the like will hopefully progress in the latter part of 2026.

The Commission is conscious that its award programmes are still not as well known amongst their target audience as might be wished. The Commission will be putting in place a new communications strategy, and in May 2026 appointed new marketing advisers to assist in raising awareness of the awards with potential applicants.

Awards Granted in 2025

Research Fellows

Alex Chan
Project: Combating antimicrobial resistance with covalent cyclic peptides
University College London
Millions of covalent cyclic peptides will be prepared and tested on pathogenic microbes to identify antimicrobial peptides. The modes of antimicrobial action will be investigated using proteomic, genetic and biochemical experiments. This study aims to discover novel antimicrobial targets and establish covalent cyclic peptides as a new class of antimicrobials.

Ashleigh Chester
Project: Metal organic frameworks for anaesthetic emissions capture: towards NHS decarbonisation
University College London
Emissions from waste anaesthetic gases and inhalation sedatives contribute to the NHS's carbon footprint. This project will focus on targeting direct emissions from NHS activities related to anaesthesia and inhalation sedatives using porous metal organic frameworks (MOFs). It will explore the development of a customised filter utilising MOFs as the adsorbents.

Sam Coward
Project: Empowering computer chip design through formal methods
University College London
Arising from a career spanning industrial semiconductor design and academic research, this project proposes a modern approach to the design of the massively parallel chips that power computer graphics and AI. Intertwined with formal methods, the novel design technologies will provide the critical correctness guarantees and foster innovation.

Trisha Gopalakrishna
Project: Stability of the tropical savanna biome to global environmental stressors
University of Bristol
Tropical savannas support one third of the world's population, but how stable is this biome to climate and land use stressors? This project will map the stability of this biome globally, delineate vulnerable hotspots and determine the underlying mechanisms of stability, with the goal of informing environmental conservation policy and practice.

Jeannine Grüne
Project: Single molecular qubits with optical readout for next generation quantum technologies
University of Oxford
This research project focuses on developing single molecular qubits with optical readout of electron spin states without external magnetic field. By leveraging molecular systems with tuneable spin properties, combined with expertise in molecular spin processes and optical techniques, it seeks to create a scalable platform for future room-temperature quantum technologies.

Lucas Le Nagard
Project: Harnessing physics to exploit bacteria's sense of touch against them
University of Cambridge
This project will characterise the variations of bacteria's transmembrane electrical voltage, building on preliminary results suggesting that those variations are governed by the cells' physical environment. It will uncover innovative methods to manipulate this bacterial 'sense of touch', and provide novel strategies against bacterial communities that resist traditional antibiotic treatments.

Anindya Majhi
Project: Understanding gully erosion better: global soil losses and local dynamics
University College London
Gully erosion causes the gravest land degradation worldwide and imperils efforts to realise several sustainable development goals. To develop robust land management strategies and mitigate its effects on sustainability, this project aims to create the first global map of gully erosion and improve our predictive capability of gully erosional dynamics.

Matthew Mould
Project: Uncovering black hole binary origins with gravitational waves and machine learning
University of Nottingham
The origins of merging stellar-mass black hole binaries detected with gravitational waves are poorly understood but play a crucial role in our understanding of the universe. This project will develop a Bayesian machine-learning approach that directly compares populations from state-of-the-art simulations with real observations to reveal their astrophysical formation processes.

Patricia Ribes Metidieri
Project: Unveiling black hole entanglement
University of York
Black holes uniquely test the interplay between quantum theory and gravity. This project leverages novel tools from quantum information to study quantum correlations during black hole formation and evolution, and semiclassical effects in measurements near horizons. The findings offer insights into the information loss paradox, quantum information, and semiclassical gravity.

Brunel Fellow

Dr Maria Liapopoulou
Project: Integrated design framework for energy-efficient and safe construction
University of Cambridge
The embodied energy consumption and carbon emissions of buildings must be drastically reduced to address climate change. This is hindered, however, by overdesign to ensure safety. The proposed research tackles this challenge by combining optimisation and machine learning methods to develop a design framework for sustainable and safe construction.

Industrial Fellows

Alex Bentley
Project: High throughput generation of ligase molecule glue libraries
Sponsor: GSK
University of Strathclyde
The field of targeted protein degradation has emerged as a therapeutic strategy to revolutionise the treatment of diseases with severely unmet medical needs. This project aims to develop molecular glue degraders with the ability to target and remove key cancer-causing proteins from the body, which had previously been deemed undruggable.

Viktoria Brachmaier
Project: The astrocyte nexus: developing a platform using translatable human cell models for motor neuron disease
Sponsor: LifeArc
University of Sheffield
This project combines human tissue data and human derived cell models to study how astrocyte dysfunctions drive motor neuron disease (MND). By linking genetic insights to disease specific changes, the aim is to find new treatment targets and improve testing for therapies that will help to treat patients with MND.

Natasha Bury
Project: Discovery of novel BacTACs: advancing antibacterial drug discovery
Sponsor: LifeArc ***University of Glasgow***
This project aims to expand research on manipulating bacterial proteases to degrade essential survival proteins for combatting antimicrobial resistance. By using cross-disciplinary approaches including structural biology and screening for small molecule binders and degraders, the project aims to bridge the translational gap, advancing this innovative approach into effective therapeutic options.

Cordelia Cavill
Project: AI-driven design of perovskite materials for next generation energy devices
Sponsor: QinetiQ ***Imperial College London***
Perovskites exhibit enormous potential for sustainable energy devices due to their favourable properties, however traditional design methods are time-consuming and expensive. This project will leverage AI to accelerate the design and optimisation of novel perovskite materials, enabling high-performance, next-generation energy devices and ultimately accelerating the transition to a zero-carbon economy.

Charlie Chandler
Project: Femtosecond laser ablation X-ray photoelectron spectroscopy depth profiling
Sponsor: Thermo Fisher Scientific ***University of Surrey***
This project aims to develop a novel methodology for X-ray photoelectron spectroscopy (XPS) depth profiling which avoids chemical damage during the profiling material removal process. The work programme involves instrument development and experimental work to develop a fundamental understanding of the femtosecond laser-material interaction and optimise the depth profiling methodology.

Graham Lightfoot
Project: A novel sustainable catalyst for the synthesis of methanol, a foundational chemical
Sponsor: Johnson Matthey ***Durham University***
This project aims to develop a novel cost-competitive copper-free catalyst for methanol synthesis to address impending copper scarcity resulting from the electrification of industrial and domestic processes. This will facilitate the future production of affordable methanol which, as a foundational chemical, will benefit several industries as well as consumers.

Zaeem Najeeb
Project: Quantitative high throughput characterisation of catalyst nanoparticles using advanced 4D-STEM and spectroscopy
Sponsor: Johnson Matthey ***University of Oxford***
This project integrates quantitative 4D-STEM and spectroscopic techniques with automation and data processing to characterise catalyst nanoparticles. By leveraging new microscope coding interfaces, simultaneous spectroscopy, crystallography, and 3D structure analysis are enabled, providing models for improved catalyst design. These advancements will directly enhance Johnson Matthey's business and understanding of catalyst functionality.

Carl Parsons
Project: High resolution thermal imaging of temperature memory coatings
Sponsor: Sensor Coating Systems ***University of Cambridge***
This project will develop a high-resolution thermal imaging system for Thermal History Coatings, enabling full surface temperature mapping with sub-millimetre accuracy. By replacing point-based measurements with imaging, it increases data density and reduces measurement time. This technology will aid aerospace and energy industries in enhancing performance, increasing durability, and reducing environmental impact.

Anna Passmore
Project: Value from abundance: a new catalytic strategy for unlocking crucial tertiary amine products
Sponsor: Cortex Organics ***University of Oxford***
Synthetic chemistry is always striving to add value and complexity to molecules in a streamlined fashion. Boc-protected amines are ubiquitous across organic syntheses in both industry and academia, and this project looks to develop a procedure for the functionalisation of these groups to produce relevant tertiary amine motifs

Maggie So
Project: Expediting covalent medicine discovery through electrophile diversification
Sponsor: GSK ***University of Strathclyde***
Covalent molecules have the potential to act as efficacious therapeutics for diseases with unmet medical need. This project will expand the diversity of molecules that are screened in covalent drug discovery efforts while also drastically increasing throughput. Such improvements will accelerate the identification of new covalent medicines for patients.

Samuel Winter
Project: Variational quantum algorithms for the optimisation of telecommunications systems
Sponsor: BT Group ***University of Edinburgh***
Variational quantum algorithms (VQAs) show potential for enhancing both solution quality and tractability of certain optimisations - many applicable to telecommunications. This project will develop new VQAs that exploit mathematical characteristics of telecommunications networks, to outperform classical algorithms in practice. This will lead towards resource efficiency (energy, time, money, etc).

Wan Yeung
Project: Hydro for hydrogen: charting a course for green hydrogen with offshore seawater production
Sponsor: Aqualution Systems ***University of Edinburgh***
To generate green hydrogen offshore through direct seawater electrolysis, this project involves two parts: first, maximising efficiency and output from novel electrolysers; second, conducting a techno-economic analysis to assess cost-effectiveness, feasibility, and environmental impact of offshore system configurations, delivering a scalable solution to meet industrial demands and ease freshwater scarcity.

Enterprise Fellows

Sara Alao
Company: Stars Edge
[Financially supported by the ERA Foundation]
Stars Edge has developed a revolutionary air-breathing engine that uses atmospheric particles as natural propellant, eliminating the need for onboard fuel. This allows satellites to operate in Very Low Earth Orbit for significantly longer periods, reducing the costs of refuelling and replacement launches. The technology extends mission lifespans, lowers operational costs, and supports more sustainable satellite operations for industries such as Earth observation and communications.

Ben Coyne
Company: Munnch
Munnch has developed foamed packaging from underutilised biopolymers that matches the performance of expanded polystyrene while composting rapidly, even in landfill. The material offers superior strength, insulation, and water resistance, and can be produced using existing polystyrene equipment for seamless supply chain integration. By replacing plastics and paper, it helps businesses avoid costly packaging taxes while reducing environmental impact.

Henry Dunne
Company: Microneedle Solutions
MNS delivers a recyclable, dissolvable microneedle patch that enables painless, self-administered vaccine delivery without refrigeration. The patches reduce reliance on healthcare staff, cut waste, and maintain vaccine stability in heat, making them ideal for resource-limited settings. An automated, cost-efficient manufacturing system overcomes scalability barriers, offering a sustainable and commercially viable alternative to needles.

Lucy Hughes
Company: MarinaTex
MarinaTex produces a 100% plastic-free, compostable film and coating made from seafood waste and algae. The material biodegrades in home and industrial composting without harmful residues, while its coatings are recyclable with paper and feature antimicrobial properties that extend food shelf life. By using waste feedstocks instead of virgin plastics, MarinaTex lowers CO_2 emissions and delivers a scalable, circular solution for industries such as food packaging and agriculture.

Emanuele Griccioli
Company: Sealeo
Sealeo has created a bio-based, multi-layered material inspired by seal skin that uses evaporative cooling to regulate cold-chain temperatures without external energy. Its hydrogel core and vapor-permissive outer layer maintain stable conditions, while the adaptable design can be molded to the shape of medicines, improving efficiency and reducing waste. Scalable and sustainable, the technology combines high performance with patent-pending innovation.

Built Environment Fellows

Eleanor Fawcett
Project: Fostering thriving social ecosystems within New Towns
Mentor: Sowmya Parthasarathy, Arup
This research project responds directly to a major challenge in the UK's New Towns programme: how to ensure that these new places develop thriving community life from the outset, not years after the homes are built. Across the UK we have rich insight from community organisers, local authorities, public-service designers and neighbourhood groups — yet this expertise is rarely integrated into the early design and delivery of new developments. At the same time, many recent large schemes still struggle to activate ground floors, deliver purposeful social spaces, or build strong social networks.

This project will explore how to connect these worlds, and asks: How can we systematically deliver the social ecosystems—formal and informal—that allow communities to thrive in new developments, particularly as the UK embarks on the New Towns programme?

Using developments from the UK and Europe as case studies, the project will identify the governance models, partnerships, procurement approaches and early-activation strategies that consistently produce vibrant social ecosystems. It will explore and develop approaches which strengthen cross-sector and cross-departmental collaboration, and engage with developers' objectives, supported by the analysis of case study projects. It will then translate these lessons into a practical, UK-focused toolkit to support New Towns delivery teams, local authorities, developers and community organisations to collaborate more effectively and shape stronger social outcomes.

We have an opportunity to rethink how housing, community life, public services and spatial design work together in the UK. By joining up community insight with New Towns delivery, this research aims to strengthen the systems that produce new places — so thriving social ecosystems become a consistent, scalable outcome across the next generation of UK developments — designed intentionally, delivered collaboratively, and sustained for the long term.

Madeleine Kessler
Project: The first 100 days: embedding design for resilient futures
Mentor: Judith Sykes FREng, Expedition Engineering and Useful Simple Trust
The first 100 days of a project set the trajectory for everything that follows. The decisions taken at this stage lock in decades of cost, carbon and performance, yet they are made long before design is part of the conversation. This project addresses that gap.

Working directly inside government, the project embeds design thinking into the systems, processes and emerging AI tools that shape the UK's built environment. With the formation of the new National Infrastructure and Service Transformation Authority (NISTA), a major period of national investment, and the rapid deployment of AI within government systems, the UK is at a pivotal moment to ensure long-term value, climate resilience and quality of life are built into decision-making from the start.

The project will develop a Design Resilience Toolkit and an AI-enabled Design Resilience Agent. These are practical, scalable tools created through Design Resilience Studios, hands-on co-design sessions that bring senior officials and next-generation leaders together across disciplines to understand core issues, test ideas, and prototype solutions on live infrastructure projects.

In collaboration with partners across government and industry, the Fellow aims to embed these tools directly into the systems and processes that guide the earliest stages of projects. The project builds on the Fellow's interdisciplinary experience across architecture, engineering, co-design and national infrastructure policy. Its legacy will be the creation of governance models that embed design thinking at the point where decisions are made, while training a cohort of future leaders to steward and evolve these systems to build a more resilient future.

By strengthening the first 100 days, the project helps shape the next 100 years of the UK's built environment.

Sir Misha Black Medal for Distinguished Services to Design Education

Professor William Ion ***University of Strathclyde***
Professor Ion has played a leading role in the development of design education for over 35 years. His focus has been on the development of product design engineering as a discipline. With Professor Stuart Pugh he developed the concept of Total Design, introducing a cross-faculty course at the University of Strathclyde, teaching design to students from a broad range of engineering disciplines (electrical, chemical, mechanical, civil, architecture etc), quite an innovation at the time. This work led to him leading the establishment of an undergraduate MEng programme on Product Design Engineering with a strong focus on interdisciplinary design, one of the first such programmes in the UK, which quickly became the flagship programme for the Design, Manufacturing and Engineering Management department. Professor Ion also played a key role in the UK organisation Sharing Experience in Engineering Design (SEED)and later led the amalgamation of SEED into the international organisation The Design Society, with SEED becoming the Design Education Special Interest Group (DESIG) of the Design Society. He was chair of DESIG from its inception up until 2013. Since 2008 Professor Ion's focus has also been on broader aspects of manufacturing design. He was the founding Director of the Advanced Forming Research Centre and the University lead on establishing it as a part of the UK High Value Manufacturing Catapult. Latterly he has been involved in the team that established the National Manufacturing Institute Scotland, leading the workstream that established the Manufacturing Skills Academy with a focus on lifelong learning.

Lady (Helen) Hamlyn CBE ***Helen Hamlyn Trust***
Lady Hamlyn is a designer and design-driven philanthropist whose approach exemplifies how design can address complex societal challenges across disciplines, communities, and generations. She creates contexts for innovation and change to happen with an eye firmly on long term development, using education as the multiplier effect. She's personally involved and has pioneered a long-term, systemic change approach to philanthropy.

Lady Hamlyn is always designing—perceiving unmet needs, connecting people and ideas, and shaping inventive, real-world solutions. Her contribution to design education lies not only in developing institutions and initiatives, but in creating the conditions for others to design their own responses to complex challenges. Across sectors, she fosters inclusive, collaborative environments where learning, creativity, and innovation thrive. Unusually for a funder, she is deeply involved in every detail of her projects.

In 1991, following her influential New Design for Old exhibition at the V&A Boilerhouse, Lady Hamlyn proposed and then founded DesignAge at the Royal College of Art. It reframed ageing as a design challenge and later evolved into the Helen Hamlyn Centre for Design (HHCD), now a global leader in inclusive and human-centred design. HHCD profoundly shaped design research and education, integrating ageing, healthcare, and public policy into design discourse and curricula.

In 2003, Lady Hamlyn initiated Open Futures, a holistic learning programme that reached over 86,000 children in deprived areas of England. Built on partnerships with leading experts and co-created with schools, it integrated skills-based learning—gardening (growit), cooking (cookit), filmmaking (filmit), and enquiry-based learning (askit)—into core education. The programme empowered teachers to reimagine curricula, placed learners at the centre, and treated creative, practical skills as vital pathways to literacy, science, and social development. Open Futures exemplified design-led education—iterative, responsive, inclusive, and locally relevant.

In 2008, Lady Hamlyn endowed Imperial College London to establish the Hamlyn Centre for Robotic Surgery, giving the UK a physical home for surgical robotics. The Centre brings together clinicians, engineers, and designers in a multidisciplinary environment where technological innovation meets real-world healthcare needs. It functions as a hybrid design lab—advancing global health while modelling how design education can operate across disciplines, fusing systems thinking, user research, and advanced engineering.

These are just a few examples of the transformational projects Lady Hamlyn has initiated.

Sir Misha Black Award for Innovation in Design Education

Victoria Thornton ***Thornton Education Trust***

Victoria Thornton was the founder and Chair of Open House 30 years ago, which subsequently became Open City. Open City runs an annual event that opens up exemplars of the finest architecture in London. Today, hundreds of thousands of people gain access and are welcomed by the architects, designers, and engineers who created the architecture which makes our cities. Under her leadership, the programme has expanded to over 40 cities worldwide.

In 2020 she stepped down to create the Thornton Education Trust which takes engagement of young people in the built environment to a whole new level. Young people will inherit the world we've made but they have no say today in designing or planning it. The built environment generates 40% of carbon emissions and embodies so many issues that govern our health and wellbeing and that of the planet. Young people want to understand how we make and manage what we build to tackle the challenges they will face. TET campaigns for young people to be engaged from an early age. It helps them have a voice through participation and helps them to develop skills that can lead them to creative, technical, entrepreneurial, or civic roles. It does this through its education programmes, toolkits and awards programmes that explain and demonstrate how to involve and engage young people, in schools, through dialogue, working with professionals within projects. TET helps built environment professionals, promoters of policies and projects, and educators to develop the capacity to do this well through knowledge sharing, toolkits and research. It acts as a knowledge hub and a community of practice, sharing the knowledge and expertise gleaned from decades of experience of engagement and participation.

Industrial Design Students

Ewan Atkinson	Royal College of Art / Imperial College London	Innovation Design Engineering
Sophie Britz	Imperial College London	Design Engineering
Ella Freeman	Loughborough	Ergonomics and Human Factors
Patrick Fulton	CSM	Industrial Design
Jake Inglis	Imperial College London	Design Engineering
Aya Khayat	Royal College of Art / Imperial College London	Innovation Design Engineering
Serene Knight	Royal College of Art / Imperial College London	Innovation Design Engineering
Tobias Kunz	Royal College of Art / Imperial College London	Innovation Design Engineering
India Lloyd-Evans	Imperial College London	Cleantech Innovation
Elizabeth McKenna	Royal College of Art / Imperial College London	Innovation Design Engineering
Nuo Miao	Royal College of Art / Imperial College London	Innovation Design Engineering
Kimon Panayotou-Ennes	King's College London	MedTech Innovation and Entrepreneurship
Jack Pritchard	Imperial College London	Design Engineering
Chin Wei Tang	Imperial College London	Design Engineering

Technical Teaching Fellowships

Clare Wood ***Chelmsford College***

Project: Researching the gaps that may exist in hard (technical) and soft (human) employability skills in T-level learners

This project aims to identify specific skills gaps that employers encounter when hiring T-Level learners for placements, including those identified by learners themselves. It will identify and deploy digital tools (including AI and immersive technologies) to enhance learners' technical and human employability skills. The initial focus will be on Management and Administration learners and then expand to other T-Level programs. This will develop and enhance employability skills to allow T-Level learners to be more competitive in the job market.

Jay Alexander and Dan Balls ***South Essex College***

Project: Teaching in the dark

This project aims to improve staff retention in high-turnover technical departments by introducing a structured mentoring network. It will support early-career teachers through regular meetings, classroom visits, and shared planning, focusing on curriculum, professional growth, and the broader FE experience.

The project will initially target up to two curriculums based on mentee needs. A digital hub will host practical resources created by network participants. The goal is to shift early teaching in FE from survival to possibility, fostering confidence, belonging, and long-term contribution - ultimately strengthening provision for learners and reducing disruption caused by staff turnover.

Jessica Stevenson ***UTC Sheffield***

Project: Creating a health tech/med tech qualification using the EPQ framework

Digital innovation in healthcare is accelerating, but the education sector lacks both the expertise and structure to prepare students adequately for emerging roles. Young people, particularly those outside specialist institutions, often receive limited exposure to digital applications in health contexts. There is also a shortage of teaching resources and curriculum frameworks that combine digital, health, and research skills in a cohesive, inclusive, and future-facing way.

This project will create a nationally scalable Digital Health EPQ to improve student access to health-tech careers. It aims to enhance access to health-tech apprenticeships, university courses, and employment by providing students with a structured, high-quality experience that gives them an advantage in a critical growth sector. The project will pilot a rigorous, project-based qualification at UTC Sheffield, offering industry-informed resources and frameworks.

Rana ElFarra ***North Hertfordshire College***

Project: VISTA (Virtual Immersive Science for T Level Achievement) Project

The use of immersive virtual reality (VR) in education has grown rapidly, yet its integration within the further education (FE) and skills sector remains fragmented and underutilised. The VISTA project aims to implement and evaluate a scalable, immersive VR teaching model to enhance engagement, accessibility, and technical skill development in T Level Science. It will use immersive VR to replicate complex laboratory environments and bridge theory and practice. The project includes the development and roll-out of staff training, VR standard operational procedures, digital passports, curriculum mapping tools and national guidance on immersive learning in technical education.

Gerard Morgan and Steve Williams ***Gower College Swansea***

Project: Embedding pressure testing into the curriculum to push learner standards

This project aims to embed pressure testing across vocational curricula to improve learner outcomes and better align teaching with industry needs. By simulating high-expectation, real-world environments, it helps students develop technical skills, soft skills, and resilience, preparing them for workplace challenges.

Recognising that the further education (FE) and skills sector often prioritises assessment over readiness for employment, the project shifts the focus toward holistic development. Staff will be supported to design and deliver pressure tests within their subjects and collaborate with employers to ensure tasks reflect current industry demands. Ultimately, the initiative empowers both educators and learners, encouraging personal bests and ensuring vocational training is relevant, rigorous, and responsive to the evolving needs of the workforce.

Vanessa Mee ***The Guernsey Institute – College of Further Education***

Project: Professional plasticity: teaching our staff to model positive mental fitness

The World Economic Forum's Future of Jobs Survey 2024 found that resilience, flexibility and agility are now deemed core skills in the workplace, with their importance expecting to rise significantly by 2030. This project will develop and deliver a six-week professional development course focusing on building "professional plasticity" (resilience / flexibility / agility) among STEM lecturers. It aims to enhance educator capability while demonstrating how this positively impacts learner outcomes, particularly around engagement, persistence, and employability. By embedding these competencies into teaching practice, the project aims to support both staff and students to adapt and thrive in the evolving landscape of vocational education and training.

Tiberiu Danovici ***Coleg y Cymoedd***

Project: Project Sidekick: Teacher-designed AI learning partner

Project Sidekick aims to develop and evaluate a teacher-led methodology for creating AI learning agents that enhance rather than replace pedagogical practice in technical education, transforming AI from a learning bypass tool into a genuine learning enhancement mechanism. Unlike generic AI tools, which often produce inaccurate or ethically questionable responses, Sidekick aims to embed trustworthy, learning-focused behaviours tailored to technical education. The project addresses the limitations of commercial AI by involving educators directly in shaping both the agent's knowledge base and its pedagogical approach. Ultimately, the project aims to bridge the gap between AI innovation and classroom realities, making AI a meaningful partner in education.

Special Awards Granted

STEM education and outreach

Royal Academy of Engineering – Apprenticeship development awards
Baker Dearing Educational Trust – Developing engineering teaching talent
We The Curious – Curious collaborations
Physics Partners – Manchester physics programme
Smallpeice Trust – STEM discovery sessions in Coventry libraries
Inspiration Trust – Big D&T Meet
Association for Science Education – Building mathematical confidence in science teachers
Big Ideas – Black heroes of mathematics
University of Hull - Colliderfest 2026
Humanitarian Technology Trust - OpenFlexure microscope
Foundation for Science and Technology - Event sponsorship
All Party Parliamentary Engineering Group – Event sponsorship
Sensor Coating Systems – Lab experience day
Big Ideas – London Wonder
Kids Invent Stuff – Guinness World Records bid
Foundation for Science and Technology – Future Leaders Conference

Support for legacy estate

Natural History Museum - Children's gallery
Royal College of Music – MSc studentship in performance science
Royal Albert Hall – Associate scientist
Exhibition Road Cultural Group – SouthKenZEN+ Project work

Awards completed in 2025

Research Fellows

Dr Mark England

Project: Investigating the near-term climate benefits of reducing methane emissions: Methane MIP

University of Exeter

Mark's Fellowship enabled him to lead MethaneMIP (the Methane Model Intercomparison Project). The aim of this project, which is still ongoing, is to produce a state-of-the-art estimate of the climate and health benefits of reducing methane emissions. Methane is the second most important greenhouse gas behind carbon dioxide – it is extremely potent in terms of warming, is relatively short lived in the atmosphere and there is substantial scope for reducing emissions in a cost-effective way. MethaneMIP brought together ten international climate modelling centres from across the world to perform co-ordinated simulations with new scenarios based on plausible methane reductions. The main findings are that ambitious reductions in methane can reduce near-term warming by approximately 0.3˚C, reduce the risk of crossing the 2˚C Paris Climate Accord target by 75%, and avoid 200,000 deaths per year due to surface level pollution. This work will be used to inform future policy relevant reports such as those by the IPCC and UNEP. Future work will involve running comprehensive simulations with interactive methane emissions, which will enable important feedbacks from natural sources such as permafrost and wetlands to be included. This topic is at the forefront of climate modelling and has been designated as a key priority by the Coupled Modelling Intercomparison Project (CMIP). Since finishing his Fellowship, Mark has taken a position as an assistant professor at the University of California Irvine in the Earth System Science department.

Dr Tim Hageman

Project: Next generation ice sheet fracture models to quantitatively predict sea level rise

Imperial College London / University of Oxford

During his Fellowship, Tim investigated how meltwater can drive cracks in ice sheets and ice cliffs. Through the development of computational models, he showed that surface meltwater collecting and pressurising these cracks plays an important role in stability: even cliffs that would otherwise be stable can be pushed past their tipping point when meltwater is present. To make this possible Tim created new computational tools to simulate large ice domains while keeping the fine-scale accuracy needed to capture hydro fracture and melting-related phenomena. Additionally, novel material models were developed that capture the full behaviour of ice: extremely brittle to capture fractures, while also capturing the ductile, fluid-like, behaviour that allows it to flow over longer timescales.

This work has produced nine papers so far: four on glaciology (with two more in preparation) and five on other areas within engineering: hydrogen embrittlement, corrosion and fracture mechanics. For these related areas, codes developed for the simulation of glaciers were used, demonstrating that concepts from engineering can be advanced to be applicable to glaciology, and these advances can then in turn be applied to engineering concepts again. Additionally, all computational codes developed have been made openly available, allowing others to use them in their research.

The Fellowship helped Tim start several collaborations with academics at the University of Liverpool (magma-driven fracture processes for volcanos), Northumbria University (linking small- and large-scale glacier models) and Vanderbilt University (fracture in viscous flows), with these collaborations helping to extend the impact and reach of his computational research. It also helped him obtain a position as a departmental lecturer at the University of Oxford. Currently, Tim is applying for further research funding to extend the computational models developed as part of his fellowship to larger regions, aiming to make it computationally feasible to capture meltwater-induced instabilities on a complete glacier-scale.

Dr Monireh Kabirnezhad
Project: A holistic approach to neutrino-nucleus interaction calculations for neutrino experiments
Imperial College London

Neutrinos could hold the key to some of the most fundamental questions in physics, such as why the universe contains more matter than antimatter, and ultimately, why we exist at all. To explore these questions, major international experiments like DUNE and Hyper-Kamiokande are underway to precisely measure neutrino properties, including CP-violation, an asymmetry between neutrinos and antineutrinos that could explain the observed matter–antimatter imbalance in the universe.

Although neutrinos are the most abundant matter particles in the universe, they remain among the least understood. Their elusive nature and the fact that they cannot be directly detected make their study exceptionally challenging. Instead, experiments observe the visible particles produced when neutrinos interact with atomic nuclei inside detectors and use interaction models to infer the neutrino's original properties, particularly its energy. As a result, precision measurements in next-generation neutrino experiments rely critically on accurate theoretical models of neutrino-nucleus interactions.

Minoo's research focuses on developing next-generation neutrino–nucleus interaction models to maximise the discovery potential of future experiments. Neutrinos interact with bound nucleons inside nuclei, and the resulting particles propagate through the nuclear medium. Therefore, her work is structured around two goals:
- Developing the MK model, to describe inelastic neutrino-nucleon interactions across a broad kinematic range relevant to current and future experiments.
- Nuclear dynamics: Using advanced computational and machine learning methods to incorporate detailed nuclear models, such as Relativistic Mean Field theory, into the NEUT event generator used in neutrino experiments.
Minoo's work has been published in the *Physical Review D Journal.*

Following her Fellowship, Minoo has been awarded a Royal Society University Research Fellowship which she will hold at Imperial College London.

Dr Tim Lamont
Project: Ecological function on restored coral reefs
Lancaster University

Tim is a marine biologist who specialises in tropical coral reef ecology. During his Fellowship, he worked at the world's largest coral reef restoration project, in Indonesia. He carried out a series of research projects to demonstrate the ways in which reef restoration generates recovery of 'ecosystem functions' – such as biological diversity, net reef growth, soundscapes and community composition. He published these results in seven scientific papers, which were reported on widely within academic circles and in the popular media.

Tim also evaluated sustainability claims made by the world's largest businesses. He found that many businesses are engaging enthusiastically in ecosystem restoration projects, but the quality and transparency of their reported outcomes is very low. He published this work in the journal *Science* and presented it at several international business summits. The work has influenced the development of international sustainability reporting frameworks, and the practice of several transnational corporations.

Tim's Research Fellowship has allowed him to develop important academic leadership skills – including coordinating international teams, supervising postgraduate and postdoctoral researchers, presenting research at academic conferences, industry events and in the popular media, and winning research grants to complement the funding provided by his Research Fellowship. Now, Tim has been awarded a UKRI Future Leaders Fellowship, which he will hold at Lancaster University, during which he will continue to develop his research ideas and real-world impact. He is hugely grateful to the

Royal Commission of 1851 for granting his Research Fellowship, and for their extensive support and encouragement in what has been a transformative period of his career.

Dr Harry Lane
Project: Stabilising magnetism in two dimensions
University of St Andrews / University of Manchester

The aim of Harry's Fellowship was to study the stabilisation of magnetism in two dimensions, which is unstable, as thermal fluctuations give rise to disorder. Stabilising long-range magnetic order typically requires additional ingredients such as spin-orbit coupling. This introduces additional degrees of freedom complicating the physics. The potential of harnessing two-dimensional magnets promises to unlock a new generation of low power technologies.

A key challenge in understanding magnetic systems is the computational cost of computing their spectra. During his Fellowship, Harry developed a numerical approach that dramatically reduces this cost. Using this new method, calculations on systems that were previously unfeasible can now be performed. Particular use cases include modelling realistic systems with structural disorder and skyrmion lattice systems, which have been proposed as platforms for memory storage.

Whilst often fluctuations in two-dimensional magnets lead to disorder, in some cases quantum fluctuations conspire to form exotic quantum entangled states. Diagnosis of these quantum fluctuations is typically performed using spectroscopy. However, Harry demonstrated that a wide range of classically disordered systems can give rise to similar spectroscopic signatures. In another work, he demonstrated that a similar "mimicry" of quantum fluctuations explains the order-disorder phase transition of the 2D honeycomb antiferromagnet $FePSe_3$.

Another theme of Harry's work has been the exploration of intertwined degrees of freedom. This has included work on understanding spin-lattice coupling, including how it can lead to ordered phases of matter (in the case of $MgCr_2O_4$), large magnetostriction (in the case of the industrially important compound $CoFe_2O_4$), and magnetoelastic control of magnetic surfaces (in the case of $Sr_4Ru_3O_{10}$).

In the final year of his Fellowship, Harry took up a Dame Kathleen Ollerenshaw Fellowship, which is a "tenure track style" academic position at the University of Manchester.

Dr Daniel Leybourne
Project: Elucidating the agro-ecological factors influencing virus success in cereal ecosystems
University of Liverpool

During his Fellowship, Daniel has been actively developing and delivering a research programme on sustainable pest and disease management. He has worked on identifying the biological factors that enable efficient disease transmission by plant virus vectors, on determining how microbial symbionts and viral agents alter vector behaviour, screened a diverse panel of plant varieties for disease resistance, and examined whether plant beneficial microbes can protect crops from insect-vectored disease. He has also collaborated with multiple partners to develop AI-driven tools for insect monitoring and spatial models to better estimate vector and disease spread. Since starting the Fellowship, Daniel has published 11 peer-reviewed papers; of these eight are a direct result of his Fellowship position at Liverpool with an additional four currently in-review and a final four in-prep.

During his Fellowship, Daniel proactively grew his international profile to establish himself as a research leader. During this time, he was nominated as a Fellow of The Royal Entomological Society, appointed to the Editorial Board of two journals, and collaborated with partners across the UK, Ireland, Germany, Argentina, and Chile. He was invited as keynote speaker for an international workshop in Chile, established a research network that spans academia and industry, attended international conferences, and showcased innovative AI-driven insect monitoring tools at stakeholder events.

Daniel now holds a PI position as the Head of Pest and Pathogen Surveillance at The Agri-Food and Biosciences Institute in Belfast, a public-sector institute that delivers scientific research with a focus on sustainable farming and plant health. The team comprises 16 scientific staff in addition to fixed-term researchers, and Daniel is responsible for the development and delivery of the scientific programme. This position will allow him to continue to develop the research programme initiated during his 1851 Fellowship, and his first funding application through this position was submitted in December 2025.

Dr Alex Riley
Project: Constraining the nature of dark matter with galactic halo substructures
Durham University

In both the real universe and our best theoretical models, galaxies grow by constantly consuming smaller systems. As smaller galaxies fall into and orbit around a more massive host, they begin to unravel, and form extended stellar streams that spray stars across the sky. The shapes, orbits, and lifetimes of these streams are sensitive probes of dark matter, the "missing mass" of the Universe whose nature is one of the remaining fundamental questions in physics.

By studying streams in both simulations and wide-area digital sky surveys, Alex's work places novel constraints on galaxy formation and dark matter. During his time as a Fellow, Alex identified and characterized the stellar streams in the state-of-the-art Auriga simulations, finding that stream orbits in Auriga are similar to those of Milky Way streams, resolving a tension in the literature between theory and observations. As satellites disrupt in Auriga, their cores lose stellar mass and increase in average metal content, challenging our understanding of the mass metallicity relation that is fundamental to galaxy formation. The methodology and overall philosophy of the Auriga Streams project has been adopted by other simulation groups, pushing the field in a new direction.

In addition to these science results, being an 1851 Fellow granted Alex independence and support to grow his role as a leader in his field. He is co-leading a Key Project (to be published in June 2026) within the Dark Energy Spectroscopic Instrument (DESI) survey to measure the mass of the Milky Way, with three independent methods calibrated on mock surveys Alex created for the project. Alex joined the ARRAKIHS mission, an ESA-funded space telescope that will launch in 2030 to image ~70 Milky Way-mass galaxies to unprecedented depth to uncover their stellar streams, contributing theory work for the final stage of mission approval. Alex has also been invited to lead a tutorial on working with simulation data at a large workshop in the field in summer 2026.

Following the Fellowship, Alex will continue his work at Lund University in Sweden with a two-year independent postdoctoral fellowship funded by the Wenner Gren Foundation.

Dr Sathyawageeswar Subramanian
Project: Quantum algorithms for testing and learning
University of Warwick / University of Cambridge

Realising the remarkable benefits promised by quantum technologies requires us to overcome a fundamental barrier: how do we efficiently understand the properties of immensely complex quantum systems by examining only a tiny fraction of their information?

Sathya set out to tackle this challenge by developing quantum algorithms that can reliably test properties of, and extract patterns from, quantum data. His investigation led to a new mathematical framework for analysing how reliable patterns learned from quantum data can be, essential for practical quantum machine learning. This work, with collaborators at Caltech, ENS Lyon, TU Munich, and the University of Tokyo, was featured at premier conferences (COLT 2024, TQC 2024, ICML 2023). With colleagues at Cambridge and Warwick, he also developed new measures for quantum information processing channels and algorithms for testing their properties.

The Commission's support allowed Sathya to follow unexpected insights. Leading a collaboration with a PhD student and industry partner Dr. Min-Hsiu Hsieh (Foxconn), they proved that quantum computers have mathematically guaranteed advantages for certain tasks, even on today's imperfect hardware (*Nature Communications*). In another collaboration, Sathya leveraged results in additive combinatorics to prove that even quantum algorithms that only succeed on a small fraction of their inputs can be transformed efficiently into ones that succeed on all their inputs (*SODA 2024*).

Sathya is now a Royal Society University Research Fellow at Oxford, embarking on an eight-year programme probing quantum computing through average-case complexity, to develop more sophisticated quantum algorithm design and analysis techniques for harnessing quantum computational advantages

Industrial Fellows

Augusto Bartolome Diaz de Budalles

Project: Development of a hierarchical nanocoating technology for enhanced electrode efficiency of commercial alkaline electrolysers

Sponsor: Oxford nanoSystems and Electrogenos

University College London

Augusto's Fellowship focused on developing advanced catalytic coatings for hydrogen electrolysis — a critical technology for producing green hydrogen at lower cost and without reliance on scarce platinum group metals (PGMs). During the first phase of the Fellowship at Oxford nanoSystems, Augusto developed an enhanced catalytic coating that was integrated with the company's existing nanoFLUX surface technology. The combined system delivered promising results in both internal testing and independent trials at University College London. These outcomes enabled Oxford nanoSystems to open commercial discussions with several of the world's largest electrolyser manufacturers, progressing to signed non-disclosure agreements, and underpinned a patent filing covering the coating enhancement.

In the second phase, Augusto founded Electrogenos, a hard-tech startup building a novel electrolyser architecture around an advanced catalytic coating. The company has grown to a team of ten based in Oxfordshire, with subsidiaries in Spain and Abu Dhabi. Augusto has raised over £7 million, filed three patents (one granted, two in PCT phase), and demonstrated electrolyser stacks that outperform platinum-based catalysts twofold — without using any PGMs. The company has scaled from millimetre-scale research electrodes to 500 cm^2 plates, representing a 100- to 500-fold increase over typical academic work. Electrogenos has also secured a £250k proof-of-concept partnership with Repsol Foundation, a Royce Institute collaborative grant with NPL and the University of Oxford, and entry into leading industry accelerators including TechX in Aberdeen.

Following the Fellowship, Augusto will complete the write-up of his PhD thesis at UCL while continuing to lead Electrogenos through its next funding round.

Joseph Counte

Project: Reducing temperature uncertainty in thermal memory coatings for advanced gas turbine applications

Sponsor: Sensor Coating Systems

University of Nottingham

During Joseph's Fellowship, a new method for extracting temperature values from thermal history coatings was pioneered through the analysis of photoluminescence (PL) emission spectra. Joseph was able to link unique features in PL spectra to real material changes occurring within the coatings, providing a basis for understanding their temperature response without the need for time-consuming and expensive characterisation methods. The exploration of novel coating application techniques, possible only at The University of Nottingham's thermal spray facilities, has opened a pathway toward the development of improved thermal history coatings suitable for the next generation of hydrogen-powered gas turbines.

In addition to spectral fingerprinting, Joseph's research developed a method for processing PL spectra that is now used across SCS industrial contracts to deliver temperature measurements for gas turbine design engineers that were previously unattainable using conventional luminescence processing techniques. The uncertainty of this technique has been quantified up to 1400 °C and falls within the ±20 °C range required to identify hotspots that could halve the operational lifetime of commercial gas turbine components.

Following the conclusion of the fellowship, Joseph will be taking up a permanent position at Sensor Coating Systems, overseeing customer projects and coordinating R&D efforts, applying the knowledge and skills gained through the Fellowship in an industrial context.

Matthew Diable

Project: Development and industrialisation of novel hyperbranched photopolymers via proprietary technology to revolutionise 3D printing

Sponsor: Scott Bader (Polymer Mimetics)

University of Liverpool

During the course of his Fellowship, Matt developed a portfolio of advanced materials designed to help unlock the next generation of polymer-based 3D printing. His work has focused on creating high-value 3D printed plastics through the development of hyperbranched photopolymers: specialised liquid resins containing highly branched molecules that rapidly solidify into well-defined, durable parts when exposed to UV light in 3D printers. These novel materials, produced via a patented and scalable polymer platform invented at the University of Liverpool, address long-standing safety and performance challenges that have limited the wider adoption of 3D printing in biomedical, dental and consumer applications.

The most notable output of Matt's research is the invention of a new class of hyperbranched polymeric photoinitiators: light-absorbing species essential for initiating the curing process in 3D printers. In response to growing industry demand for safer and more sustainable photoinitiator technologies, these highly branched materials deliver rapid printing speeds whilst significantly reducing leachable chemical residues, facilitating the efficient manufacture of compliant, high-performance 3D printed plastics across regulated sectors. This innovation has already resulted in a new patent application and generated considerable commercial interest following its presentation at a major 3D printing exhibition, with the technology projected to have a potential 20-year lifetime value of around £25 million across 3D printing and other UV curable markets, including coatings, inks and adhesives.

Following his Fellowship, Matt has accepted a new position as Lead Chemist at Arkema, a global leader in UV curable technologies, where he will continue developing sustainable materials that drive innovation in advanced manufacturing.

Marina Economidou

Project: Investigations into the ligand and oxidation state dependent extraction of residual palladium from pharmaceutically relevant molecules

Sponsor: GSK

University of Strathclyde

Palladium-catalysed coupling reactions are powerful carbon-carbon and carbon-heteroatom forming reactions frequently employed in the chemical industry to synthesise key intermediates. During her Fellowship, Marina has advanced the understanding of palladium-removal processes following such transformations, which is a relatively understudied field. The removal of metals in a pharmaceutical context is crucial, as stringent regulatory limits are in place to ensure the safety of marketed medicines. Through a series of systematic investigations, Marina's project delved into the complexities surrounding the choice of reagents and reaction conditions for palladium-catalysed couplings, and how these factors affect metal removal. Marina has also explored the properties of the ligands facilitating these chemical transformations, and how these ultimately influence palladium

precipitation. By reverting to a first principles understanding of metal removal processes, Marina's findings have demonstrated that the reagents and reaction conditions can be optimised to limit residual metals in solution to the desired limits. These insights were demonstrated to be impactful, with multiple case studies showcasing the applicability of Marina's work on pharmaceutically relevant molecules.

Following the Fellowship, Marina has started full-time employment as a Senior Process Development Scientist at GSK. She envisions that her Fellowship research on metal removal will be incredibly useful in departmental workflows, particularly with the commonality of metal-catalysed transformations in industry.

Finbar Gaffey
Project: Developing a platform to improve the identification of therapies for motor neuron disease
Sponsor: LifeArc

University of Sheffield

Motor neuron disease (MND) affects 1 in 300 people, with most patients dying within 2–3 years of diagnosis. Despite this, effective therapies remain elusive, largely due to the lack of robust models to validate genetic targets. Stem cell-derived models are essential for this work, but current approaches lack the reproducibility needed for drug discovery.

Finbar's project established a pipeline to generate consistent, scalable motor neuron models from stem cells, suitable for industrial and therapeutic screening. The novel methodologies developed were published in *Scientific Reports (Nature portfolio)* to benefit the wider MND research community.

To understand early disease mechanisms—before neuronal death—Finbar built a platform to define disease manifestation in the models. This involved generating large-scale transcriptomic and proteomic datasets across multiple MND genetic backgrounds. The resulting data revealed a novel disease-relevant state in ALS, enabling earlier, unbiased assessment of therapeutic candidates. These findings are being prepared for publication in a high-impact journal.

This work laid the foundation for LifeArc's new MND-focused wet lab capability, positioning the organization as a leader in scalable MND drug discovery. As a charity, LifeArc has shared findings widely to accelerate progress across the field.

Following the Fellowship, Finbar will continue contributing to MND drug discovery at LifeArc. He comments that the Fellowship has been pivotal in developing his scientific independence and impact in this space.

Claudine Greenwood
Project: Identification of covalent tools for essential parasite proteins implicated in tropical diseases
Sponsor: GSK

University of Strathclyde

Parasitic infections such as malaria and leishmaniasis have an immense impact on tropical and sub-tropical regions worldwide. Malaria, transmitted by mosquitoes carrying *Plasmodium* parasites, affected an estimated 240 million individuals in 2023. Leishmaniasis, a disease spread by sandflies carrying *Leishmania* parasites, poses a threat to 1.3 billion people and can be fatal if left untreated. These diseases face significant challenges due to rising antimicrobial resistance, which diminishes the efficacy of current treatments and underlines the urgent need for novel therapeutic strategies.

Claudine's research explored a promising direction by focusing on proteins known as bromodomain-containing factors (BDFs) that are vital for the survival and growth of these parasites. Bromodomains play a key role in the regulation of gene transcription and have been identified as potential drug targets across *Leishmania* and *Plasmodium* genomes. Developing selective chemical tools to investigate these bromodomains is complex due to high similarity to proteins across other species including

human. Recent progress in the field emphasizes covalent approaches, which exploit unique residues within protein active sites to achieve selectivity.

The study was divided into phases, starting with identifying promising bromodomains in the parasites and assessing how they could be targeted specifically using advanced screening methods. A set of chemical tools was developed, which showed potential by selectively binding to a unique site within the parasite bromodomains, minimizing off-target interactions that could affect human proteins.

Following the Fellowship, Claudine will be joining the Centre for Targeted Protein Degradation at the University of Dundee as a postdoctoral scientist, driving the development of treatments for Parkinson's Disease.

Magdalene Ho

Project: Home grown therapeutics – using bioinspired nanotechnology to harvest patient derived biologics for healing chronic wounds

Sponsor: ConvaTec

Imperial College London

Every 20 seconds, a foot is amputated due to complications from diabetic foot ulcers. Unfortunately, current clinical strategies are still sub-optimal when it comes to dealing with these chronic non-healing wounds. Potent therapeutic proteins that are known to induce cell proliferation, such as platelet-derived growth factors (PDGF-BB) and Fibroblast Growth Factor (FGF-2), are currently being delivered through a gel or a spray. Such delivery methods do little to extend the short *in vivo* half-life of these proteins, resulting in the need for frequent supraphysiological doses of untargeted growth factors to achieve decent efficacy. These untargeted therapeutics lead to off-target adverse effects, making therapy extremely risky and expensive. To address this unmet need for a targeted delivery system, Mag's Fellowship focused on the development of a bio-inspired novel 'super-plaster' technology called Traction-force Activated Payloads (TrAPs).

TrAPs are made of DNA strands that fold into a 3D structure that binds specific therapeutic proteins. When wounds pull on the "handles" of TrAPs, TrAPs will simply untie like a shoelace, releasing the therapeutic protein for interaction with the cell. This cell-activated delivery mechanism enables up to a thousand times less dose required than competitor strategies, as verified by *in vivo* studies, significantly reducing therapy cost.

During the Fellowship, Mag managed to drive the development of TrAPs from an early proof-of-concept, through multiple complex *in vitro* 3D models, *in vivo* preclinical studies and *ex vivo* human skin models, demonstrating that TrAPs can harvest growth factors from biological fluids like blood and injury sites to promote increased blood vessel formation, skin healing and dermal integration. This work is now under revision at a high impact journal and has enabled recognition through several competitions/awards including the June Wilson Award 2024 from the London Materials Society branch of IOM3, and the Falling Walls Lab Singapore Award.

The Fellowship facilitated close collaboration with the multinational wound-care company, ConvaTec, which has been integral in shaping the translational and regulatory strategy of the technology. The Fellowship also allowed Mag to attend international conferences, leading to new collaborations and research exchanges — including a four-month placement at the University of Washington which allowed Mag to study controlled ways of activating TrAPs with the use of light, exploring and pushing the boundaries of instructive biomaterials for tissue repair, and a subsequent visit to the University of Arkansas to complete key preclinical studies. It also assisted Mag to explore entrepreneurship programmes to strengthen her business acumen and prepare for the commercial translation of this innovation.

Mag has also gained recognition through awards such as the Impact Award Winner at Imperials' Venture Catalyst Challenge, 2nd place WE Innovate, Best Presentation Award at Champions of Champions, and Audience Choice Award at the London Business School HealthTech Challenge.

Following completion of the Fellowship, Mag has become the Founder and CEO of Traxion Biotech Ltd, a company she has spun out from Imperial to commercialise TrAPs. She is currently raising investments to complete preclinical large animal studies to derisk the technology further, increasing its readiness for wound-care companies like ConvaTec.

Aleksandra Nikoniuk

Project: Integrating automated microfluidics process analytical technology platforms into autologous CAR-T cell manufacturing

Sponsor: Autolus

University College London

Chimeric Antigen Receptor (CAR) T cell therapies have achieved high remission rates in blood cancers for patients who were otherwise terminal. However, their cost is prohibitive to wider application. To lower the costs associated with manufacturing, this project focused on developing a novel analytical method for monitoring key process attributes.

A microfluidic device was developed to support the manufacturing of CAR T cell therapies by enabling near real-time monitoring of specific T cell subtypes. The device used magnetic beads to selectively capture target cells for quantification using fluorescence-based detection. All processing steps were incorporated within the device, minimising manual intervention. It required only small volumes of samples and reagents, making the assay more cost-effective compared to conventional laboratory methods. Importantly, the results produced by the device were consistent with those obtained using the current gold-standard techniques, confirming its reliability for in-process use.

The collaboration with a commercial CAR T cell company, Autolus Ltd, enabled the evaluation of the proposed microfluidic system within an active CAR T cell manufacturing process. The use of this device in process development and ultimately manufacturing has the potential to significantly lower the costs associated with CAR T cell production. Looking ahead, further integration of the device with existing cell processing platforms could facilitate the development of a Process Analytical Technology (PAT) framework for real-time T cell phenotyping. Such developments should enable Autolus to provide high-quality CAR T cell therapies at a lower price, thereby improving their accessibility to patients.

Following the completion of the Fellowship, Aleksandra continues to work as a Senior Process Engineer in the Cell Process Development team at Autolus, where she aims to develop and optimise CAR T cell manufacturing processes.

Nicholas Nyamayedenga

Project: Practical approaches to address non-dewatered alum sludge properties and benefits of dewatering

Sponsor: James Mae Group

University of Bradford

Alum sludge (AS) is a by-product from the purification process of drinking water at freshwater treatment plants (WTPs). Current dewatering processes like centrifugation, belt presses and others leave the moisture content between 83% and 77%. Disposal of the sludge to landfill or farmland is therefore rendered costly since this would be a removal of only 17 to 23% total dry solids (tds). Compounding the problems associated with this is that landfill space is fast running out. With about 500,000m^3 landfill sludge (LS) generated annually, more cost-effective methods of dewatering LS to increase tds content must be developed. Currently, no mechanical process can dewater AS below 75% moisture content unless very costly and environmentally unfriendly thermal drying processes which are energy intensive are employed.

Nicholas's research sought to explore dewatering AS using the freeze-thaw process to dewater the sludge effectively where the sludge would be frozen in a sludge freezing machine developed at James Mae Industries (JMI).

Understanding the dynamics of freezing the sludge, paying particular attention to ice crystal formation for optimum freezing, was essential in the establishment of the design parameters of the sludge freezing machine. With the knowledge base and experimental trials conducted by Nicholas during the fellowship, JMI were able to establish the best operating conditions for the freeze-thaw machine. A prototype machine was designed, fabricated and tested successfully. The process and knowledge have generated interest amongst Chemical and Civil Engineering students at the University of Bradford who are conducting research on the freeze-thaw process as research projects. The knowledge gained has been incorporated into the University of Bradford Chemical Engineering curriculum.

The prototype was decommissioned, and the project awarded a SMART grant by Innovate UK to build a full-scale machine which is going to be demonstrated to water treatment companies in the UK. The process has been patented in the UK and internationally in Europe, the USA, Canada, India, Australia, and New Zealand. JMI plan to build 200 machines over the next five years, improving their revenue base, creating employment and reducing the amount of sludge going to landfill.

Following the Fellowship, Nicholas is continuing with the project as an R&D Process Engineer at JMI focused on building the said 200 business machines that would be leased to water treatment companies.

Joe Ross
Project: Cell state estimation for modular battery packs
Sponsor: Brill Power

University of Oxford

Battery modelling research has progressed significantly over the last 15 years, yet challenges remain for the electrification industry due to commercial and practical limitations. Brill Power, a company that develops electronics for battery packs, has experience working on creative solutions to these challenges.

Battery management systems (BMS) are responsible for monitoring and controlling the cells within a battery pack. However, variations between cells and within their internal materials make accurate monitoring difficult. Complex electrochemical models can describe these variations but are often too computationally intensive to run on embedded systems.

This project focused on developing simplified models that capture the effects of cell and pack heterogeneity while remaining efficient enough for implementation in a BMS. These simplified models allow the BMS to better track battery states, such as state of charge (SOC), temperature, power, and energy, leading to improved pack performance.

At the pack level, Joe developed an efficient model that resolves the individual states in a heterogeneous group of parallel-connected cells. Analysis of this model has improved methods for controlling maximum charging and loading currents, by accounting for cell-to-cell variability. This work has been documented in a research paper currently under submission.

At the cell level, Joe developed a simplified model for estimating SOC that incorporates how charge is distributed within the cell. Modelling this distributed SOC improves estimation accuracy and makes cell states more observable to the BMS. This model was parameterized using machine learning methods and has contributed to a Brill Power patent application.

These advances provide Brill Power with enhanced modelling tools that offer a deeper insight into pack behaviour, helping maximise available battery energy and lifetime. Following the Fellowship, Joe has become an Embedded Systems Engineer at Brill Power, working on integrating novel battery management algorithms into their technology.

James Rowley
Project: A platform for the high throughput screening of reactive fragments in cells
Sponsor: GSK

University of Strathclyde

Studies into human genetics have led to the identification of proteins linked to human disease. Small molecules called "chemical tools" are needed to confirm this link and validate these proteins as viable targets for future medicines. Reactive fragments are a class of small molecule that have proven effective as the basis of new chemical tools. However, current methods for identifying chemical tools from collections of reactive fragments are hindered by a reliance on proteins that have been isolated from biological systems. Thus, these methods lack important biological context. Alternative methods suffer from a lack of throughput, meaning that the evaluation of reactive fragments as potential chemical tools is slow.

To address these limitations, James has developed a new method for the high throughput evaluation of reactive fragments in biological systems. Following the extensive development and optimisation of this method, over 300 reactive fragments were assessed in parallel against PIN1, a protein linked to several cancers, in a biological environment. From this proof-of-concept experiment, eight reactive fragments were identified that could be used as the basis of new chemical tools for the study of PIN1. Although the purpose of this project was not to develop chemical tools for this protein, this outcome demonstrated the utility of the new methodology for the high throughput assessment of reactive fragments against disease-linked proteins in a biological environment.

In future projects, James anticipates that the application of this new method will significantly reduce the time and resources necessary to evaluate GSK's full collection of reactive fragments. In turn, this will accelerate the discovery of novel chemical tools required to validate disease-linked proteins as targets for future medicines.

Rebecca Stevens
Project: High throughput chemical synthesis and biological testing of proteolysis targeting chimeras
Sponsor: GSK

University of Strathclyde

Rebecca's project integrated chemical synthesis with biological testing to rapidly assemble and evaluate novel medicinal molecules without the standard requirement for purification, in an end-to-end high throughput 'direct-to-biology' workflow. These molecules are known as PROTACs, and can selectively degrade undesired proteins within the cell, to elicit a desired pharmacological effect. PROTACs typically suffer from slow optimisation processes due to lengthy syntheses, troublesome purifications, and unpredictable structure-activity relationships. The high throughput methods that have been developed in this project have addressed a major bottleneck in this optimisation process, and compound throughput has been increased 10- to 100-fold, drastically accelerating the discovery of new lead molecules as potential therapeutics.

The results of this work have been published in four first-author publications including one corresponding author paper, in high-impact medicinal and organic chemistry journals. Furthermore, funding from the Industrial Fellowship allowed Rebecca significant opportunity to present the work externally at a range of international conferences, including most recently as an invited keynote speaker at the American Chemical Society (ACS) Spring 2025 meeting, hosted in San Diego, USA. Not only has this expanded the reach of the science, but the opportunity to grow her global scientific network from this symposium, as well as many other conferences, has been

invaluable to Rebecca. Rebecca has also been awarded the European Federation for Medicinal Chemistry Young Scientist's Network PhD Prize, giving a presentation at their annual conference in Porto

Following the Industrial Fellowship, Rebecca will be starting a position as Research Scientist in the Medicinal Chemistry team at Bicycle Therapeutics, Cambridge, UK, where she will be using the experience she has gained in novel pharmaceutical modalities for the discovery of new bicyclic peptide-based therapeutics.

Regenerative Design Fellow

Oliver Broadbent
Project: Developing practice-based methodology for regenerative design in the built environment
Mentor: Rowan Conway
During his Fellowship, Oliver has created a coherent set of tools for describing and communicating regenerative design, developed the Regenerative Design Lab as a method for learning about and applying regenerative thinking to a wide range of contexts, and established the Pattern Book for Regenerative Design (of which over 400 copies have been sold to date) as a method for scaling this work, providing a reference tool for others in the sector interested in exploring regenerative design.

Together, these elements have enabled a growing number of well-placed designers, teachers and policy makers to move from sustainability fatigue towards more regenerative agency, applying new regenerative frameworks to design, planning, local and national policy making, supply chains, business strategy and teaching.

Working with other practitioners in this domain, the Fellowship has enabled the establishment of clear conceptual frameworks for regenerative design, demonstrated a transformative educational model for developing regenerative agency and begun to grow the field of regenerative practice, which aims to shift the system of construction industry from a paradigm of endless growth to one of creating thriving.

Oliver comments that it was the 1851 Fellowship that made this work possible. It provided him with the high-level challenge to address, the ambition, and the funding to experiment in a new realm for the built environment. The gestation time enabled him to move beyond individual tools or projects to focusing on developing a shared language and practice that others can take forward. That shift - from outputs to creating a field of practice – will continue beyond the Fellowship. The continued success of the Pattern Book for Regenerative Design is a signal of the momentum building around this approach in industry.

Industrial Design Students

Zachary Berry
Course: Innovation Design Engineering
Royal College of Art / Imperial College London
Supported by his studentship, Zachary fully engaged with the academic community at Imperial College London during his master's programme. For his independent master's project, he worked with the Imperial Human Robotics Lab, collaborating closely with an amputee born with a partial left hand. Over six months of rapid prototyping, informed by user testing, Zachary developed *Teneray*, a device that translates prosthetic finger movements into tactile feedback on the forearm. By restoring a sense of finger position for people with upper limb differences, *Teneray* improves coordination, reduces fatigue, and decreases prosthetic hand abandonment rates.

To validate *Teneray*, Zachary conducted two experiments at the Imperial Human Robotics Lab with

a cohort of 20. The results showed a 35% improvement in grasping accuracy and an 812% increase in perceived prosthetic hand ownership. These strong outcomes have led the lab to continue researching *Teneray's* long-term efficacy and broader applications. *Teneray* received significant recognition, winning the InnovationRCA Patent Award and securing funding for a full patent filing on its core mechanism. It also won the Snowdon Award for Disability at the 2025 Helen Hamlyn Centre for Design Awards.

After completing his studentship, Zachary joined Fether Labs, a startup founded by Imperial alumni, where he works as a software engineer. Powered by their proprietary sensor technology, Fether Labs is developing gesture-sensing wristbands that translate hand gestures into custom commands. Zachary is building the company's developer platform and creating integrations for software such as Snap Lens Studio and Unity, contributing to the next generation of human-computer interaction.

Daphné Biestro
Course: Innovation Design Engineering

Royal College of Art / Imperial College London

Daphné joined the Innovation Design Engineering course with the intention of building a practice in sustainable product development. Her research and development integrated laboratory and in-situ experimentation, enabling her to develop a cross-disciplinary and cross-border scientific skillset that combined engineering expertise with creative thinking and advanced making capabilities.

During her Studentship, she explored new ways of living in alignment with our climate realities. She investigated novel material strategies in a project that examined discarded sports equipment as an alternative material stream for woven furniture applications. Another project addressed first-response kits for climate-related disasters, proposing a range of power tools redesigned for interchangeable modularity and emergency compatibility in earthquake scenarios.

For her final projects, Daphné focused on fostering agency in individual climate action. In collaboration with Cyrus Richards and Guy Turner, she developed a novel biodiversity sensor designed to collect critical interaction data in remote ecological contexts. Conceived with and for explorers, the battery-free device integrates its technology into a credit-card format to maximise portability and accessibility. The project combined laboratory and field-based research with insights from academic experts, industry specialists, and expedition practitioners. The resulting product was showcased in more than seven public exhibitions.

Daphné firmly believes that the support provided through her Studentship granted access to an invaluable network of thinkers and makers who inspired and mentored her throughout the programme. She continues to apply these learnings in her professional trajectory, working toward engineering a more sustainable relationship between human systems and the environment.

Ruta Czaplinska
Course: Innovation Design Engineering

Royal College of Art / Imperial College London

During her Studentship, Ruta explored the intersection of design, technology, and engineering to develop sustainable and accessible solutions for real-world challenges. Her work focused on circular economy principles, biomaterials innovation, and making environmentally responsible design viable for widespread adoption across industries.

Throughout her Master's, Ruta worked on diverse projects addressing both social and environmental challenges. A significant collaboration with DFS furniture examined sustainable systems in manufacturing. Recognizing that consumers replace sofas every 3-7 years while frames last much longer, her team proposed a subscription model with replaceable covers and cushioning. The innovation that garnered particular attention was an interlocking frame architecture using CNC machining, which eliminated staples and glue, both of which pose recycling constraints, while preserving existing supplier relationships and British manufacturing heritage.

Her practice evolved toward biomaterials and tackling microplastic pollution. The group project, *Gróa*, developed a low-energy manufacturing process specifically optimized for bioplastics, creating "monomaterial composites" with varied properties while maintaining consistent composition—ideal for infinite recycling or composting. Her final solo project addressed the 1.7 million sequined fashion items discarded annually, which shed microplastics even when reused. Using diffraction grating with chitosan-based bioplastics, she created structural colour through iridescence rather than pigments, offering a scalable, compostable alternative to traditional sequins.

Following her Studentship, Ruta is joining a startup in stealth developing waterproof, compostable materials, where her structural colour expertise will complement their sustainable material development. She also completed placements, including work with CipherX, designing an applicator for their microneedle radiology marking product, offering cancer patients a painless, temporary alternative to permanent tattoo marks. Her work continues to focus on translating innovative materials research into practical, accessible products that can compete with conventional alternatives while advancing environmental and public health.

Muhammed Saym Hussain
Course: Design Products

Royal College of Art

During his Studentship, Saym developed a materially driven, narrative-led design practice, drawing on his engineering background from Imperial College London to form a critical approach to making. The programme enabled him to reposition his technical expertise as a tool for examining contemporary social, economic, and environmental conditions, focusing on how everyday objects embody, transmit, and reproduce cultural narratives.

His graduate body of work, *Pot Dialogics*, comprises furniture, film, photography, and writing that explore migration, material flows, and the aesthetics of contemporary British South Asian culture. The project traces aluminium handis sourced from British metal scrap, remade in Pakistan and returned to the UK as domestic objects. By repurposing preformed aluminium and foregrounding its diasporic material journey, the work interrogates dominant ideas of Britishness - what it represents and who it excludes - proposing a more plural, contemporary understanding of British design. A documentary film accompanies the objects, revealing the material's journey and its transformation into furniture that facilitates dialogue around identity, cultural memory, and authorship.

Since graduating, Saym has presented *Pot Dialogics* across four exhibitions during London Design Festival 2025, including a public screening at the Brompton Design District. He has participated in speaking engagements, including a panel on Art as a Tool of Resistance, and currently has work on display in a Chelsea-based design store. Building on the Studentship, he has established SAYM STUDIO, an independent practice using objects and material experimentation to surface cultural, social, and political narratives in response to contemporary crises.

Khalil Ismail
Course: Innovation Design Engineering

Royal College of Art / Imperial College London

Khalil trained with a fluency between the desirable and the technical, completing his Bachelors of Engineering (industrial design, mechanical, materials) before working at Apple in interaction design, Microsoft AI in product, and Imperial in behavioural science research.

Pursuing the Innovation Design Engineering masters at Imperial College London and the Royal College of Art, with the support of the Commission, Khalil worked on brain-computer interfaces and neural augmentation — aiming to derive the next natural input modality for personal computing. He considers thought decoding to be a complex space that demands the skills of a technologist and the sensibility of a designer. His work examined how such intimate systems might be built without

compromising human agency and autonomy. During this time, he also worked with Snap, Inc. in augmented reality design for several months and was a visiting scholar in the Department of Philosophy at the University of Oxford.

Between his dual masters, Khalil went to Boston to join Harvard University as an AI researcher in pedagogy and philosophy, also working as a neuro researcher at MIT Media Lab exploring memory augmentation for sleep and dream engineering. These experiences shaped his human-centred view on neurotechnology.

Khalil is now a founder building his own neuro-ai startup with a small team in London, supported by early institutional investors from the United States.

Jérémie Kofman
Course: Innovation Design Engineering
Royal College of Art / Imperial College London

During his Studentship, Jérémie sought to immerse himself in designing solutions that address real and pressing needs at the intersection of science, technology, and the arts, focusing on delivering tangible positive social and environmental impact through multidisciplinary innovation.

His group project aimed to address the underlying behavioural patterns and indoor climate conditions that drive damp and mould formation in poorly insulated social-estate flats, while easing the maintenance load that ultimately falls on councils and landlords. Alongside his team members, he developed, prototyped, and tested a novel temperature and humidity sensor capable of spatially locating mould growth and flagging its risk of development. The sensor's output was used to help tenants adopt better habits to maintain lower humidity levels in their homes. This same data also provided valuable insight for property managers, helping prioritise preventative actions based on observed conditions. The project took a two-pronged approach, combining a technical solution with design for behaviour change. This project was recognised at the iF Design Awards 2025 in Bilbao, with a win in the Industry category.

For his solo project, Jérémie dived into the design challenge of technology in the service of healthy ageing - particularly during prehabilitation and rehabilitation following knee and hip replacement surgeries. His aim was to enable patients undergoing such procedures to maintain high levels of mobility pre-operation, and to enhance the quality of their recovery post-operation. Drawing on his passion for useful and beautiful data visualisation, he developed a system to quantify key mobility metrics: active balance, range of movement, and functional strength. The solution relied on a single-camera system capable of inferring 3D body movements through computer vision and motion tracking. This data was then returned to the user in real time and overlaid with responsive visuals informing the patient of the quality and accuracy of their movement. These visuals guided patients in performing the exercises prescribed by their osteopaths to the best of their abilities. Over time, adherence to the exercise programmes was supported by tracking the impact of the exercises on the key mobility metrics. His design process was informed by multiple experts in the field, including fellow 1851 Awardees, as well as researchers at Imperial College's Musculoskeletal Lab and the St Mary's Helix Centre.

Jérémie is now completing a graduate placement at Statera Energy, an independent power producer developing, constructing, and operating utility-scale Battery Energy Storage Systems, gas peakers, and pumped-hydro storage assets. These assets provide critical services to the UK's electricity grid, supporting the transition to a renewables-led future. This experience has strengthened his conviction that multidisciplinary teams are uniquely positioned to apply design thinking in ways that drive truly innovative solutions and deliver meaningful, lasting impact across industries.

Guy Turner
Course: Innovation Design Engineering

Royal College of Art / Imperial College London

During his time studying Innovation Design Engineering, Guy focused on user-centric research and product innovation for environmental sciences and healthcare. Previously, Guy completed a bachelor's degree in engineering and started his career at Dyson. Having worked in engineering bringing consumer products to market, Guy decided to refocus his career towards the intersection of design and engineering. IDE became his platform to develop a design skillset and explore environmental and social issues in the design industry.

The culmination of his masters were two products. *Sixth Sense* is a biodiversity sensor which logs an ecosystem's ecological health as you hike. With a credit-card size form and powered by NFC, it's both accessible and low-cost. *Sixth Sense* aims to democratise ecological surveying to all. By allowing anyone to contribute to the fight against the climate crisis in their local environment, *Sixth Sense* builds a democratised biodiversity dataset over time.

Following Guy's father being diagnosed with an endocrine condition, he explored how doctors monitor hormonal health. In contrast to continuous glucose monitors, he discovered existing hormone monitoring technologies were limited. *Duco* is the first wearable medical device for continuous hormone monitoring. Needing no needle, *Duco* sticks to the bicep. Sweat is analysed and insights relayed to your clinician to manage your treatment remotely. *Duco* is the first of its kind in sustainable medical wearables with reusable electronics and recyclable pods.

Guy now works as a product manager alongside developing *Duco*. *Duco* was recently patented and featured at the Dubai Futures Prototypes for Humanity conference.

Enterprise Fellows

Sara Alao
Company: Stars Edge
Technology: Fuel-free electric satellite engine
[Financially supported by ERA Foundation]
During her Fellowship, Sara advanced the commercial and technical development of Stars Edge Ltd, a UK deep-technology company developing fully electric, air-breathing propulsion for Very Low Earth Orbit (VLEO) satellites. The company's mission is to enable satellites to operate at the lowest possible altitudes of 100–150 km, where they can deliver higher-resolution Earth observation and lower-latency communications, while eliminating the need for pollutant fuels. Over the past year, Sara has matured the proprietary AERIS plasma propulsion system through ground testing and subsystem validation, strengthened the intellectual property portfolio, and secured over £1,000,000 in-kind support. Stars Edge has built strategic relationships across the UK, European and APAC space ecosystem, including partnerships and client pipelines for in-orbit demonstration and satellite platform integration. The company also welcomed new senior team-members with expertise across the field, and reputable success in high potential companies. The Fellowship has enabled Sara to push Stars Edge from research-led innovation to commercial readiness, refining market positioning across defence, telecommunications, and Earth observation sectors, and preparing for the first in-space demonstration. Next, will be completing full system integration, expanding the team, and progress towards operating their own satellite within the next few years. The long-term ambition is to establish the UK as a global leader in sustainable, fuel-free orbital mobility and ultra-low-altitude satellite infrastructure.

Ben Coyne
Company: Munnch
Technology: Sustainable insulation foam
Fellowship funding enabled Ben to secure laboratory space at the 3M Buckley Innovation Centre in Huddersfield, giving Munnch a dedicated base for research, development and prototyping. Munnch also invested in specialist equipment to develop their minimum viable product: a compostable composite material designed as a sustainable alternative to conventional foamed plastics. The core polymer underpinning the material is capable of biodegrading under ambient composting conditions within a matter of weeks, providing strong environmental credentials for future applications.

During the Fellowship, Ben collaborated with the University of Leeds to produce working prototypes exploring the replacement of traditional prop and set-build materials within the theatre sector. This partnership led to a successful £10,000 "Living Lab" award to support further real-world trials. Ben also worked with Palletech Limited to develop lightweight pallet prototypes, expanding potential applications in the logistics industry.

Looking ahead, Munnch have secured two further awards commencing in 2026: a £15,000 Innovate UK RTO grant to evaluate compatibility with existing industrial foaming processes, and a £25,000 Henry Royce SME Access Fund to support advanced materials testing, including environmental weathering analysis to ensure safe and responsible end-of-life performance.

Collectively, the Fellowship has strengthened Munnch's technical foundations, deepened strategic partnerships and positioned the company for scale.

Henry Dunne
Company: Microneedle Solutions
Technology: Vaccine patches
During his Fellowship Henry has led the transition of Microneedle Solutions (MNS) from an early-stage, preclinical venture into a company preparing for first-in-human clinical development.

MNS is developing needle-free, painless microneedle patches that enable medicines and vaccines to be delivered without injections, reducing cost, improving patient experience, and widening access to healthcare. At the start of the Fellowship, the company had generated encouraging animal data and was preparing for its seed fundraising round but faced the typical challenges of an early graduate-led spinout: translating scientific promise into a credible clinical and commercial pathway.

Over the course of the Fellowship, MNS achieved three positive *in vivo* studies validating the performance of its lead patch platform, strengthened its governance by appointing a new Chair and expanding its clinical advisory board, and successfully closed an oversubscribed funding round. This capital will support the company's progression into clinical development of its lead asset.

The Fellowship was instrumental in this progress. Structured support in sales, pricing strategy, fundraising, team management, and corporate governance helped Henry develop as a first-time CEO and build a company capable of engaging confidently with investors, clinicians, and partners. Just as importantly, the credibility and network associated with the Fellowship opened doors to advisors and collaborators at a critical stage.

Looking ahead, MNS is now preparing for its first-in-human clinical trial in collaboration with the NHS. The Fellowship has provided the foundation needed to move from promising research to real-world patient impact, and to build a sustainable UK-based medtech company with global potential.

Lucy Hughes
Company: MarinaTex
Technology: Seafood-waste-based coatings and materials
During the Fellowship, MarinaTex has progressed from advanced development into early commercial deployment. MarinaTex develops plastic-free coatings made from natural polymers to replace fossil-fuel plastics in packaging and agriculture. Over the course of the Fellowship, the company completed multiple pilot-scale manufacturing trials, including its fourth commercial trial, demonstrating that its coatings can run on existing industrial equipment. Independent shelf-life testing showed performance comparable to conventional plastic-lined packaging, a key milestone for industry adoption.

Alongside technical progress, MarinaTex secured several industry collaborations with packaging converters and agricultural partners to validate real-world applications. The company also closed its seed investment round, enabling Lucy to grow the team and expand development capacity. During the Fellowship, MarinaTex also secured further grant funding, including three Innovate UK grants, to accelerate validation and scale-up.

Personally, the programme had a significant impact on Lucy's development as a founder. The combination of mentoring, coaching and peer learning strengthened her decision-making and resilience while navigating fundraising, team growth and commercial negotiations.

Looking ahead, MarinaTex will focus on regulatory approvals, scaling manufacturing and converting pilot projects into long-term commercial agreements. The goal is to enable large-scale replacement of problematic plastics with materials designed to safely return to natural cycles, supporting a circular economy across packaging and agriculture.

Matthew Moore
Company: DroneTector
Technology: Drone detection radar
Current drone detection systems struggle to keep up with the rapid evolution of modern drones. Existing sensors frequently mistake birds for drones, triggering false alarms, while smaller drones often go undetected. This creates serious security risks for airports, critical infrastructure, public spaces and defence.

During his Fellowship, Matthew has developed a new generation of drone detection radar through his work at DroneTector. The system uses high-frequency millimetre-wave radar to produce far more detailed images than conventional radar. This allows it to reliably detect, identify, and track the small, low-flying drones that legacy systems typically miss. By dramatically reducing false alarms while improving detection accuracy, DroneTector's technology represents a major advance in counter-drone capability.

Since receiving the Fellowship, DroneTector has secured £500,000 in grant funding, including support from the Defence and Security Accelerator. The company has also been selected for the NATO DIANA (Defence Innovation Accelerator for the North Atlantic) programme, recognising the strategic importance of its technology. In addition, DroneTector was accepted into Y Combinator, which includes a £370,000 pre-seed funding round to accelerate product development and commercialisation.

The company has successfully progressed the technology from a laboratory experiment to a full-scale field prototype. This system has undergone extensive real-world testing, enabling rigorous validation and live demonstrations that show the effectiveness of the approach.

In the coming months, DroneTector will deliver fully integrated, deployment-ready systems for use at airports, critical infrastructure sites, and defence facilities.

Teja Potocnik
Company: Nanomation
Technology: Automated nanofabrication of semiconductors
Nanomation has developed a new hardware-software platform for manufacturing advanced electronic devices based on nanostructured materials. Its nanoscale-optimised technology makes it possible to integrate advanced materials that were previously impractical to use in commercial electronic devices, unlocking a new generation of high-performance electronics.

While their manufacturing platform is applicable across multiple materials and electronic applications, Nanomation is initially targeting infrared sensors. With support from the Fellowship, the company has made significant progress over the past year by validating its go-to-market strategy and building its first functional prototypes. By integrating new infrared-sensitive materials, these sensors can be made smaller, more compact and significantly lower cost than existing alternatives. These capabilities have the potential to transform applications in defence, including thermal surveillance, as well as environmental monitoring and non-invasive medical diagnostics. Concentrating technical development on infrared detector prototypes has resulted in the filing of two additional patents. Nanomation's founder, Teja, was one of only 10 recipients of the European Patent Office's Young Inventors Prize, reflecting the disruptive nature and global significance of the underlying technology. The company has also secured two Innovate UK grants to further advance its infrared sensing prototypes and expand its technical team. Going forward, Nanomation aims to establish strategic commercial partnerships to help them bring their technology to market.

Adhesh Shenoy
Company: Guerrilla Co
Technology: Retrofittable water purification
During Adhesh's Fellowship, Guerrilla progressed from an early-stage innovation into a validated, field-tested solution addressing a critical but often overlooked challenge of pollution from urban road runoff. The Fellowship enabled Guerrilla to move beyond laboratory testing and secure a full-scale field trial with West London's largest property developer, allowing them to deploy and monitor their device in real-world conditions. This was a major milestone in proving both technical performance and operational feasibility. Alongside this, Guerrilla engaged extensively with public sector stakeholders, with four local councils across the UK actively exploring partnership opportunities and alignment with their sustainable drainage and pollution reduction strategies. Guerrilla has also been able to strengthen the commercial interest from industry, with 12 letters of interest from prospective customers, spanning developers and infrastructure operators, and Guerrilla has also submitted tenders in response to two European Sustainable Drainage Systems (SuDS) requirements.

Guerrilla has also seen strong external validation. Guerrilla secured an Innovate UK grant to further develop the technology, was featured in the Evening Standard, and won the Engineering Matters Awards in two categories. Internationally, the device was showcased in the UAE and India, laying the groundwork for global expansion in regions facing acute runoff pollution challenges.

As Guerrilla moves forward, the focus is on completing long-term field trials, converting pilots into paid deployments, and scaling partnerships in the UK and internationally. The Enterprise Fellowship was instrumental in de-risking this transition and positioning Guerrilla for its next phase of growth.

William Davies ***NPTC Group (Newton College)***

William focused on transforming technical education by integrating 3D modelling and immersive digital tools into vocational teaching. This approach aimed to make complex mechanical concepts more accessible and engaging for learners, supporting the future skills agenda.

He shared best practice widely through many venues and teaching conferences across Wales and the UK, as well as international exchanges via Global Wales visits to Germany and India. Within NPTC Group, he delivered CPD sessions to senior staff and Heads of School across four campuses, reaching a college community of over 7,250 students annually. Over the year, he engaged more than 500 practitioners and employers through workshops and conferences, with indirect reach exceeding 8,000 via digital resources and networks. Feedback confirmed that 3D modelling clarified difficult concepts and boosted learner confidence, particularly in emerging technologies like electric and hybrid propulsion.

The Fellowship has enhanced William's own teaching practice and inspired others to adopt similar digital approaches. Looking ahead, he will continue developing resources, expand international collaboration, and establish a Professional Learning Community to share best practice nationally. Plans include creating an open-access resource library and exploring AI-driven teaching tools, ensuring sustained impact across the FE sector.

Jen Deakin ***Runshaw College***

Jen's project focused on how AI can enhance teaching and learning in Further Education while also reducing teacher workload. She began by conducting a literature review to explore how AI can benefit the sector and then moved into practical implementation which involved upskilling staff at Runshaw College through a collection of AI CPD programmes. This work also led to the creation of the "AI Teacher Handbook", a practical sector-facing guide informed by case studies of teachers embedding AI in their practice. Jen found it really encouraging to see clear impact: the CPD programmes helped improve teacher confidence when using AI, and increased staff knowledge of how AI can support effective resource creation.

Alongside this, Jen contributed to the College's wider AI strategy and shared CPD more widely across other FE colleges and Higher Education institutions nationally. This work led to invitations to speak at national conferences including UCET, the Sixth Form Colleges Association Curriculum Conference, the Association of Colleges AI Conference, and the Festival of Education.

The Fellowship inspired Jen to further her own study. She is currently studying for a PhD at the University of Sunderland. She has also been appointed as a Lecturer in Digital Transformative Education at Leeds Beckett University, where she supports teachers undertaking their Initial Teacher Training qualification and works with Masters in Education students.

Through the experiences of the Fellowship and the confidence gained through speaking nationally, Jen has developed new interests in teacher education and research. She has also set up a sideline business, Future Proof Teaching, where she provides teacher CPD and education consultancy services.

Sophie Harris ***Derby College Group***

The Fellowship focused on embedding sustainability within technical and vocational education through contextualisation, making content relevant to educators' expertise and students' chosen fields. This approach reduces overwhelm and fosters confidence in exploring sustainability. Education for Sustainable Development (ESD) in Further Education (FE) is critical as environmental, social, and economic challenges intensify. Students need green skills—communication, teamwork, and problem-solving—to thrive in a sustainable future.

Educators, as dual practitioners, are not expected to be sustainability experts, yet the Department for Education stresses the need for upskilling to avoid tokenistic curriculum integration and sector experts advocate for a holistic, non-modular approach to normalise sustainability in FE.

Professional development reached 88 educators through contextualised sessions addressing misconceptions and highlighting social and economic dimensions. Bespoke 1:1 support aligned subject content with the UN's 17 Sustainable Development Goals and the 3Ps framework (People, Planet and Profit). Informal observations and feedback reinforced existing sustainability practices. Surveys captured the voice of 87 students and 58 educators, revealing strong preference for contextualised learning.

Pilot projects with Creative Media and Business students introduced sustainability through vocational outcomes, boosting recognition from 18.2% to 100%. Employer collaborations, including live briefs and Dragons' Den-style pitches, enhanced authenticity and green skill development.

Impact includes contribution to an organisational cultural shift, improved educator confidence and student engagement. Sector-wide influence stems from webinars, articles, and showcases, while employer-linked projects strengthen vocational relevance. The Fellowship refined resources and strategies, embedding sustainability as a core element of planning and practice.

Next steps will focus on promoting green skills in context, ensuring they are integrated meaningfully across vocational curricula to prepare learners for sustainable careers.

Scott Rorrison ***Humberside Engineering Training Association (HETA)***

Scott's Fellowship focused on improving the contextualisation of theory in technical education through the use of artificial intelligence (AI), particularly generative AI tools such as ChatGPT, Copilot, and Teachermatic. The project set out to address a clear learner need: most apprentices prefer practical activities and struggle with theory unless it's linked to workplace practice.

Working with tutors across welding, design, CAD, maintenance, and mathematics, Scott facilitated two curriculum design workshops where staff generated over 30 contextualised lesson ideas via Microsoft Copilot and recorded within Padlet. These included factory site visits, employer-set challenges, and innovative uses of AI to create lesson resources. Staff piloted these ideas in class, supported by AI-generated datasets, contextualised maths problems, and authentic industry scenarios.

Key outputs included: a Scunthorpe-based Planned Preventative Maintenance (PPM) project judged by employers; maths lessons using robotic arms and motors to teach radians; and design projects where learners reverse-engineered an e-scooter using AI-generated data to propose manufacturing improvements. Tutors reported increased confidence in using AI, with one staff member sharing that "the workshops gave me the confidence to experiment without worrying about getting it wrong." Learners showed stronger engagement with theory through applied tasks. Best practice was promoted through CPD, mentoring, and shared resources, reaching over 50 practitioners directly and 240 learners indirectly.

Personal circumstances meant that dissemination activities were not carried out as widely as initially planned. Beyond HETA, Scott shared resources with colleagues across the FE sector including contributing to a webinar on the details and progress of his project for the Society of Education Training.

Alumni Awards, Honours and Achievements

A selection of the alumni appointments, publications, honours and awards notified to the Commission. The Commission encourages all alumni to keep their alumni profiles up to date so that their successes can be celebrated.

Research Fellows

Dr Jo Ashbourn (2002)
- As the Director of the St Cross Centre for the History and Philosophy of Physics organised conferences on: *Physical Origins from the Big Bang to Earth*, *Measure for Measure: A History of Measurement* and *A Physical History of Navigation*

Professor Philip Donoghue (1996)
- Elected a Fellow of the Learned Society of Wales

Dr Amparo Güemes (2021)
- Awarded Beloe Fellowship, Worshipful Company of Scientific Instrument Makers
- Elected Freeman, Worshipful Company of Scientific Instrument Makers
- Appointed Assistant Professor in Bioelectronic Systems, University of Cambridge
-

Professor Brianna Heazlewood (2012)
- Awarded Blavatnik Awards UK Honoree in the Chemical Sciences

Professor Tom Lancaster (2006)
- Published *General Relativity for the Gifted Amateur* (with Stephen Blundell, OUP)

Professor Emilio Martínez-Pañeda (2018)
- Awarded Philip Leverhulme Prize in Engineering

Professor Tom Montenegro-Johnson (2014)
- Appointed Deputy Pro Vice Chancellor for Research, University of Warwick

Professor Stephen Montgomery (2011)
- Appointed Professor of Neurobiology and Behaviour, University of Bristol
- Appointed Prince Philip Professor in Ecology and Evolution, University of Cambridge
- Awarded Zoological Society of London's Scientific Medal

Dr Luke Rhodes (2019)
- Awarded £1.8 million EPSRC open fellowship to start research group in theoretical condensed matter physics, University of St Andrews

Industrial Fellows

Dr Tim Barry (2008)
- Appointed Managing Director, Calex Electronics

Dr Maral Bayaraa (2020)
- Appointed to a scientist position with the United Nations Environment Programme's International Methane Emissions Observatory

Professor Rob Deaves (1994)
- Appointed Visiting Professor at the Bristol Robotics Laboratory, University of the West of England
- Awarded an IET Achievement Medal in Robotics

Dr Misty Haith (2014)
- Awarded Gail Long Early Career Woman Engineer of the Year Award by the British Institute of Non-Destructive Testing

Dr Alex Mahon (1995)
- Awarded CBE for services to broadcasting and diversity
- Appointed CEO of Superstruct

Dr Poppy Oldroyd (2020)
- Awarded a Schmidt Science Fellowship

Dr Chris Town (2001)
- Elected a Fellow of Jesus College Cambridge
- Elected a Bye Fellow and Director of Studies in Computer Science at Wolfson College Cambridge

Industrial Design Students

Peter Brewin (2003)
- Awarded MBE for services to engineering and materials innovation

Erin Carr (2022)
- Selected for 2026 training group, Search and Rescue Aid in Disasters (SARAID), the group of UK engineers and medics who are called upon by the UN to assist in disasters

Steph Jump (2022)
- Co-founded Faros MedWorks, a company that works with international MedTech start-ups to develop and commercialize their products in the US

Julita Napieralska (2023)
- Appointed Junior Medical Design Engineer, Intersurgical
- Guest speaker, Eton College, as student mentor

Alexander Spencer (2022)
- Founded Halo, a start-up reinventing the way people live with diabetes
- Founded CoolIt, a start-up transforming medical devices into beautiful lifestyle objects, starting with injection pens

Enterprise Fellows

Rowan Armstrong (2022)
- Bioliberty, a company that has designed a robotic glove for hand rehabilitation, launched its first suite of products in the US

Douglas Brion (2023)
- Matta, a company that is building an industrial AI platform for manufacturing, raised over £10m of funding

Matt Escott (2020)

- Protolaunch, which creates rocket engines that use a novel thermodynamic cycle to enable truly dedicated launch of small satellites, was selected by Airbus Defence and Space UK to develop the throttling control valves for testing of the European Space Agency's ExoMars Rosalind Franklin Lander

Idan Gal-Shohet (2023)

- Fibe, a company that creates sustainable fibres for textiles from potato waste, was featured by the Royal Academy of Engineering during London Climate Action Week

Henrik Hagemann (2016)

- Puraffinity, which creates customised membranes for the removal of PFAS chemicals from water, signed its first commercial agreement with Swedish water treatment company Envytech Solutions

Gregory Hargraves (2023)

- Paige Braille, a device that translates between braille and text, was launched in the US

Beren Kayali (2023)

- Deploy Tech, a company that creates flat-packed, ready-to-use water tanks, has announced that its product is being trialled by the US and UK militaries

Ming Kong (2016)

- TGO, which creates smart 3D sensing materials, announced a partnership with the University of Plymouth to create a smart insoles system that can accurately measure the body's interaction with the ground allowing athletes to track their movement, optimise training, and reduce the risk of injuries

Ben Lakey (2019)

- Syndi Health, a healthcare software company, was acquired by HealthKey

Bella-Trang Ngo (2020)

- Brarista, which creates AI-enabled bra-fitting software, raised over £0.5m of funding

Varun Sarwal (2020)

- Hammer Missions, which creates drone control software, raised €1.6m to accelerate its AI technology development and strategic expansion into the US

Samuel Willis (2022)

- Appointed Product Manager at Crane Building Services and Utilities

George Wright (2017)

- Vochlea, which creates vocally controlled interfaces for music production, launched Dubnote, an app that takes musicians' spur-of-the-moment recordings and helps them split them into sections; transcribe speech and lyrics; add time-stamped notes and key moments; and tag recordings based on their content

Sheana Yu (2018)

- Aergo, which designed an adaptable postural support system, was acquired by US mobility solutions providers Merits Health Products, Inc

Rome Scholars

Anne Desmet (1989)

- *Wood Engraving – a Personal Approach* was published by the Crowood Press
- The exhibition *Anne Desmet – Building without Barriers* opened at the Escher in the Palace Museum in The Hague

Sir Misha Black Medal

Professor Don Norman (2021)

- Lifetime Achievement Award from the User Experience conference, UXCON25
- DFA Lifetime Achievement Award (Design for China) from the Hong Kong Design Centre
- Appointed adviser to three universities in India, Flame (Pune), BITS Design School (Mumbai) and The Design Village (Noida)

Technical Teaching Fellows

Alison Ackroyd (2022)

- Appointed AMGEN Master Teacher Fellow, working with a small international cohort of biotechnology educators to widen access to high-quality, industry-aligned practical science
- Established fifth UK ABE Hub at Mid Kent College, supporting biotechnology CPD for technicians and teachers together with supplying industry standard kit and consumables to local schools
- Appointed Chair of the Association of Colleges / Gatsby T Level Science Community of Practice, working with colleges, awarding bodies, employers and policymakers to address implementation challenges and shape national approaches to T Level delivery
- Appointed to Science Council's Technical Professional Advisory Group, supporting work around professional registration, technician recognition and progression routes

Report by the Chairman of the Finance Committee

Introduction

The Board of Management has appointed the Finance Committee as a sub-committee to supervise the Commission's finances and investments; this Committee meets at least twice a year. I would like to thank all members of the Committee for their ongoing valuable contribution in overseeing the Commission's finances.

During 2025 there were two formal meetings of the Committee, at both of which the Committee met with and reviewed the performance of the Commission's investment managers. At the May meeting the Committee also reviewed the annual accounts and met with the Commission's auditors. At the November meeting the Committee focused on developments within the Commission's estate.

Investment Objective and Spending Policy

The Commission is expected to exist in perpetuity, and it is not anticipated that the demand for its funding will diminish. Accordingly, the financial objective of the Commission is to at least maintain the real value of its assets whilst generating a stable and sustainable return to fund grant making. Over the long term, the Commission aims to disburse 4% of the trailing three-year average value of the portfolio per annum. The investment objective is to achieve at least a 4% real return over the long term.

Asset Allocation

To achieve the investment objective, the Commission has adopted a strategic asset allocation comprising 85% equities, 5% property (the South Kensington Estate) and 10% cash and bonds, with ranges of plus or minus 5% in each case. For the purposes of setting the strategic asset allocation, some property holdings which are let on long leases for nominal rent and are not expected to generate market returns in the short to medium term (but which further the Commission's charitable objectives by providing accommodation to legacy institutions and are also held for their long-term potential) are excluded from consideration.

The Finance Committee will revisit the strategic asset allocation at least every three years and consider the need for tactical deviations from it on at least an annual basis.

ESG considerations

The Commission recognises that its investments have wider impacts and seeks to align its investment strategy with its aims, reflecting the views of its stakeholders and taking into account broader public benefit. The Commission expects its investment managers to integrate Environmental, Social and Governance (ESG) considerations into the normal investment process and to fulfil the requirements of the UK Stewardship Code, actively engaging with the companies in which they invest to promote best practice corporate behaviour and sustainable business practices. The Commission has one ethical exclusion which is tobacco.

The Commission recognises that climate change is a key challenge for the next decade and that limiting global temperature rises will require significant change in business, investment, technology development and fossil fuel use. The Commission monitors the carbon emissions of its equity portfolio and through its investment managers seeks to reduce these emissions over time.

Investment Performance

While inflation and interest rates are hopefully stabilising, geopolitical uncertainty and market volatility are set to continue, with the impact of AI set to be transformative in many sectors. The Commission recognises that meeting the investment objective over the short to medium term will be challenging and so remains flexible in its disbursement policy.

The annualised real return over the past one, three, five and ten years has been 8.3%, 11.3%, 3.2% and 6.6% respectively, with high inflation and disappointing equity returns in 2022 negatively impacting performance over the longer periods.

Despite the volatile geopolitical environment and challenging economic environment, including the ongoing war in Ukraine, hostilities in the Middle East, persistent high inflation and elevated interest rates, equity and bond markets performed well in 2025 with the MSCI ACWI Index up 13.9% for the year and the Bloomberg Barclays Global Aggregate Index (GBP Hedged) up 4.8%. Against this backdrop the Commission achieved a total return net of fees of approximately 11.7% (2024: 18.0%). CPI + 4% was 7.4% (2024: 6.5%).

Financial performance for the calendar year to 31 December 2025

Over the 12-month period the investment assets (including directly held property not considered part of the strategic asset allocation and cash held outside the portfolio) generated income of £1,701,058 (2024: £2,259,719). When combined with capital gains of £16,321,277 (2024: capital gains of £23,017,136) this meant that, after donations, other income, grants and other expenditure, the total funds of the Commission increased from £162,548,711 to £173,937,869 as at 31 December 2025.

Expenditure on core Fellowships and Studentships increased from £4,224,615 to £4,496,709, helping to increase total expenditure on charitable activities from £5,983,370 to £6,200,057.

Expenditure on raising funds – which primarily comprises investment and property management fees – decreased from £642,408 in 2024 to £460,915 in 2025, the drop primarily reflecting decreased exposure to segregated funds and increased investment in pooled funds where fees have been deducted in calculating unit prices.

Going concern

The Commissioners do not believe there are any material uncertainties that call into doubt the Commission's ability to continue and the accounts have therefore been prepared on a going concern basis.

The Commission, like every other organisation, has been impacted by the pandemic, Russia's invasion of Ukraine and the hostilities in the Middle East, which have resulted in ongoing supply chain disruption, persistent high inflation, increased interest rates and a cost-of-living crisis. Investment markets have been much more volatile, and the day-to-day value of the Commission's portfolio has inevitably reflected that. The Commission is a long-term investor, however, and Commissioners remain confident in the underlying strength of the portfolio; they see no evidence at this stage of any permanent loss of value – indeed, the portfolio has shown significant gains over the past year. Similarly, while the Commission has had to defer or write off a certain amount of rent, there is not considered to be any risk to the long-term value of the estate. The Commission has sufficient assets, and sufficient liquidity, to ride out the current market disruptions. The Commission's core grant-making activity has therefore continued largely as planned and Commissioners expect it to continue to do so.

Reserves Policy

The Commission's funds originated from the surplus arising from the Great Exhibition of 1851 and have been enhanced by careful stewardship of the assets invested over many years. They are technically unrestricted, giving the Commissioners the ability to spend the funds as they wish in fulfilment of the charitable objectives of the Commission.

Given the Commission's flexibility to spend capital if required, the Commissioners do not consider that there is any merit in identifying an optimum level of free reserves that might be readily available if required but will respond appropriately to spending needs identified as and when circumstances arise.

The Commission's Auditor

In 2008, Moore Kingston Smith LLP was appointed the Commission's auditor following a competitive tender. The audit partner meets with the Finance Committee at least once each year. In the interests of good governance, the audit manager changes at least every five years and the audit partner at least every ten years.

Statement of Commissioners' Responsibilities

The Commissioners are responsible for preparing the Trustees' Report and the financial statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice.)

The law applicable to charities in England and Wales requires the Commissioners to prepare financial statements for each financial year which give a true and fair view of the state of the affairs of the Commission and of the incoming resources and application of resources of the Commission for that period. In preparing these financial statements, the Commissioners are required to:

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

The Commissioners are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the Commission and enable them to ensure that the financial statements comply with the Charities Act 2011, the Charity (Accounts and Reports) Regulations 2008 and the provisions of the Royal Charter. They are also responsible for safeguarding the assets of the Commission and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Annual Report on pages 2 to 53 and 79 to 84 was approved by the Commissioners on 8 July 2026.

Ms Sandra Robertson

Independent Auditor's Report to the Commissioners of Royal Commission for the Exhibition of 1851

Opinion

We have audited the financial statements of the Royal Commission for the Exhibition of 1851 for the year ended 31 December 2025 which comprise the Statement of Financial Activities, the Summary Income and Expenditure Account, the Balance Sheet, the Cash Flow Statement 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 FRS 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 charity's affairs as at 31 December 2025, and of its 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 charity in accordance with the ethical requirements that are 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 relating to going concern

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

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

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

Other information

The other information comprises the information included in the annual report, other than the financial statements and our auditor's report thereon. The Commissioners 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.

Matters on which we are required to report by exception

We have nothing to report in respect of the following matters where the Charities Act 2011 requires us to report to you if, in our opinion:

- the information given in the Commissioners' Annual Report is inconsistent in any material respect with the financial statements; or
- the charity has not kept adequate accounting records; or
- the financial statements are not in agreement with the accounting records and returns; or
- we have not received all the information and explanations we required for our audit.

Responsibilities of Commissioners

As explained more fully in the Commissioners' responsibilities statement set out on page 53, the Commissioners 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 Commissioners determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Commissioners are responsible for assessing the 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 Commissioners either intend to liquidate the 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 regulations made under section 154 of that Act.

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 aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

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

Explanation as to what extent the audit was considered capable of detecting irregularities, including fraud

The objectives of our audit in respect of fraud, are: to identify and assess the risks of material misstatement of the financial statements due to fraud; to obtain sufficient appropriate audit evidence regarding the assessed risks of material misstatement due to fraud, through designing and implementing appropriate responses to those assessed risks; and to respond appropriately to instances of fraud or suspected fraud identified during the audit. However, the primary responsibility for the prevention and detection of fraud rests with both management and those charged with governance of the charity.

Our approach was as follows:

- We obtained an understanding of the legal and regulatory requirements applicable to the charity and considered that the most significant are the Charities Act 2011, the Charity SORP, and UK financial reporting standards as issued by the Financial Reporting Council.

- We obtained an understanding of how the charity complies with these requirements by discussions with management.

- We assessed the risk of material misstatement of the financial statements, including the risk of material misstatement due to fraud and how it might occur, by holding discussions with management.

- We inquired of management and those charged with governance as to any known instances of non-compliance or suspected non-compliance with laws and regulations.

- Based on this understanding, we designed specific appropriate audit procedures to identify instances of non-compliance with laws and regulations. This included making enquiries of management and obtaining additional corroborative evidence as required.

As part of an audit in accordance with ISAs (UK) we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purposes of expressing an opinion on the effectiveness of the charity's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Commissioners.

- Conclude on the appropriateness of the Commissioners' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the charity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions

may cause the charity to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Use of our report

This report is made solely to the charity's Commissioners, as a body, in accordance with Chapter 3 of Part 8 of the Charities Act 2011. Our audit work has been undertaken so that we might state to the charity's Commissioners 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 any party other than the charity and charity's Commissioners as a body, for our audit work, for this report, or for the opinion we have formed.

Statutory auditor

2 Appold Street
London
EC2A 2AP

Moore Kingston Smith LLP is eligible to act as auditor in terms of Section 1212 of the Companies Act 2006.

Royal Commission for the Exhibition of 1851

Statement of Financial Activities for the Year Ended 31 December 2025

	Notes	Unrestricted Funds 2025 £	Unrestricted Funds 2024 £
Income from:			
Donations	4	2,000	2,000
Investments	5	1,701,058	2,259,719
Other	6	6,123	6,015
Total income		1,709,181	2,267,734
Expenditure on:			
Raising funds	7	460,915	642,408
Charitable activities	8	6,200,057	5,983,370
Total expenditure		6,660,972	6,625,778
Net expenditure before gains and losses on investments		(4,951,791)	(4,358,044)
Net gains / (losses) on investments			
Gains / (losses) on property		(247,982)	154,478
Gains on investments		16,569,260	22,862,658
Total of net gains on investments		16,321,278	23,017,136
Net income		11,369,487	18,659,092
Other recognised gains and losses			
Actuarial gains on defined benefit pension scheme	14	19,671	50,728
Net movement in funds		11,389,158	18,709,820
Reconciliation of funds			
Total funds brought forward		162,548,711	138,125,545
Net movement in funds		11,389,158	18,709,820
Total funds carried forward		173,937,869	162,548,711

The notes on pages 61 to 78 form part of these accounts. Notes 1-2 provide details of the Commission's objectives and accounting policies.

Royal Commission for the Exhibition of 1851

Balance Sheet
as at 31 December 2025

	Notes	Total Funds 2025 £	Total Funds 2024 £
Fixed asset investments			
Investment properties	15	18,667,850	19,220,350
Listed investments	16	162,775,143	149,969,167
Cash held as part of the investment portfolio		107,892	165,408
		181,550,885	169,354,925
Current assets			
Debtors	17	228,928	485,974
Cash at bank and in hand		1,164,685	1,267,369
		1,393,613	1,753,343
Liabilities			
Creditors: Amounts falling due within one year	18	(5,106,853)	(4,640,555)
Net current liabilities		(3,713,240)	(2,887,212)
Total assets less current liabilities		177,837,645	166,467,713
Creditors: Amounts falling due after more than one year	18	(3,664,776)	(3,645,002)
Net assets excluding pension liability		174,172,869	162,822,711
Defined benefit pension scheme liability	14	(235,000)	(274,000)
Net assets		173,937,869	162,548,711
The funds of the Charity:			
Capital Funds			
Balance as at 1 January		162,548,711	143,838,891
Movement in year		11,389,158	18,709,820
Balance as at 31 December		173,937,869	162,548,711

Approved by the Commissioners on 8 July 2026 and signed on their behalf by:

Ms Sandra Robertson
Chairman, Finance Committee

Mr John Lavery
Secretary

The notes on pages 61 to 78 form part of these accounts.

Royal Commission for the Exhibition of 1851

Statement of Cash Flows
for the Year Ended 31 December 2025

	Total Funds 2025 £	Total Funds 2024 £
Cash flows from operating activities		
Donations received (excluding donations in kind)	2,000	2,000
Grants and awards paid	(4,833,018)	(4,146,875)
Payments to suppliers	(929,388)	(1,099,846)
Payments in respect of employees	(390,254)	(372,738)
Other payments	(39,623)	(35,968)
Cash used in operating activities	(6,190,283)	(5,653,427)
Cash flows from investing activities		
Dividends, interest and rent from investments	1,950,540	2,101,518
Proceeds from sale of investments	11,045,439	119,813,534
Purchase of investments	(6,965,896)	(117,368,107)
Net cash provided by investing activities	6,030,083	4,546,945
Change in cash and cash equivalents in the reporting period	(160,200)	(1,106,482)
Cash and cash equivalents brought forward	1,432,777	2,539,259
Cash and cash equivalents carried forward	1,272,577	1,432,777
Disclosed as:		
Cash held as part of the investment portfolio	107,892	165,408
Cash at bank and in hand	1,164,685	1,267,369
	1,272,577	1,432,777

1. STATUS AND OBJECTIVES

The Commission for the Exhibition of 1851 was set up by Royal Charter in 1850 to plan and promote the Exhibition of Works of Industry of all Nations, which was to be held in London in 1851. When the affairs of the Great Exhibition had eventually been wound up, the Commissioners were appointed, under a Supplemental Charter, as a permanent body to administer the surplus funds at their disposal. These were to be applied in order to "increase the means of industrial education and extend the influence of science and art upon productive industry".

2. ACCOUNTING POLICIES

The accounts are prepared under the historic cost convention, modified by the revaluation from time to time of certain fixed assets, and in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (effective January 2015) (FRS102), 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 (effective January 2019) (SORP) and the Charities Act 2011.

In the estimation of the trustees (the Commissioners), there are no material uncertainties that call into doubt the Commission's ability to continue and the accounts have therefore been prepared on a going concern basis.

The Commission, like every other organisation, has been impacted by the pandemic, Russia's invasion of Ukraine and war in the Middle East, which have resulted in ongoing supply chain disruption, persistent high inflation, increased interest rates and a cost-of-living crisis. Investment markets have been much more volatile, and the day-to-day value of the Commission's portfolio has inevitably reflected that. The Commission is a long-term investor, however, and Commissioners remain confident in the underlying strength of the portfolio; they see no evidence at this stage of any permanent loss of value. Similarly, while the Commission has had to defer or write off a certain amount of rent, there is not considered to be any risk to the long-term value of the estate. The Commission has sufficient assets, and sufficient liquidity, to ride out the current market disruptions. The Commission's core grant-making activity has therefore continued largely as planned and Commissioners expect it to continue to do so.

The Commission meets the definition of a public benefit entity under FRS102.

The financial statements are presented in sterling which is the functional currency of the charity. Monetary amounts are rounded to the nearest pound.

(a) Investments

(i) Are shown in the balance sheet at market value; any unrealised gain over original cost is shown in the statement of financial activities.

(ii) Income on investments is included in the accounts when receivable.

(iii) Cash held as part of the investment portfolio includes short-term deposits held temporarily with the company's bankers pending re-investment.

2. ACCOUNTING POLICIES (Continued)

(b) Donations, legacies and similar income

Donations, legacies and similar income are included in the year in which they are receivable, that is, when the Commission becomes entitled to the income. Donations received for general purposes are included as unrestricted funds. Where the wishes of the donor are legally binding on Commissioners, donations are accounted for as Restricted Funds with their use limited to that defined by the donor.

(c) Fixed Assets and Depreciation

All purchases of capital items under £10,000 are written off in the year of purchase. Capital items over £10,000 are depreciated over their estimated useful economic lives. Currently no items are being depreciated.

(d) Investment Properties

All the Commission's properties are let to provide an income on a full repairing lease. All properties are inspected regularly by the Commission's Surveyors and revalued by them from time to time. The last full revaluation was undertaken at 31 December 2025 and was based on the existing use and occupation of the land, and the duration of leases at ground rents and rack rents. These valuations are reviewed and adjusted annually as described in note 15.

(e) Realised and Unrealised Gains and Losses on Investments

Gains and losses on investments and assets held for the Commission's use are treated in accordance with the Statement of Recommended Practice. They are recognised in the statement of financial activities for the year in which they occur.

(f) Cash and cash equivalents

Cash and cash equivalents include cash in hand, deposits held at call with banks, other short-term liquid investments with original maturities of three months or less, and bank overdrafts. Cash held on capital account pending investment by the charity's investment managers, together with cash for investment in transit between investment managers, is disclosed within fixed asset investments; all other cash and cash equivalents is disclosed within current asset investments.

(g) Lease premiums and licences

Premiums received for lease extensions are treated as capital receipts and included within gains / (losses) on property transactions. Certain other premiums received which do not materially affect the underlying value of the Commission's investment are treated as income receipts.

(h) Charitable activities

The primary charitable activity is the making of grants and awards. Grants and awards payable are accounted for on an accruals basis. Multi-year grants are accounted for in full in the year that the grant is awarded. The Commission recognises future liabilities discounted to their present value where material.

2. ACCOUNTING POLICIES (Continued)

(h) Charitable activities (continued)

The majority of grants and awards are made to individuals who have been granted Fellowships or Studentships by the Commission. A limited number of awards are made to Institutions in furtherance of their educational needs. Some support is also provided to the legacy institutions on the Commission's South Kensington estate and to organisations facilitating access to the Commission's archives. A full analysis is shown in note 9.

The Commission also undertakes some direct charitable activities, in particular networking and educational events organised for the Commission's Fellows, Students, Alumni and the general public. Further details are shown in note 10.

(i) Allocation of support costs

Support costs are allocated on the basis of board or staff time as appropriate.

(j) Financial instruments

The Commission has elected to apply the provisions of Section 11 *Basic Financial Instruments* and Section 12 *Other Financial Instruments Issues* of FRS 102 to all of its financial instruments.

Financial instruments are recognised in the Commission's balance sheet when the Commission becomes party to the contractual provisions of the instrument.

Basic financial assets
Basic financial assets, which include trade and other debtors and cash and bank balances, are initially measured at transaction price including transaction costs and are subsequently carried at amortised cost using the effective interest method unless the arrangement constitutes a financing transaction, where the transaction is measured at the present value of the future receipts discounted at a market rate of interest.

Other financial assets
Other financial assets, including investments in equity instruments which are not subsidiaries, associates or joint ventures, are initially measured at fair value, which is normally the transaction price. Such assets are subsequently carried at fair value and the changes in fair value are recognised in the statement of financial activities, except that investments in equity instruments that are not publicly traded and whose fair values cannot be measured reliably are measured at cost less impairment.

Trade debtors, loans and other debtors that have fixed or determinable payments that are not quoted in an active market are classified as 'loans and receivables'. Loans and receivables are measured at amortised cost using the effective interest method, less any impairment.

Basic financial liabilities
Basic financial liabilities, including trade and other creditors, are initially recognised at transaction price unless the arrangement constitutes a financing transaction, where the debt instrument is measured at the present value of the future payments discounted at a market rate of interest.

Debt instruments are subsequently carried at amortised cost, using the effective interest rate method.

2. ACCOUNTING POLICIES (Continued)

(j) Financial instruments (continued)

Trade creditors are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. Accounts payable are classified as current liabilities if payment is due within one year or less. If not, they are presented as non-current liabilities. Trade creditors are recognised initially at transaction price and subsequently measured at amortised cost using the effective interest method.

Other financial liabilities
Derivatives, including interest rate swaps and forward foreign exchange contracts, are not basic financial instruments. Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently re-measured at their fair value. Changes in the fair value of derivatives are recognised in the statement of financial activities in finance costs or finance income as appropriate, unless they are included in a hedging arrangement.

(k) Retirement benefits

Payments to defined contribution retirement benefit schemes are charged as an expense as they fall due.

The cost of providing benefits under defined benefit plans is determined separately for each plan using the projected unit credit method and is based on actuarial advice.

The net interest element is determined by multiplying the net defined benefit liability by the discount rate, taking into account any changes in the net defined benefit liability during the period as a result of contribution and benefit payments. The net interest is recognised in the statement of financial activities.

Remeasurement changes comprise actuarial gains and losses and the return on the net defined benefit liability excluding amounts included in net interest. These are recognised immediately in the statement of financial activities in the period in which they occur.

The defined net benefit pension liability in the balance sheet comprises the total of the present value of the defined benefit obligation (using a discount rate based on high quality corporate bonds).

(l) Significant judgements and key sources of estimation uncertainty

In the application of the charity's accounting policies, Commissioners are required to make judgements, estimates and assumptions about the carrying value of assets and liabilities that are not readily apparent from other sources. The estimates are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates. The key sources of estimation uncertainty that have a significant effect on the amount recognised in the accounts are:

- the valuation of investment properties, which are stated at their estimated fair value based on professional valuations as disclosed in Note 15;

- the valuation of multi-year grant commitments, which take into account estimates of future inflation, early withdrawal rates, claim rates and other factors affecting the final amount payable; in this context, given other uncertainties, discounting for the time value of money is not considered material;

2. ACCOUNTING POLICIES (Continued)

(m) Significant judgements and key sources of estimation uncertainty (continued)

- the valuation of the defined benefit pension scheme liability, which is based on actuarial assumptions and a professional valuation as set out in Note 14;

- the valuation of future minimum lease payments under non-cancellable operating leases, which are discounted for inflation in accordance with Bank of England targets and ignore the potential effects of leasehold enfranchisements, as set out in Note 15.

3. FUNDS

All the Commission's income and capital is expendable at the discretion of the Commissioners and is therefore shown as a single unrestricted fund. Fund movements are disclosed in Note 20.

4. DONATIONS

The Commission received donations of £1,000 each from The Faculty of Royal Designers for Industry and The Royal Academy of Engineering. The donations were for the general charitable purposes of the Commission, but with an expressed wish that they be used to support the activities of the Sir Misha Black Awards Committee. The donations were therefore used to part fund the event at which the 2025 Medals and Award were presented. The Commissioners are very grateful to The Faculty of Royal Designers for Industry and The Royal Academy of Engineering for their support.

5. INVESTMENT INCOME

	2025 £	2024 £
Rental income from UK properties	627,053	670,741
Income from managed investments	1,035,297	1,503,994
Interest on cash deposits	38,708	84,984
	1,701,058	2,259,719

6. OTHER INCOME

	2025 £	2024 £
Licence income	6,123	6,015
	6,123	6,015

7. COST OF RAISING FUNDS

	2025 £	2024 £
Investment management fees	223,097	467,771
Property management fees	151,896	113,643
Legal fees	30,595	2,430
Allocated support costs (note 11)	55,327	58,564
	460,915	642,408

8. CHARITABLE ACTIVITIES

	Grants (note 9) £	Direct costs (note 10) £	Allocated support costs (note 11) £	2025 £	2024 £
Fellowships and studentships	4,170,195	154,739	171,775	4,496,709	4,224,615
STEM education and outreach	469,891	153,916	60,671	684,478	1,092,773
Support for legacy estate	673,727	34,985	60,671	769,383	505,065
Archives and alumni relations	-	182,891	66,596	249,487	160,917
	5,313,813	526,531	359,713	6,200,057	5,983,370

9. GRANTS AWARDED

a. Fellowships and studentships

	2025 No.	2025 £	2024 No.	2024 £
Research Fellowships	10	1,944,970	10	2,005,165
Industrial Fellowships	12	952,100	12	802,901
Industrial Design Studentships	14	717,298	11	546,152
Built Environment Fellowships	2	200,000	-	-
Design Fellowships	-	-	1	100,000
Regenerative Design Fellowships	-	-	-	-
Enterprise Fellowships	4	250,000	6	375,000
Technical Teaching Fellowships	7	85,827	5	48,133
Sir Misha Black Awards Bursaries	2	20,000	1	10,000
Total fellowships and studentships	51	4,170,195	46	3,887,351

All of the fellowships and studentships were awarded to individuals. The Annual Report includes more information on the awards granted, including where relevant details of each of the institutions at which individual recipients are carrying out their studies / research.

9. GRANTS AWARDED (continued)

b. STEM education and outreach

	2025 £	2024 £
Royal Academy of Engineering – Apprenticeship development awards	175,000	-
Baker Dearing Educational Trust – Developing engineering teaching talent	65,000	-
We The Curious – Curious collaborations	52,650	-
Physics Partners – Manchester physics programme	49,995	-
Smallpeice Trust – STEM discovery sessions in Coventry libraries	27,050	-
Inspiration Trust – Big D&T Meet	15,000	-
Association for Science Education – Building mathematical confidence in science teachers	14,726	-
Big Ideas – Black heroes of mathematics	14,000	-
University of Hull - Colliderfest 2026	11,000	-
Humanitarian Technology Trust - OpenFlexure microscope	10,000	-
Foundation for Science and Technology - Event sponsorship	5,000	-
All Party Parliamentary Engineering Group – Event sponsorship	5,000	-
Sensor Coating Systems – Lab experience day	500	-
STEM Learning – Bespoke training for primary STEM teachers	-	500,000
Royal Museums Greenwich – First Light gallery	-	100,000
Royal Designers for Industry – Summer schools	-	71,000
Institute of Physics – Mimi's Tiny Adventure	-	52,500
Royal Institution – Science in Schools	-	50,000
National Science Centre – Outer Solar System gallery	-	40,000
Durham University – Celebrate Science 2024	-	15,000
Big Ideas – London Wonder	12,470	14,400
Fun Kids Radio – War time inventions	-	13,400
Number Champions – Numeracy in primary schools	-	12,000
Kids Invent Stuff – Guinness World Records bid / Exhibition	10,000	10,000
Somerscience Trust – Somerscience Festival 2024	-	5,000
British Science Association – Primary kit boxes	-	2,925
Foundation for Science and Technology – Future Leaders Conference	2,500	2,500
Imperial College Union Design Engineering Society – Hackathon		2,000
	469,891	890,725
Less: Past awards written back where not utilised in full	-	(12,500)
	469,891	878,225

All 16 of the STEM education and outreach grants in 2025 were awarded to institutions (2024: all 15 grants were awarded to institutions).

9. GRANTS AWARDED (continued)

c. Support for legacy estate

	2025 £	2024 £
Natural History Museum - Children's gallery	150,000	-
Royal College of Art – Main entrance	-	250,000
Exhibition Road Cultural Group – SouthKenZEN+ Project work	363,727	90,000
Exhibition Road Cultural Group – SouthKenZEN+ Heat network	-	70,000
Royal College of Music – MSc studentship in performance science / Colin Lawson Fund	110,000	2,000
Royal Albert Hall – Associate scientist	50,000	-
	673,727	412,000
Less: Past awards written back where not utilised in full	-	(5,518)
	673,727	406,482

All of the grants in support of the legacy estate in both 2025 and 2024 were awarded to institutions

d. Archives and alumni relations

No awards were made in this category in 2025 or 2024.

In total, 20 grants were made to institutions and 51 to individuals (2024: 19 grants to institutions and 46 to individuals).

10. DIRECT COSTS

	Fellowships and studentships	STEM education and outreach	Support for legacy estate	Archives and alumni relations	2025	2024
	£	£	£	£	£	£
Promotion and selection costs	85,968	-	-	-	85,968	97,786
Networking and educational events	68,771	153,916	3,000	21,268	246,955	237,892
Estate memberships, projects and advice	-	-	31,985	-	31,985	30,914
Archive supplies, projects and acquisitions	-	-	-	152,782	152,782	66,709
Alumni website and expenses	-	-	-	8,841	8,841	8,364
	154,739	153,916	34,985	182,891	526,531	441,665

11. SUPPORT COSTS

	Cost of raising funds	Fellowships and studentships	STEM education and outreach	Support for legacy estate	Archives and alumni relations	2025	2024	Basis of allocation
	£	£	£	£	£	£	£	
Governance costs (note 12)	6,548	6,548	5,238	5,238	2,619	26,191	37,756	Board time
Staff costs (note 13)	42,734	144,752	48,563	48,563	56,049	340,661	330,033	Staff time
Retired staff pension costs	1,554	5,262	1,765	1,765	2,038	12,384	14,737	Staff time
Facility costs	1,094	3,706	1,244	1,243	1,435	8,722	8,722	Staff time
Office costs	2,131	7,219	2,422	2,423	2,795	16,990	24,009	Staff time
Legal and professional fees	797	2,700	906	906	1,045	6,354	9,472	Staff time
Travel and entertaining	469	1,588	533	533	615	3,738	3,482	Staff time
	55,327	171,775	60,671	60,671	66,596	415,040	428,211	

12. GOVERNANCE COSTS

	2025 £	2024 £
Audit fees (including VAT)		
- Current year	16,500	15,000
- Prior year under / (over) accrual	1,100	(1,056)
Actuarial fees	2,220	2,220
Annual report	2,734	17,548
Meeting costs	3,637	4,044
	26,191	37,756

13. STAFF COSTS AND RELATED PARTY TRANSACTIONS

	2025 £	2024 £
Salaries (including benefits in kind)	269,572	260,099
Employers NI	24,743	24,601
Pension contributions	45,317	43,834
Training and development	1,029	1,499
	340,661	330,033

The average number of employees during the year analysed by function was: -

	2025 No.	2024 No.
Support and administration	4.0	4.0
Archive	1.0	1.0
	5.0	5.0

The full-time equivalent number of employees during the year analysed by function was: -

	2025 No.	2024 No.
Support and administration	2.8	2.8
Archive	0.4	0.4
	3.2	3.2

13. STAFF COSTS AND RELATED PARTY TRANSACTIONS (continued)

One employee earned between £100,000 and £110,000. Pension contributions of £14,053 were paid in respect of this employee. One employee earned between £60,000 and £70,000. Pension contribution of £9,998 were paid in respect of this employee. (2024: one employee earned between £90,000 and £100,000; pension contributions of £13,545 were paid in respect of that employee. One employee earned between £60,000 and £70,000; pension contributions of £9,636 were paid in respect of that employee.)

Commissioners do not receive remuneration. During the year re-imbursements were made to four Commissioners in respect of travelling and other expenses totalling £928 (2024: to three Commissioners totalling £1,442). One Commissioner received an honorarium of £1,750 as a member of the Science and Engineering Fellowships Committee in recognition of specialist services provided in assessing potential candidates (2024: one Commissioner received £1,600).

The total amount paid in respect of key management personnel (i.e., the Secretary and Finance Director), including employer's national insurance and employer pension contributions, was £209,593 (2024: £203,353).

There were no other related party transactions during the year (2024: none).

14. PENSIONS AND OTHER LONG-TERM EMPLOYEE BENEFITS

All current and new members of staff are eligible to join a personal pension scheme of their choice with the Commission contributing 15% of salary (2024: 15% of salary). There is no requirement for employee contributions. Staff may opt to sacrifice some of their salary in return for an additional employer contribution. Employer contributions of £45,317 (2024: £43,834) were made in the year of which £1,305 (2024: £952) were outstanding at the year-end. There were no prepaid contributions at the year-end (2024: £nil).

All current and new members of staff also benefit from an unfunded / uninsured death in service scheme under which the Commissioners (at their absolute discretion) may pay a nominated beneficiary a lump sum equivalent to 18 months' salary if an employee dies while employed by the Commission. No liability for the scheme is recognised in the accounts as Commissioners do not believe there is any sensible way to estimate the liability. Actuarial calculations based on assumptions comparable to those used in valuing the defined benefit pension liability (see below) suggest that any liability in respect of the death in service scheme would in any case be immaterial.

All current and new members of staff also benefit from a Group Income Protection policy with Canada Life which covers basic salary and pension contributions for staff unable to work due to long term illness.

The Commission operates an unfunded pension scheme in the UK (the 'Scheme'). The Scheme is an unregistered, non-contributory defined benefit scheme. As the Scheme is unfunded, no contributions are paid by the Commission, other than to meet benefits as they fall due. As no triennial valuations are carried out, a valuation is carried out at the balance sheet date each year by an independent qualified actuary.

14. PENSIONS AND OTHER LONG-TERM EMPLOYEE BENEFITS (continued)

The Scheme was closed to new members on 14 July 2004. As at 31 December 2025, all three remaining members of the Scheme are receiving a pension and there is no further accrual of benefits. There is therefore no service cost for the year. The amount recognised in arriving at net expenditure for the year is an expense of £12,384 (2024: £14,737) which is fully in respect of net interest on the net liability.

As regards the unfunded, defined benefit pension scheme:

The principal assumptions used by the actuary were:

	FRS102 Valuation 2025 (% p.a.)	FRS102 Valuation 2024 (% p.a.)
Financial assumptions		
Gross investment return		
In-service members		
Pre-retirement	N/A	N/A
Post-retirement	N/A	N/A
Current pensioners	4.6%	4.8%
Pensionable earnings increases	N/A	N/A
Price inflation	2.9%	3.7%
Pension increases	2.9%	3.7%
Allowance for administration expenses	0.0%	0.0%
Demographic assumptions		
Mortality		
Pre-retirement	N/A	N/A
Post-retirement	101%/104% S4PA CMI 2024 1%	101%/104% S3PA CMI 2023 1%
Withdrawal allowance	No allowance	No allowance
Early retirement allowance	No allowance	No allowance
Proportion married	90%	90%
Wife's age	3 years younger than husband	3 years younger than husband

The assumptions used by the actuary are best estimates chosen from a range of possible actuarial assumptions which, due to the timescale covered, may not necessarily be borne out in practice.

Value of Scheme assets and liabilities:

	2025 £	2024 £
Market value of Scheme assets	-	-
Present value of Scheme liabilities	(235,000)	(274,000)
Scheme deficit	(235,000)	(274,000)
Related deferred tax asset	-	-
Net liability	(235,000)	(274,000)

14. PENSIONS AND OTHER LONG-TERM EMPLOYEE BENEFITS (continued)

Movements in the year:

	2025	2024
	£	£
Scheme deficit at beginning of year	(274,000)	(345,000)
Current service cost	-	-
Interest on obligation	(12,384)	(14,737)
Actuarial gain on liabilities	19,671	50,728
Benefits paid directly by employer	31,713	35,009
Scheme deficit at end of year	(235,000)	(274,000)

The interest on obligation of £12,384 (2024: £14,737) is disclosed within Support costs (note 11) while the actuarial gain on liabilities of £19,671 (2024: gain of £50,728) is disclosed within Other recognised gains and losses on the face of the SOFA.

15. INVESTMENT PROPERTIES AND OPERATING LEASES

	2025	2024
	£	£
(a) Movements in value of investment properties		
Balance at 1 January	19,220,350	19,595,350
Sales during the year	(115,000)	(210,000)
Unrealised loss on year-end revaluation	(437,500)	(165,000)
Valuation at 31 December	18,667,850	19,220,350

The valuation as at 31 December 2025 shown above resulted from a full revaluation of the properties at 31 December 2024, undertaken by Daniel Watney LLP, Chartered Surveyors and Property Consultants. The valuation was carried out on an open market value basis in accordance with the RICS Appraisal and Valuation Manual and is based on existing usage and occupation of the land, and the duration of leases at ground and rack rents. In reaching the 31 December 2025 valuation, the value at 31 December 2024 has been adjusted, based on advice from Daniel Watney LLP, to take into account movements in local property market indices, changes in estimated rental values, the decreasing length of leases and lease extension / leasehold enfranchisement claims received. All of the investment properties are located in the UK. During January 2026, a new 76-year lease was granted over one of the Commission's properties for a premium of £1,950,000. This will have reduced the carrying value of investment properties by £1,965,000, based on the valuations as at 31 December 2025 disclosed above.

15. INVESTMENT PROPERTIES AND OPERATING LEASES (continued)

(b) Operating leases – lessor

The Commission is entitled as landlord to income from investment properties under operating leases. Future minimum lease payments under non-cancellable operating leases, discounted for inflation, for each of the following periods are as follows:

	2025 £	2024 £
Not later than one year	13,733	77,750
Later than one year and not later than five years	-	-
Later than five years	11,014,232	11,054,796
	11,027,965	11,132,546

The Commission's investment properties are let for periods ranging up to 999 years. All leases are on full repairing and insuring terms. Leases of residential property are potentially subject to leasehold enfranchisement; this has been ignored in arriving at the above figures. The figure for future minimum lease payments in respect of leases expiring in not more than one year includes an amount of £4,983 in respect of a lease that has since been surrendered with a new 76-year lease granted for a premium of £1,950,000 and a peppercorn rental.

16. INVESTMENTS

	2025 £	2024 £
(a) Movements in listed investments		
Market value 1 January	149,969,167	129,015,824
Acquisitions at cost	6,969,317	117,406,203
Disposals at cost	(9,372,112)	(85,890,586)
Net gains / (losses) on revaluation	15,208,771	10,562,274
Market value 31 December	162,775,143	149,969,167
Value at cost 31 December	125,957,524	128,360,319

(b) Geographic breakdown

	2025 £ Listed investments	2025 £ Cash	2024 £ Listed investments	2024 £ Cash
In the UK	42,515,119	-	36,381,298	150,711
Outside the UK	120,260,024	107,892	113,587,869	14,697
	162,775,143	107,892	149,969,167	165,408

16. INVESTMENTS (continued)

All investments are listed on a recognised stock exchange.

There were no individual holdings the market value of which is considered to be material in the context of the portfolio as a whole.

17. DEBTORS

	2025	2024
	£	£
Rents receivable		
- in hands of surveyors	170,652	277,856
- in arrears	7,471	143,067
	178,123	420,923
Other debtors	11,741	18,416
Prepayments	39,064	46,635
	228,928	485,974

18. CREDITORS

Amounts falling due within one year	2025	2024
	£	£
Grants payable	4,950,584	4,497,521
Other creditors	156,269	143,034
	5,106,853	4,640,555

	2025	2024
	£	£
Analysis of other creditors		
Investment management fees	59,009	56,896
Property management fees	35,541	30,043
Audit fees	16,500	15,000
Other legal and professional fees	4,551	5,313
Others	40,668	35,782
	156,269	143,034

18. CREDITORS (continued)

Amounts falling due after more than one year	2025 £	2024 £
Grants payable	3,664,776	3,645,002
Due in one to two years	2,323,571	2,298,118
Due within two to five years	1,341,205	1,346,884
	3,664,776	3,645,002

The analysis of grants payable by award is as follows

Award	Period of commitment	2025 £	2024 £
Fellowships and studentships			
- Research Fellowships	3 years	3,651,941	3,321,439
- Industrial Fellowships	3 years	2,111,997	2,286,548
- Industrial Design Studentships	2 years	468,230	286,942
- Built Environment Fellowships	2 years	177,500	80,000
- Design Fellowships	2 years	55,000	55,000
- Regenerative Design Fellowships	2 years	65,000	132,500
- Enterprise Fellowships	1 year	187,500	62,500
- Sir Misha Black Award Bursaries	1 year	16,500	1,000
STEM education and outreach	1 year	957,965	196,250
Support for legacy estate	3 years	923,727	640,455
		8,615,360	8,142,523

19. FINANCIAL INSTRUMENTS

	2025 £	2024 £
Carrying amount of financial assets		
Debt instruments measured at amortised cost (debtors excluding prepayments)	189,864	439,339
	189,864	439,339
Carrying amount of financial liabilities		
Measured at amortised cost	8,771,629	8,285,557
	8,771,629	8,285,557

20. FUNDS

	At 1 January £	Income £	Expenditure £	Gains / (losses) £	Transfers £	At 31 December £
Unrestricted						
General	162,548,711	1,709,181	(6,660,972)	16,340,949	-	173,937,869
	162,548,711	1,709,181	(6,660,972)	16,340,949	-	173,937,869

Administrative Information

Structure, Governance and Management

The Commission is constituted as a limited company incorporated by Royal Charter. Its governing documents are the original Charter dated 3 January 1850 and a Supplemental Charter dated 2 December 1851.

The Commission may have up to twelve trustees, known as Royal Commissioners, at any one time, who together constitute the Board of Management, which meets formally twice a year. Commissioners are chosen to bring wide experience in areas relevant to the Commission's work – science, engineering, industry, design, architecture and finance. To maintain an appropriate balance of skills, Commissioners normally serve for 10 years, and Commissioners themselves identify possible successors, who may serve on a committee prior to election. Following election by the Board of Management, Commissioners are only appointed with the approval of the President.

All other committees are advisory in remit, are subordinate to the Board of Management and report to it, and all committee Chairmen are Commissioners. *Ad hoc* committees may be formed for limited periods and specific purposes. Any committee other than the Board of Management may have non-Commissioners as members subject to the wishes of the Chairman of that committee. All committees, except *ad hoc* committees, meet at least once annually. All committees are serviced by the Secretary and, where appropriate, by the Finance Director.

The Secretary also provides full briefing and induction programmes for all new Commissioners and committee members when appointed. As part of this introduction Commissioners are provided with a Governance Book containing full details of the Commission's history, role, strategy, procedures and Commissioners' responsibilities, as well as the relevant Charity Commission guidance for trustees. During their tenure, further opportunities for Commissioners to develop their knowledge of areas relevant to the Commission's activities are provided as appropriate.

Day to day running of the Commission is delegated to the Secretary, assisted by a small staff team. Matters of strategy, and all grants greater than £5,000, are decided by Commissioners.

Full details of Commissioners and Committee members in post during the year, as well as the small staff team, are provided on pages 81 to 83. Details of the Commission's professional advisers are provided on page 84.

Remuneration

Commissioners are not remunerated in their role as trustees of the charity and do not receive benefits other than reimbursement of expenses incurred in attending meetings.

In order to maximise funds available for grant making, Commissioners are determined to keep staff numbers and associated office costs to a minimum. To attract and retain experienced staff of the right calibre, however, Commissioners recognise the need to set salaries in line with those for other grant-making charities in the London area, based on sector benchmarks and other publicly available data.

Salaries for all staff, including key management personnel, are reviewed annually by the Chairman of the Board and the Chairman of the Finance Committee as part of the performance appraisal process. Pay awards are dependent on performance and set based on increases in the cost of living and average salary increases for the sector. There are no automatic increments and no bonus scheme.

Commissioners recognise the importance of helping employees make adequate provision for retirement. All employees are therefore eligible to receive a 15% employer pension contribution to the pension scheme established for auto-enrolment purposes or a personal pension of their choice. All employees also benefit from a Group Income Protection policy that will cover basic salary and pension contributions if they are unable to work due to long-term illness. At their absolute discretion, Commissioners may pay a nominated beneficiary a lump sum equivalent to 18 months' salary if an employee dies while employed by the Commission. All employees are also entitled to an interest free season ticket loan. All of the above benefits are available to all employees, including key management personnel. Employees do not receive any other benefits.

Risk Policy

In discharging their responsibilities for the management of risk, it is the policy of the Commissioners to identify, analyse and seek to manage any risks to the ability of the Commission to carry out its role effectively and meet the obligations of its Royal Charter.

To this effect the Commissioners have given consideration to the major risks to which the Commission is, or may be, exposed. A full risk register has been drawn up, which is reviewed regularly. Insurance brokers have been appointed to advise on areas where risk can be effectively mitigated through insurance. Compliance risks are mitigated through taking and following appropriate professional advice.

The main remaining areas of strategic and operational risk and the steps taken to address them are summarised below.

Investments: security, performance, liquidity

The Commission has a diversified portfolio, both in terms of investments held and managers appointed. It has adopted investment and disbursement policies designed to maintain the real value of the portfolio over time and hence the support available to current and future beneficiaries. Sufficient liquidity is held outside the portfolio to meet short term commitments. Commissioners have delegated review of investment performance to a Finance Committee comprising individuals with relevant expertise.

Grant-making: applications, assessment, administration

Commissioners have appointed specialist committees to review fellowship applications, work closely with other organisations active in the STEM arena to avoid unnecessary duplication or administrative effort and have appointed a communications company to assist with marketing of the awards to ensure they are brought to the attention of eligible recipients. Commissioners regularly seek feedback from potential applicants and other stakeholders to ensure the awards remain relevant.

Legacy estate: character, experience, relevance

Commissioners take an active interest in the estate, seek to facilitate relevant initiatives across legacy institutions and provide financial support where possible to ensure the estate remains a beacon of excellence and inspiration in the worlds of science, engineering and design.

Commissioners and Committee Members

President

HRH The Princess Royal

Commissioners (and Board of Management)

The Rt Hon Professor Lord Kakkar KG KBE PC FMedSci
Chairman, Board of Management

Professor Jim Al-Khalili CBE FRS FInstP
The Rt Hon Lord Burnett of Maldon PC DL
Professor Dame Ann Dowling OM DBE FREng FRS
Professor Sir Andrew Hopper CBE FRS FREng FIET
Professor Sadie Morgan OBE HonFRAIA HonFRIBA HonFICE FRSA
Dame Alison Nimmo DBE MRTPI FRICS HonFRIBA FICE
Ms Sandra Robertson
Professor Dame Carol Robinson DBE FRS FRSC FMedSci
Professor Dame Sarah Springman DBE FREng FICE FInstRE FWES
Professor Eleanor Stride OBE FREng HonFIET
Professor Chris Wise RDI FREng FICE FIStructE HonFRIBA

Ex Officio Commissioners

The Lord President of the Council
The First Lord of the Treasury
The Chancellor of the Exchequer
The Secretary of State for Science, Innovation and Technology
The Secretary of State for Energy Security and Net Zero
The Secretary of State for the Environment, Food and Rural Affairs
The President of the Institution of Civil Engineers
The President of the Geological Society

Finance Committee

Ms Sandra Robertson *Chairman*
Ms Sarah Arkle
The Rt Hon Lord Burnett of Maldon PC DL
Professor Sir Andrew Hopper CBE FRS FREng FIET
Dame Alison Nimmo DBE MRTPI FRICS HonFRIBA FICE
Mr Thomas Seaman
Mr Fabian Thehos CFA

Science and Engineering Fellowships Committee

Professor Dame Carol Robinson DBE FRS FRSC FMedSci *Chairman*
Professor Jim Al-Khalili CBE FRS FInstP
Professor Mike Benton FRS FRSE
Professor Katherine Blundell OBE
Professor Martin Bridson FRS
Professor Neil Champness FRSC FLSW MAE
Professor Martin Dawson FRS FRSE FIEEE FOSA FinstP
Professor Anne Dell CBE FRS FMedSci
Professor Marian Holness FRS
Professor Patrick Keogh FREng
Dr Sandra Knapp OBE FRS
Professor Rachel O'Reilly FRS FRSC
Professor Rachel Oliver OBE FREng
Professor Neil Ranson
Professor Ann Rosser FRCP
Dr Dame Frances Saunders DBE CB FREng FInstP
Professor Christopher Tout
Professor Dominic Vella
Professor Stuart West
Professor Philip Withers FRS FREng FIMMM MAE ForMemCAE ForMemINSA
Professor John Wood CBE FREng

Professor Katherine Blundell was appointed to the Committee on 19 November 2025
Professor Philip Withers was appointed to the Committee on 1 December 2025
Professor Andrew Briggs retired from the Committee on 31 December 2025
Professor John Dewey retired from the Committee on 31 December 2025

Brunel Fellowships Sub-Committee

Professor Dame Carol Robinson DBE FRS FRSC FMedSci *Chairman*
Professor Dame Anne Dowling OM DBE FREng FRS FICE FInstRE FWES
Professor William Powrie CBE FREng FICE
Professor Philip Withers FRS FREng FIMMM MAE ForMemCAE ForMemINSA
Professor John Wood CBE FREng

Professor Philip Withers was appointed to the Sub-Committee on 1 December 2025

Industry and Engineering Committee

Professor Dame Ann Dowling OM DBE FRS FREng *Chairman*
Professor Cees de Bont
Mr Mike Carr OBE FREng HonDTech CEng FIET
Professor John Clarkson FREng
Professor Adrian Lahoud
Professor Andrew Lewis FREng FRSC FAPS FIMMM CChem CSi
Professor Raffaelle Ocone OBE FRSE FREng FIChemE
Professor Ron Pethig
Professor Dame Sarah Springman DBE FREng FICE FInstRE FWES
Professor Adam Stokes
Professor Eleanor Stride OBE FREng

Professor Adrian Lahoud was appointed to the Committee on 1 January 2025
Professor Raffaelle Ocone was appointed to the Committee on 23 November 2025
Dr Nicholas de León retired from the Committee on 31 December 2025
Dr Malcolm Skingle CBE DSc retired from the Committee on 31 December 2025

Built Environment and Design Fellowships Committee

Professor Chris Wise RDI FREng FICE FIStructE HonFRIBA *Chaiman*
Professor Sadie Morgan OBE HonFRAIA HonFRIBA HonFICE FRSA
Ms Kat Scott
Dr Andrea Siodmok EMPP FRSA HonDCL

Professor Rachel Cooper passed away on 17 July 2025

Sir Misha Black Awards Committee

Professor Malcolm Garrett MBE RDI FISTD *Chairman*
Professor Chris Wise RDI FREng FICE FIStructE HonFRIBA
Professor Peter Childs
Dr Nicholas de León
Professor Geoff Kirk RDI FREng
Professor John Clarkson FREng

Staff

Mr John Lavery MVO	Secretary
Mr Amahl Smith ACA	Finance Director
Mrs Helen Harris	Fellowship Programme Manager
Mrs Angela Kenny RMARA	Archivist and Alumni Relations
Ms Kat O'Dea	Office Manager / Executive Assistant

Professional Advisers

Bankers

The Royal Bank of Scotland plc
1st Floor
440 Strand
London WC2R 0QS

Surveyors

Daniel Watney LLP
165 Fleet Street
London EC4A 2DW

Auditor

Moore Kingston Smith LLP
9 Appold Street
London EC2A 2AP

Actuaries

XPS Pensions
Albion
Fishponds Road
Wokingham RG41 2QE

Legal Advisers

Lee Bolton Monier-Williams LLP
1 The Sanctuary
London SW1P 3JT

Insurance Brokers

Howden
3rd Floor
Quadrant House
Croydon Road
Caterham CR3 6TR

Investment Consultant

Stanhope Consulting
35 Portman Square
London W1H 6LR

Investment Managers

Baillie Gifford & Co Limited
Calton Square
1 Greenside Row
Edinburgh EH1 3AN

BlackRock Asset Management Ireland Limited
2 Ballsbridge Park
Ballsbridge
Dublin 4
Republic of Ireland

JP Morgan Asset Management (UK) Ltd
60 Victoria Embankment
London EC4Y 0JP

Osmosis Investment Management
36-38 Botolph Lane
London EC3R 8DE

Schroder & Co. Limited
1 London Wall Place
London
EC2Y 5AU

The Children's Investment Fund
TCI Fund Services (Ireland) Limited
Ella House
39-43 Merrion Square
Dublin 2
Republic of Ireland

Royal Commission for the Exhibition of 1851

453 Sherfield Building
Imperial College
London SW7 2AZ

Telephone: 020 7594 8790

e-mail: royalcom1851@imperial.ac.uk
website: www.royalcommission1851.org
http://alumni.royalcommission1851.org
LinkedIn: https://linkedin.com/company/royalcom1851
instagram: https://instagram.com/royalcom1851
Bluesky: https://bsky.app/profile/royalcom1851.bsky.social