

**Institution of Chemical Engineers**

Annual Report and Consolidated  
Financial Statements  
for the year ended 31 December 2022

## **Contents**

Trustees' Report	3
Statement of Trustees' responsibilities	20
Independent Auditor's Report to the Trustees of the Institution of Chemical Engineers	21
Consolidated statement of financial activities for the year ended 31 December 2022	24
Charity statement of financial activities for the year ended 31 December 2022	25
Balance sheets at 31 December 2022	26
Consolidated cash flow statement for the year ended 31 December 2022	27
Charity cash flow statement for the year ended 31 December 2022	27
Notes forming part of the financial statements for the year ended 31 December 2022	28

## Trustees' Report

The Board of Trustees is pleased to present its annual report together with the financial statements of the charity and its subsidiaries for the year ended 31 December 2022.

The financial statements comply with the *Charities Act 2011* and *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 (FRS 102).

### Reference and Administrative Details

The Institution of Chemical Engineers (IChemE) is a registered Charity in England and Wales (charity number 214379) and a charity registered in Scotland (SC039661).

#### *Principal Office*

Davis Building, Railway Terrace, Rugby, Warwickshire, CV21 3HQ

#### *Auditors*

RSM UK Audit LLP, 10<sup>th</sup> Floor, 103 Colmore Row, Birmingham, B3 3AG

#### *Main Bankers*

NatWest Bank Plc, Silbury House, 300 Silbury Boulevard, Milton Keynes, MK9 2ZF

#### *Solicitors*

Mills & Reeve, 100 Hills Road, Cambridge, CB2 1PH

#### *Investment Managers*

Rathbone Investment Management Limited, 8 Finsbury Circus, London, EC2M 7AZ

Ruffer LLP, 80 Victoria Street, London, SW1E 5JL

#### *Trustees*

The Trustees serving through the year were as follows:

##### **1 January 2022 – 14 June 2022**

Ms LJ Cutler  
Prof SM Richardson  
Prof IDL Bogle  
Mr IJ Martin  
Dr RJ Best  
Ms AL Meldrum  
Mrs A Hosey  
Prof PJ Ashman  
Mrs JV Atkinson  
Mrs MD Isles-Ahite  
Mr DM Sutton  
Mrs WJ Wilson

##### **From 14 June 2022**

Prof IDL Bogle  
Ms LJ Cutler  
Mr JN Hirst  
Dr DW Edwards  
Dr RJ Best  
Ms AL Meldrum  
Mrs A Hosey  
Mr RE Tucker  
Mrs MD Isles-Ahite  
Prof R Ocone  
Mr DM Sutton  
Mrs WJ Wilson

#### *Chief Executive*

Ms YD Baker (from 12 April 2023)

Mr JL Prichard (to 30 September 2022)

#### *Interim Chief Executive*

Ms J Downham (from 30 September 2022 to 12 April 2023)

#### *Senior Management Team*

Ms J Downham: Director, Finance & Business

Mrs C Flavell-White: Director, Learned Society

Mr A Foster: Director, Regions

Ms P Kerin: Director, IChemE Safety Centre

Mr D LLoyd-Roach: Director, Qualifications

## Objectives and activities for the public benefit

The Institution of Chemical Engineers (IChemE) is an internationally recognised professional body committed to advancing the contribution of chemical engineering for the benefit of society.

In support of this core purpose, we promote a wide awareness of the role of chemical engineering. We develop, maintain, and administer standards of professionalism, education, safety and engineering practice. We work to attract a broad range of talent from diverse backgrounds into the discipline, and we inspire early career professionals to develop their competence to ensure that society is protected from harm.

We assess applicants for membership and professional registration through a rigorous peer review process thereby promoting professional development and competence in all those who enter the profession.

By promoting high standards, we encourage chemical engineers to deliver economic benefit and wellbeing without causing harm to society or the planet.

Through the knowledge and expertise of our members we inform policy development and advance the practice of chemical engineering. We recognise and celebrate excellence; we undertake informed advocacy on behalf of chemical engineering and chemical engineers; and share the message that chemical engineering matters.

The object of the Institution as set out in the Royal Charter is:

to promote, foster and develop the general advancement of the art and science of chemical engineering in all its branches as an end in itself and as a means of furthering, in a responsible manner, both the scientific and economic development and the application of sustainable processes in which chemical and physical changes of matter and energy are involved and to promote, assist, finance and support such research, investigation and experimental work in chemical engineering as the Institution may consider likely to help bring about or contribute to those ends and to the benefit of the global community now and in the future.

The powers vested in the Institution to achieve these objects are:

- To hold meetings of the Institution for reading and discussing papers and communications bearing upon the science of chemical engineering or the application thereof or upon subjects relating thereto and generally to advance knowledge of chemical engineering.
- To print, publish, sell, lend, or distribute the proceedings or the reports of the Institution or any papers, communications, works or treatises on chemical engineering or its application or subjects connected therewith in the English or any foreign tongue or any abstracts thereof or extracts therefrom.
- To co-operate with Government Departments, Universities, other Educational Institutions, and public educational authorities for the furtherance of knowledge of and education in chemical engineering, science or practice.
- To publish statements in the public interest for the education or information of the general public on matters involving the science or application of chemical engineering.
- To hold or prescribe examinations or other assessments for candidates for election to Voting and Non-Voting membership and by requiring standards of knowledge and experience approved by the Institution.
- To maintain, under licence from the Engineering Council (UK) or the Science Council, or any other successor organisations, or any other appropriate organisations, such Register, or parts thereof, as refer to relevant Chartered Practitioner status or to relevant Technician or other status.
- To co-operate with any other organisations to advance the cause of chemical engineering or for economic purposes related thereto.
- To do all other things incidental or conducive to the attainment of the above objects or any of them.

## ***Our strategy***

Strategy 2024 sets out IChemE's enduring purpose to advance the contribution of chemical engineering worldwide for the benefit of society; and its vision being to be led by members, supporting members, and serving society. We will have realised this vision and fulfilled our purpose if we achieve four key aims by 2024. They are:

- ***Respected for professionalism and technical competence***

IChemE will continue to set and uphold professional standards, offering routes to recognized qualifications for all chemical engineers who should be qualified. The Institution will encourage and champion professional development and apprenticeship opportunities to meet existing and future demand. This will be supported by an increase in, and enhancement of, external organisational partnerships.

- ***Recognised as a vibrant learned society that addresses the Global Grand Challenges***

This will be achieved by developing insight and opinion and by working alongside other professions to provide a collective voice on joint issues. Showing technical leadership by engaging with governments and other global bodies to inform policy/decision-making is vital. By using new technology and platforms, the Institution can engage and empower members to spread technical expertise across geographies, special interests and with peers and partners – helping them to adapt to (and influence) current and future societal challenges.

- ***Acknowledged as an Institution of choice in which an engaged membership receives and adds value***

Improving societal understanding of the history of chemical engineering, as well as its contribution to tackling the *Grand Challenges for Engineering* and the *United Nations Sustainable Development Goals*, is a key role for chemical engineers and helps to inspire the next generation of engineers. Just as important is properly communicating the value proposition of IChemE to existing members, tailoring engagement carefully, depending on their career stage and ambitions. A more engaged membership adds value back into the Institution, creating greater value for society and for all prospective and current members.

- ***Known as a high-performing organisation delivering significant value***

Embracing digitalisation will be key, creating a platform which is befitting of a modern professional body with a dispersed membership, as it allows instantaneous transfer of knowledge and skills, regardless of geography. To support this, a streamlined business architecture and measures to ensure financial sustainability will also be introduced.

## ***Public Benefit***

The Institution works to fulfil these goals on an international scale, reflecting the geographical spread of its membership and of the wider chemical engineering profession. It brings benefits to the public and society by promoting high standards of engineering competence, professional ethics, safety, and sustainability, thus enabling industry and society to receive the benefit from a competent profession and its practitioners.

The Trustees confirm that they have referred to the Charity Commission's guidance on public benefit when reviewing the Institution's aims and objectives and in planning its future activities.

## Achievements and performance

The Institution continued to align business planning to the aims stated within Strategy 2024, making demonstrable progress across all four aims, as highlighted below.

### *Aim 1: Respected for professionalism and technical competence*

IChemE continued to uphold standards by regulating professional conduct, instilling appropriate ethics and setting the bar for the appropriate standards. Implementing flexible pathways to achieve professional recognition by offering routes to qualifications for all chemical engineers who wish to gain professional recognition was a key focus during the year, as well as the provision of support to education providers, employers and industry partners.

#### Pathway to professional qualifications

2022 has been a year of consolidating the three-stage membership application process that was introduced in 2021, developing enhancements to the application and assessor portals and improving the experience for both applicants and volunteer members involved in the assessments.

Following the introduction of the new Stage 1 route, Individual Case Procedure, towards the end of 2021, the first full year saw 271 applications received, 183 applications considered at the Individual Case Panel, and 96 applications fully completed and assessed as meeting the educational base for Chartered Engineer status.

Throughout 2022 there was a recruitment and training drive for more volunteers, especially Professional Reviewers. At the end of 2022, IChemE's headline membership figure was around 30,000 with 41% professionally qualified.

#### Accrediting qualifications

The Institution continued to support universities and training providers by accrediting educational programmes and fostering good practice. Twelve virtual university accreditation visits took place internationally. As well as the UK, IChemE also carried out accreditation visits to universities in Ireland, West Indies, New Zealand, Australia, France, Malaysia and China.

### *Aim 2: Recognised as a vibrant learned society that materially impacts on the Global Grand Challenges*

To achieve IChemE's strategic aim to be a vibrant learned society that materially impacts on global challenges, the key elements are to encourage knowledge transfer and facilitate professional networks.

Through IChemE's Communities of Practice on Energy and Research & Innovation, members developed projects on topics including electrolytic hydrogen, early career researchers and entrepreneurship. Member groups and special interest groups continued to deliver a variety of opportunities for members to provide networking and knowledge sharing opportunities with over 200 technical webinars delivered.

Ensuring members are equipped with an abundance of technical knowledge so they can continue creating impactful and safe solutions to help society and the environment, content on the Knowledge Hub was doubled during 2022 with all IChemE's peer-reviewed journal papers now included. 25 new books were added to Knovel, the online resource for books and technical information, interactive equations and analytical tools. This new content helped increase the number of visits over the year by 90%.

#### Priority topics

A focus for 2022 was delivering outputs for the Learned Society Committee's three priority topics: Responsible Production, Major Hazards Management and Digitalisation. An updated priority topics document was launched in April which recognised the achievements made and reflected new trends in these areas. This update guided work within the priority topics during the year and into 2023.

#### *Responsible Production*

Ahead of the COP27 climate change conference held in Sharm el-Sheikh, Egypt, in November, IChemE launched a campaign to share its progress made against commitments stated within the Institution's position on climate change, first launched in 2020, with the #ChemEngatCOP27 campaign gaining more than 20,000 social media impressions.

Net zero and climate change have been key topics for IChemE policy work in recent years. Between January 2021 and the COP27 conference, IChemE published ten contributions to policy issues on its website. Of these, nine represented chemical engineering or general engineering input and advice relating to addressing climate issues and progressing towards net zero.

IChemE's member communities were encouraged to host webinars that both build skills for zero carbon futures and help members to understand climate risks. By the end June 2022, 37 out of 95 technical webinars held during the year were aligned with sustainability and responsible production. A compendium of freely available climate-related webinar recordings delivered by IChemE's special interest and member groups has also been produced, with 30 new recordings added during the year.

IChemE committed to develop its own plans for achieving net zero carbon emissions from direct operations globally by 2025, and to publish greenhouse gas emissions data and progress each year. Annual reports showing a reduction

in emissions in recent years have been published and an expert advisory group has developed guidance on good practice for minimising emissions from rented property and advised IChemE regarding carbon offsets.

### *Major Hazards Management*

The Major Hazards Committee made good progress with two key projects during the year. The working group for the process safety competencies project determined what process safety competence looks like for chemical engineers in terms of skills and knowledge expected during the various stages of their career, with the final report of findings and recommendations due to be published in 2023. Subsequent phases of the project will look at process safety competencies for the Professional Process Safety Engineer, and for organisations.

The discovery phase of the lessons learned project was concluded with the working group establishing that there are plentiful tools and information available within IChemE and hence the requirement is to effectively disseminate lessons learned with members. The next stage of the project is to establish methods to engage members with the information and encourage their advocacy with lessons learned.

### *Digitalisation*

The digitalisation technical advisory group continued their dedicated series in *The Chemical Engineer* on digitalisation and chemical engineering, including articles on digital twins in the chemical process industries and digitalising process safety.

### Policy engagement

IChemE's technical roadmap, *Chemical Engineering Matters*, was reviewed and updated in 2022, its first update since 2016. The document provides a framework for society and stakeholders to explore how chemical engineers are central to addressing our global challenges, and identifies four key areas where our profession can create, maintain and improve quality of life, now and in the future: water, energy, food, and wellbeing.

Policy consultations are one method IChemE can use to ensure that chemical engineers' voices are heard by government. In 2022, IChemE contributed to six published pieces of policy work, covering consultation responses and technical policy reports in UK and Australia. A new fast-track policy process was developed, allowing the Institution to respond to consultations with short turnaround times, thereby increasing engagement with policy makers.

Active engagement with the National Engineering Policy Centre (NEPC) has continued to benefit IChemE's UK policy work. The NEPC operates as a hub for developing and disseminating engineering policy advice by working collaboratively with a cross section of 42 professional engineering institutions in the UK.

In a UK Government roundtable discussion held on sustainability education, IChemE recommended that the Department for Education (DfE) works with higher education institutions to enable the upskilling and reskilling of practising and future engineers to effectively perform roles that deliver sustainable solutions. IChemE Fellow Jarka Glassey represented IChemE at the roundtable held virtually in February as part of a consultation ahead of the publication of the Department's strategy on sustainability and climate change education, launched in April.

### Publications

All wholly owned IChemE journals saw a rise in their Impact Factor in 2022, a quantitative measure of a journal in relation to its competitors. The Sustainable Production and Consumption journal achieved the highest ever Impact Factor for any IChemE journal with a score of 8.921.

Multiple collections of invited papers on topical areas across the breadth and depth of chemical engineering were published in IChemE journals throughout the year, including a special issue of *Chemical Engineering Research and Design* celebrating IChemE's centenary. This featured forward-looking perspective articles on core chemical engineering topics from experts in their respective fields.

The number of papers published in IChemE journals during 2022 approached 2,300, an increase of 30% since 2021. The number of manuscripts submitted was over 12,000, an increase of 23% in the same period.

The ten issues of *The Chemical Engineer* magazine published during the year included a new series on Ethics and *The Chemical Engineer*. Launched in partnership with volunteers, the series urged the community to 'think ethics before taking action'.

Readers of the Loss Prevention Bulletin (LPB) were invited to contribute their predictions for accidents of the future i.e. accidents that are typically repeated because lessons aren't learnt, or accidents that could arise from new technology. This resulted in a special issue of the bulletin which was shared with Hazards 32 delegates and is also free to download from the website.

### Fellowships

Josh Fearn, a chemical engineering graduate of the University of Surrey, UK, was awarded the 2022 Ashok Kumar Fellowship which was established to enable chemical engineers to inform the work of UK Members of Parliament (MPs) and policy makers. In partnership with the Materials Processing Institute, IChemE funds a three-month placement with the UK Parliamentary Office for Science and Technology (POST), where Josh will contribute to an area of public policy.

A new bursary to fund 20 postgraduate students to attend a summer school to enhance their knowledge in catalysis was introduced under the Andrew Legacy scheme. The scheme aims to support scores of students in enhancing their knowledge in catalysis and is funded following a donation made to the Institution by the late Professor Syd Andrew, an IChemE Fellow and distinguished expert in the field of catalysis. The summer school was organised by, and held at, the University of Liverpool's Department of Chemistry in July and runs every two years.

### Events

Knowledge-sharing and supporting continuing professional development (CPD) activities continued at the Hazards 32 conference in Harrogate, UK, delivered face-to-face for the first time since 2019. Held in October, 290 delegates attended to listen to a range of technical presentations from industry practitioners, researchers and regulators designed to help advance the understanding and application of managing major hazards. The prestigious Trevor Kletz Lecture was given by Dame Judith Hackitt who led the independent review into building regulations and fire safety for the UK Government after the Grenfell Tower fire in 2017. Emphasising the importance of cross-sector hazards learnings, Dame Judith reflected on her personal journey in process safety and related it to the challenges in the built environment sector as it faces new and tougher regulation in the wake of the Grenfell Tower tragedy.

For the first time, and to mark IChemE's centenary year, the Chemeca conference was held in conjunction with Hazards Australasia in Melbourne, Australia, in September. At Hazards Australasia, delegates learnt how to improve process safety practices in uncertain times, including the impact of sustained pressures and strains on workforces from the Covid-19 pandemic and Australian bush fires. Attendees had the opportunity to gain further knowledge at Chemeca with the sharing of engineering research and innovations helping to make a greener, safer, cleaner future. New to Chemeca this year was a panel discussion on the next 100 years of chemical engineering and a Hackathon competition.

Focusing on the specific challenges facing process safety practitioners in the Asia Pacific region, 296 people registered for the free-to-attend IChemE Regional Process Safety Seminar, held virtually in March.

### Training

More than 80 live public training courses were delivered to over 900 attendees from all over the world. Eight new training courses were launched including Plant and Production Management and What Engineers Need to Know About Hydrogen Safety.

With IChemE members having free access to the full collection of courses within the Sustainability Hub, over 3,500 registrations were received for on-demand courses designed to further chemical engineer's knowledge and understanding around subjects that can contribute to sustainable development.

### Serving Society

IChemE partnered with ITN Business to produce *Serving Society*, a programme looking at the role of the chemical engineer and how the profession is addressing some of the biggest challenges facing society today. Anchored by presenter Sharon Thomas, *Serving Society* featured industry experts along with informative interviews, news items and sponsored editorial profiles, filmed at the ITN Business London studio and around the UK.

The role of the chemical engineer has never been more important. *Serving Society* featured reports from IChemE exploring the evolution of the chemical engineering profession's place in society today and the incredible work being done to address the future of plastic recycling. The programme also showcased films from businesses, universities and organisations from across the field of chemical engineering, demonstrating the enormous contributions they are making to our world. The programme can be viewed by visiting [www.icheme.org/serving-society](http://www.icheme.org/serving-society).

### Sustainability Hub

The Sustainability Hub was launched in February to support the development of sustainability knowledge for chemical engineers. The vision of the Sustainability Hub is to inspire and support chemical engineers to make a positive impact on global sustainability as defined by the UN Sustainable Development Goals (SDGs), focusing in particular on the following four SDGs:

- SDG 3: Good health and wellbeing
- SDG 6: Clean water and sanitation
- SDG 7: Affordable and clean energy
- SDG 12: Responsible consumption and production

A growing collection of training courses was made available through the Sustainability Hub to further chemical engineer's knowledge and understanding around subjects that can contribute to sustainable development. These courses were offered free of charge to IChemE members. All courses are delivered online, on-demand, enabling delegates to learn interactively in bite-sized chunks.

Resources to support general SDG knowledge were also developed to equip chemical engineers with up-to-date, sustainability-related information and tools. These resources were categorised within each of the target SDGs referenced above and include success stories, videos, links to relevant information within IChemE's Knowledge Hub as well as links to useful external information. New resources will continue to be added regularly.

The Sustainability Hub can be viewed at [www.icheme.org/sustainability-hub](http://www.icheme.org/sustainability-hub).



### Promoting process safety

IChemE has continued to promote process safety and advance the understanding and application of major hazards management techniques to benefit society.

The IChemE Safety Centre (ISC) delivered six technical webinars and recorded a series of process safety podcasts in collaboration with Chemical Processing magazine, with the top-rated podcast being Deadly lessons learned from a Permit-to-Work failure (Piper Alpha).

A new case study, Setting Sail, was launched, and added to the bank of ISC case studies, can be used as a training resource to communicate vital process safety lessons. Setting Sail explores the aftermath of an incident involving a ferry, with delegates working to establish who or what caused the event to occur.

The ISC's social media campaign #MinuteToLearn continued, sharing one-minute videos of incidents and related learnings on their anniversaries. Forty-nine videos gained over 5,000 YouTube views during the year. The number of followers of the ISC's social media accounts increased across all channels, with an increase of 55% on LinkedIn.

As part of IChemE's centenary activities, the Safety and Loss Prevention Special Interest Group compiled a series of 52 one-page summaries of major incidents from a variety of process industry sectors into a free-to-download e-book called 'Learning Lessons from Major Incidents'. The one-page summaries were created to be used as handouts in university classrooms, posters in plant offices and control rooms or as attachments to process hazard analysis or business case documentation to help justify investment in process safety improvement initiatives.

### Recognising excellence

IChemE recognised the importance of celebrating excellence in chemical, biochemical and process engineering with the world-renowned Global Awards and Malaysia Awards events as well as the IChemE medals and prizes programme. The Global Awards celebrate excellence in chemical, biochemical and process engineering and are a mark of peer-recognition across the world within industry and academia. Achievements across chemical engineering were celebrated across 18 categories at the IChemE Global Awards 2022 ceremony, held in Manchester, UK, during November.

The winners of the 11th IChemE Malaysia Awards 2022 were announced at a virtual awards ceremony held in October. Trophies were awarded in seven categories for excellence in chemical, biochemical and process engineering.

IChemE's medals programme was modernised and reinvigorated in 2022, with changes enabling the recognition of people and processes that address climate change and drive greater sustainability. These improvements led to a 46% rise in nominations for IChemE medals compared to 2021.

### ***Aim 3: Acknowledged as a peer-group leader in which an engaged membership receives and adds value***

Membership engagement remained a priority during the year, with the Member Engagement Committee selecting three areas to focus on following the recommendations from the last member survey:

- Career journey support: the ambition is to improve communication around the breadth of continuing professional development (CPD) and to refresh mentoring to be scalable and accessible for the whole career journey;
- Students and early careers: an early careers working group has been formed to better understand the needs and expectations of student and early careers members;
- Volunteer engagement: the goal is to ensure all volunteering opportunities are openly advertised, to help volunteers build their networks, and to improve recognition of volunteer contributions.

Member communities' activity remained predominantly virtual in 2022 enabling members in all regions to access knowledge sharing and networking opportunities. 34 member groups and 19 special interest groups delivered programmes of networking events, webinars and dinners. More than 10,000 people attended 219 technical webinars and some face to face events were re-introduced following the pandemic, with more and more physical events taking place by the end of the year.

To further support early career chemical engineers, IChemE held a Global Careers Day in October, with over 360 students and recent graduates receiving advice and guidance from practicing chemical engineers from a wide variety of industries. The sessions were held across four different time zones to cater to a global audience. The recordings from the webinars held during the day are available in the early career area of the IChemE website.

Following a two-year hiatus in overseas travel due to the pandemic, IChemE's President visited members and stakeholders in Australia, Malaysia and Singapore in September. This included meeting the regional boards, university departments and corporate partners across the area to discuss governance structures, updates within the Institution and IChemE involvement in local activities.

Two town hall sessions were held virtually in May and November giving members the opportunity to hear from their senior leaders and put questions to the panel on topics ranging from sustainability, collaboration with other engineering institutions and membership growth.

### Industrial and academic engagement

Engagement activities to support the development of chemical engineers in the workplace continued through working with employers on corporate partner programmes and Accredited Company Training Schemes (ACTS).

Strengthening the links with corporate partners, IChemE's President undertook a programme of industrial visits in November, meeting senior representatives and members in organisations including United Utilities, Syngenta, Astra Zeneca and Costain.

The President officially opened new state of the art facilities at the University of Southampton in November. The new facilities demonstrate the University's strong commitment to the profession and include a new teaching laboratory, a virtual control room and computing, design and study spaces. These resources will enable study to support the needs of society with greater emphasis on sustainability, ethics and diversity.

Engagement with universities continued with 40 presentations carried out during the year with the aim of exploring career and membership pathways with students. Some of these presentations remained virtual but more physical presentations took place than in the previous two years with the removal of restrictions related to the pandemic.

### Volunteering at IChemE

Volunteering represents the foundations that IChemE has been built on during its first one hundred years. To support and recognise volunteers going forward, there was an increased focus on volunteer engagement during the year.

Over 3,000 volunteers shared their expertise and contributed to the achievements of the Institution in a wide range of roles, from professional reviewer to mentor, member group treasurer to net zero working group member.

Working with an independent external agency, IChemE commissioned a piece of research to explore volunteering and understand how the many volunteers who play a critical role in the running of the Institution felt about their experience. This was the first time that comprehensive feedback has been sought from the full complement of volunteers, with 453 volunteers taking part in the research.

Undertaken in collaboration with the Volunteer Engagement Committee, the project was instigated to fully understand the needs of volunteers with the aim of improving the volunteer experience and engagement across the Institution. The research findings led to a series of recommendations which were formulated into a programme of work which began towards the end of the year.

During the year, the volunteering team responded to 265 expressions of interest in volunteering roles with all new volunteer opportunities continuing to be advertised on the volunteer area of the IChemE website.

In June 2022, IChemE established a volunteer engagement function within the organisation to provide ongoing staff resource and expertise, ensuring consistency of good practice and to drive forward the programme of work that was developed following the research recommendations.

The Institution celebrated the UN International Volunteer Day in December with the launch of a video celebrating the contribution of volunteers across IChemE. Demonstrating the span of roles and opportunities within volunteering, a range of volunteers took part including a mentor, a member of the Australian Board, the chair of the Covid-19 Response Team, a member of the Sustainability Hub's Technical Advisory Group and a professional reviewer trainer.

### ***Aim 4: Known as a high-performing organisation delivering significant value***

IChemE continued its activities to strengthen the Institution's governance and operational model.

The Institution has continued to extend the scope of the ISO:9001 quality management system with the HR, Governance, Membership, Qualifications, Learned Society Knowledge and Finance departments coming on board in 2022. Documenting these additional quality management systems provides the framework for continuous improvement to meet the needs and expectations of members and interested parties. IChemE remains committed to the ISO9001:2015 standard aiming to gain certification across the organisation in 2023.

During 2022, IChemE commenced and delivered a new digital logged-in area for members and non-members to pay subscriptions, update contact details and join a member group. This exciting new platform is part of the Institution's commitment to improving the digital experience which will continue in 2023.

As part of a series of subscription-related improvements that have taken place since 2017, a revised approach to international rate allocation came into effect in 2022 with IChemE now recognising three subscription tiers based on World Bank data. The new subscription model ensures an equitable approach to membership subscriptions wherever our members reside.

Staff continue to work in a hybrid pattern. Staff wellbeing remained a priority with resources shared and campaigns rolled out to all staff. This included a campaign where the trained mental health first aiders shared their own stories with staff via an internal blog series. A series of internal engagement campaigns were instigated throughout the year including 'Walking the Centenary' to encourage physical activity. A new internal newsletter, 'The Update' was launched to communicate key updates to staff with research showing good engagement levels with the newsletter and the Intranet.

Sharing knowledge via the Institution's social media platforms, including LinkedIn, Twitter, Facebook and Instagram, led to IChemE's posts being seen over 3.1 million times as well as nearly 70,000 views of YouTube video content and nearly 80,000 views of the blogsite. The Institution also took part in World Engineering Day which was introduced to celebrate the contribution of the world's engineers for a better, sustainable world, with IChemE-produced videos being aired as part of the 24-hour live broadcast.

David Bogle was inaugurated as the 81st President of the Institution, delivering his Presidential Address from Savoy Place, London, UK, only 100 metres from the site where IChemE's first meeting took place 100 years ago. An audience of around 100 members, trustees and invited guests were physically present with many more watching the Address live online. Entitled Chemical Engineering: An Ethical Profession the Address focused on the need to ensure that ethical thinking is placed at the forefront of chemical engineering professionalism and education, as safety and sustainability have been in recent years. Bogle commented that safety and sustainability are parts of the ethical code that chemical engineers must all aspire to and for which the next generation must be trained.

Jon Prichard, Chief Executive, stepped down from his role in September to take up a new appointment at another organisation. On announcing his departure, Mr Prichard thanked all members, volunteers, staff and his peers for their continual support in advancing the contribution of chemical engineering. Jo Downham, Director, Finance and Business Support, was appointed Interim Chief Executive whilst the Institution recruited a successor. Yvonne Baker, a Chartered Chemical Engineer and Chief Executive of STEM Learning was appointed as IChemE's new Chief Executive Officer and will take up the post from April 2023.

### ***ChemEng Evolution: IChemE at 100***

2022 marked IChemE's centenary as the inaugural meeting of the Institution was held at the Hotel Cecil in London on 2 May 1922. From that first meeting, where approximately 100 chemical engineers attended, to the vibrant membership body which achieved an extensive global reach by the time of the centenary, IChemE has been advancing chemical engineering's contribution for 100 years.

Ahead of the centenary, a committed group of member volunteers worked to determine the most effective way to mark this milestone under the banner of 'ChemEng Evolution'. This name was given to the celebrations to celebrate chemical engineering achievements of the past whilst recognising the importance of permanently evolving to continue to contribute to global grand challenges in the future.

Nine themes were examined throughout the year, selected to highlight the enormous contribution that chemical engineering has made to society over the last century, and will continue to do so over the next 100 years. Thousands of members got involved by submitting thought-provoking articles, joining in with discussions in a programme of webinars, attending volunteer events, engaging with the centenary blog series and following #ChemEngEvolution on social media.

A dedicated centenary website was developed hosting a vast collection of articles written by members on topics that ranged from 'COVID-19, an impact on the whole world' to 'Message in a plastic bottle – the search for sustainability'. Another section of the website detailed the chemical engineers who inspired IChemE's Past Presidents. These range from Margaret Hutchinson Rousseau as nominated by Past President Julia Higgins to Trevor Kletz as nominated by Past President Ken Rivers. The website can be found at [www.chemengevolution.org](http://www.chemengevolution.org).

The Learned Society Committee (LSC) is now taking forward the legacy of the ChemEng Evolution project to inform IChemE's future strategy. In particular, the LSC is using the ChemEng Evolution themes to inform how IChemE's activities and engagement can be reconfigured around chemical engineers' contribution to society using the framework of the United Nations Sustainable Development Goals.

## **Plans for the future**

The key activities to deliver against each of the strategic aims are set out as follows:

### ***Aim 1: Respected for professionalism and technical competence***

We will promote professional and technical competence by:

- accrediting educational programmes
- maintaining relevant qualifications
- assessing and promoting member competence
- supporting ongoing skills development

### ***Aim 2: Recognised as a vibrant learned society that materially impacts on the Global Grand Challenges***

We will advance Chemical Engineering by:

- developing an authoritative voice
- promoting innovation
- developing technical guidance and standards
- promoting good practice

### ***Aim 3: Acknowledged as an Institution of choice in which an engaged membership receives and adds value***

We will improve understanding and engagement by:

- promoting chemical engineering's contribution to society
- educating future generations
- promoting diversity and inclusion
- encouraging collaboration
- securing member engagement

### ***Aim 4: Known as a high-performing organisation delivering significant value***

We will enhance capability and performance by:

- embracing digitalisation
- optimising governance structures
- maintaining financial security
- developing organisational capability

## Financial Review

The financial statements for the year ended 31 December 2022 are set out on pages 24 to 43.

The charity only financial results incorporate the results of the UK and its branch in Australia.

The consolidated financial statements also include the results of the Institution's UK trading subsidiary, IChemE Ltd, and the charitable activities of the Institution's subsidiaries in Malaysia, New Zealand and Singapore.

### Unrestricted funds

Total group income for the year was £8,642,000 (2021: £7,886,000). The principal sources of income were:

- Membership subscription and accreditation fees totalling £4,098,000 (2021: £3,904,000).
- Within the Learned Society activity, training courses generated income of £1,943,000 (2021: £1,421,000). Income from training course activity had been significantly impacted by the pandemic in 2020 but by the end of 2022 had returned to pre-covid levels.
- Income from journals and publications was £1,369,000 (2021: £1,585,000). The income for 2021 included a one-off signing bonus of £350,000 secured as part of the renewal of the journals publishing contract with Elsevier. A further £597,000 (2021: £207,000) was received from conferences, seminars and events which returned to face to face events in 2022 generating a higher level of delegate and sponsorship income.
- Income from the Institution's knowledge communities, which includes company subscriptions to the IChemE Safety Centre and Special Interest Group activity was £364,000 (2021: £365,000). Other income, generated from collaboration with other entities, was £14,000 (2021: £7,000).
- No further income was received in 2022 from the Covid-19 government support schemes. In 2021, a total of £6,000 was claimed from the UK government's Coronavirus Job Retention Scheme and a further £110,000 was available from the local government support schemes for the staff and offices based in Australia, and Malaysia. The total funding of £116,000 for 2021 is shown as income on the Statement of Financial Activities under the heading 'exceptional government funding'.
- The income of the Institution's trading subsidiary IChemE Ltd, which is generated mainly through the sale of advertising space in the Institution's magazine, was £193,000 (2021: £190,000).
- There were no donations or legacies received or notified to the Institution in 2022. In 2021, a final payment of £26,000 was received from a legacy originally notified to the Institution in December 2017.
- Dividends and interest on the Institution's investment portfolio was £64,000 (2021: £65,000).

Total group expenditure for the year was £8,201,000 (2021: £7,273,000).

During 2022, following two years of the pandemic, there was a return of face to face training, events and stakeholder engagement which led to an increase in costs. However, IChemE continued to take advantage of the benefits realised during the previous two years by continuing to hold the majority of Trustee and Committee meetings virtually. All training courses and technical seminars also continued online which not only have a lower cost base but provide opportunities for increased inclusivity and a more equitable level of service to members, customers, and beneficiaries globally.

Total group expenditure for the year also includes the costs related to the IT Transformation Programme of £738,000 (2021: £335,000) of which £500,000 (2021: £335,000) was funded from designated funds. Details of the designated funds are set out in note 16 to the financial statements.

Overall net income before gains on investments funds, was £441,000 (2021: £613,000). Losses on investments for the year were £367,000 (2021: gains £576,000) resulting in an overall net income of £74,000 (2021: £1,189,000).

After the other recognised gains or losses; actuarial gain on the defined benefit pension scheme of £1,366,000 (2021: £1,191,000); as well as exchange gains on the retranslation of the balance sheets of the foreign branches and subsidiaries of £114,000 (2021: losses £110,000), the unrestricted fund balance at year end increased by £1,554,000 (2021: £2,270,000) to £4,810,000 (2021: £3,256,000).

The Institution's wholly owned trading subsidiary, IChemE Ltd, achieved an operating profit of £122,000 (2021: £125,000), which has been gift aided to the Institution. The results of the UK trading subsidiary and of the subsidiary undertakings in Malaysia, New Zealand and Singapore are set out in note 2 to the financial statements.

### ***Restricted funds***

Restricted funds are income funds that can only be used for specific purposes which have been specified by the donor, or by the terms applied to an appeal for funds.

The net expenditure on restricted funds for 2022 was £245,000 (2021: net income £75,000).

The total restricted fund balance at year end was £1,069,000 (2021: £1,314,000).

The movement in restricted income funds is set out in note 15 to the financial statements.

### ***Investment policy and powers***

Investments are held in accordance with the By-laws of the Institution. The Trustees have the power to invest all monies not immediately required for operational activities as it sees fit and to appoint advisers to make such investments on its behalf.

IChemE continues to use the services of an independent financial advisor to review and monitor the investment portfolio. The performance of the funds and ongoing investment strategy is formally reviewed by the Finance & HR Committee throughout the year.

The investment policy adopted by the Trustees is to achieve a target return of CPI + 3% over a 5-year rolling basis and over a rolling 3-year period to achieve a minimum return of CPI. The Institution's investment objective remains to achieve long term capital growth with income.

The investment portfolio is split between Rathbones Investment Management Limited and Ruffer LLP. Both organisations are working to this investment policy and apply their individual judgement for asset allocation and investment selection to achieve the investment objective.

The Trustees have considered their approach to ESG (Environmental, Social and Governance) within the investment strategy. The approach currently taken is not to specifically exclude any assets or investments, or to hold dedicated ESG investment funds. Both Rathbones and Ruffer consider ESG factors when evaluating investments and have their own ESG scoring mechanism for companies included within the investment portfolio. They work to improve ESG within those companies through active engagement and influence.

During the year, the investment funds received £64,000 (2021: £65,000) in interest and dividends, and incurred management fees of £66,000 (2021: £64,000). The funds generated unrealised losses of £367,000 (2021: £576,000). The total return for the year, taking into account all income, management fees and market value movements, was a decrease of 5.4% (2021: increase of 9.5%).

No disinvestments were made from the funds in 2022 (2021: £nil). All income received during the year has been re-invested.

The Institution's investments are recorded at market value. The market value of the investment portfolio at 31 December 2022 was £6,319,000 (2021: £6,678,000). The gains and losses on revaluation have been recognised in the Statement of Financial Activities.

### ***Reserves policy***

The Finance and HR Committee reviews the Institution's reserves policy and level of reserves held on an annual basis. The Committee considers all relevant information including the three-year budget and business plan, the strategic plan and the risks identified in the risk register.

The current reserves policy adopted by the Trustees is to hold free reserves equivalent to the level of committed costs plus a margin of 10%. This level of reserves is considered appropriate to demonstrate appropriate financial management of the Institution and to ensure the financial stability of the Institution in periods where there is a short to medium term shortfall in operating income. For 2022, the level of reserves required to meet this policy was £3,700,000.

The level of unrestricted reserves freely available at the year-end was £6,734,000 (2021: £6,559,000).

The current level of reserves held is in excess of the policy. The Trustees are comfortable holding excess reserves due to:

- the investment required to meet the next Strategy, some of which will require funding from reserves;
- the potential decline in the market value of the investment funds due to uncertainty in the investment market;
- to protect the Institution against fluctuating income levels;
- the defined benefit pension scheme liabilities could increase further with future years' triennial valuations.

Unrestricted free reserves exclude the designated fund of £350,000 (2021: £500,000), fixed asset reserves of £647,000 (2021: £721,000) and are stated before taking account of the pension-funding deficit of £2,921,000 (2021: £4,524,000) calculated under FRS 102. Due to the extremely long-term nature of the pension reserve, the unrestricted reserves freely available are considered a more appropriate measure.

Recognising the long-term nature of the liability, the Trustees are fully committed to the continuing support of the Defined Benefit Pension Scheme and working closely with the Pension Scheme Trustees when considering the triennial valuation results and in setting any recovery plan to eliminate the deficit in the Scheme. The contributions paid into the Scheme are included in the Institution's annual budgeting process to ensure, where possible, they are covered from operational activity rather than drawn down from reserves. The Trustees also work closely with the Pension Scheme Trustees to look at ways that the Scheme could be de-risked further, having already been closed to new members and future accruals and having utilised a Liability Driven Investment structure.

Further information on the Defined Benefit Pension Scheme can be found in note 21 to the financial statements.

The total funds held at year end, after taking into account the pension-funding deficit, amounted to £5,879,000 (2021: £4,570,000). The total fund balance includes restricted funds of £1,069,000 (2021: £1,314,000).

The Trustees have considered the level of reserves held at year end and believe they are sufficient to protect IChemE from serious disruption to its work.

## **Structure, Governance and Management**

### ***Governing Document***

The Institution of Chemical Engineers was founded in 1922 and incorporated by Royal Charter in 1957.

The governing documents under which the Institution operates comprise the Royal Charter, as amended, the By-laws of the Institution, and Regulations made from time to time by the Board of Trustees, which is the Institution's governing body.

The Institution is a registered charity in England & Wales and a charity registered in Scotland.

### ***Appointment of Trustees***

The Trustees are elected in accordance with the Royal Charter and By-laws and the Board comprises the following roles:

- President
- Deputy President
- Immediate Past President
- Honorary Treasurer
- three Vice-Presidents
- three ordinary members
- two regional members

The Honorary Officers, consisting of the President, Deputy President, Immediate Past President and Honorary Treasurer, are elected annually. Those eligible for election as President shall be the Deputy President or, if in the opinion of the Board of Trustees special circumstances exist, a Fellow. The person eligible as Immediate Past President shall be the retiring President. Those eligible for Honorary Treasurer shall be as determined by the Nominations Committee.

The Vice-Presidents, ordinary members and regional members of the Board shall be elected for a term not exceeding three years nor less than one year.

### ***Trustee induction and training***

All new Trustees receive an induction pack including the By-laws and Regulations of the Institution, recent minutes of meetings, and the relevant Charity Commission publications outlining their roles and responsibilities as a Charity Trustee. An online induction programme takes place annually for all new Trustees, also available for existing Trustees, to get an oversight of the structure of the Institution and its activities.

Trustees have a legal duty to avoid conflicts of interest so that they can focus exclusively on the best interests of the Institution. The Institution maintains a register of interests, which is updated annually or when any changes are reported by Trustees. Procedures are in place for managing conflicts of interest that may arise during Trustee meetings.

### ***Institution structure***

The Board of Trustees is the governing body of the Institution and has ultimate responsibility for providing strategic direction and for ensuring that the charitable objects set out in the governing document are met. The Board of Trustees meets formally at least five times a year to review performance against these objects.

Congress is the representative advisory body serving as a link between the Institution's members and the Board of Trustees. Congress consists of up to forty members, all members of the Institution, who are nominated and elected by their peers from a functional or geographical college. The functional college consists of up to 15 representatives to broadly reflect the Institution's membership across the various grades. The regional college consists of up to 25 representatives to reflect the geographical footprint of the Institution's membership. Congress members are elected for a term of three years, renewable up to a maximum term of six years.

The Congress Steering Group is responsible for the oversight and facilitation of the conduct of Congress and the engagement of Congress members. The Steering Group consists of the Congress Chair, Vice-Chair, the Chief Executive and a designated Trustee lead.

Congress holds up to six sessions a year, which are held as online open forums each lasting up to thirty days. The agenda for the sessions is determined by the Chair of Congress in consultation with the Congress Steering Group.

The Chief Executive is appointed by the Board of Trustees and has delegated authority for the day-to-day operation of the Institution, its branches and subsidiary undertakings. The Chief Executive is supported by the Senior Management Team.



The Board of Trustees are the registered Trustees of IChemE's branch in Australia, which is registered with the Australian Charities and Not-for-profits Commission. The branch has a National Board to advise the Trustees on how IChemE's strategy can be delivered locally.

The Institution's operations in Malaysia, New Zealand and Singapore, each have their own National Boards operating under delegated authority from the Board of Trustees and in compliance with local regulatory requirements.

The Institution has a wholly owned trading subsidiary in the UK, IChemE Ltd, established to operate the sale of advertising space in the Institution's journals and publications. The company gift aids its taxable profits to the Institution.

In addition to Congress and the local National Boards, there are a number of standing Committees operating under delegated authority from the Board of Trustees which have been established to facilitate the operation of the charity. These consist of:

- Qualifications Committee
- Learned Society Committee
- Member Engagement Committee
- Governance Panel
- Finance & HR Committee
- Audit and Risk Committee
- Succession Planning Committee
- Nominations Committee
- Professional Conduct Pool
- Commercial Panel

The Terms of Reference, which include the delegated powers and membership of these Boards, Committees and Panels are set by the Board of Trustees and reviewed regularly.

The Institution also has an extensive network of National, Regional and Special Interest Groups enabling members to get involved in the Institution's activities. Each group has its own committee, made up of members of the Institution, who meet regularly throughout the year. The activities conducted by the Groups include technical meetings, continuing professional development, school liaison visits, and networking events.

Staff participation is encouraged at all levels in the making of decisions which affect the Institution's management and future development. Formal meetings are held to update all staff on the Institution's activities and other emerging issues.

### ***Volunteers***

All Trustees and the various members of boards, committees and panels give their time on a voluntary basis. The voluntary effort and contribution on the part of the members is at the heart of the Institution's success.

### ***Fundraising***

The Institution does not actively undertake any fundraising activities from the general public or use the services of professional fundraisers or commercial participators.

The Institution is not bound by any regulatory scheme and is not subject to any voluntary code of practice regulating fundraising.

No complaints have been received by the Institution in relation to fundraising activities.

### ***Remuneration policy for key management personnel***

The Institution considers its key management personnel to comprise the Board of Trustees, the Chief Executive and the Senior Management Team. All Trustees give their time freely and no Trustee received remuneration in the year. Details of Trustees' expenses and related party transactions can be found in notes 8 and 17 to the accounts.

The pay of the Chief Executive and Senior Management Team is set by the Finance & HR Committee in line with the Institution's Remuneration Policy.

The Institution is committed to ensuring that it pays its staff fairly and in a way which ensures it attracts and retains appropriately qualified staff to lead, manage, support and deliver the Institution's charitable objects.

The objective of the Policy is to ensure that the Chief Executive and staff team are provided with appropriate incentives to encourage enhanced performance and are, in a fair and responsible manner, rewarded for their individual contributions to the success of the Institution.

The Committee secure professional advice where appropriate to establish appropriate benchmark levels for each position or group of positions. These benchmark rates are reviewed regularly. When inflation is relatively low this review may not be annual and so an interim inflationary adjustment to the benchmark salary level may be made.

The Institution does not employ interns without pay and it complies with the living wage for all staff.

In addition to financial remuneration, the Institution seeks to provide staff with a supportive working environment and wherever possible works to promote the wellbeing of staff and satisfactory work-life balance.

The appropriateness and relevance of the Remuneration Policy is reviewed annually by the Committee.

### ***Risk management***

The Trustees are responsible for overseeing risk management across the organisation and for maintaining a sound system of internal control that supports the achievement of its strategic aims and objectives. The Audit & Risk Committee is responsible for assessing the effectiveness of risk management and internal controls across the organisation, and for reviewing the Institution’s risk policy on an annual basis.

A strategic and operational risk register is maintained by the Senior Management Team and is formally reviewed on a quarterly basis. A change risk register is overseen by the Future Institution Transformation (FIT) Board. The risk registers capture the types of risk internally and externally, prioritises them in terms of potential impact, likelihood and reputational impact, and identifies means of mitigating those risks or minimising the impact on the Institution should those risks materialise. Both the senior executive team and the FIT Board regularly review the classification of the risks and the effectiveness of the control measures. The Audit & Risk Committee regularly review the risk registers, concentrating on the significant strategic risks and their control measures.

The business planning and budgeting cycle is used to set objectives for the following three years, agree action plans, allocate resources, and to identify new risks or changes in existing risks or their control measures. Progress towards meeting the objectives and annual budget is monitored on a monthly basis by the Senior Management Team.

The Trustees receive an annual report from the Audit & Risk Committee highlighting the top strategic and operational risks. Key changes in risk items will also be reported to the Trustees as required.

The highest rated strategic risks in 2022 which could impact the delivery of the strategy are listed below.

Risk	Control and Mitigation Measures
Insufficient volunteers to deliver our objects	Develop and deliver a cohesive and coherent approach to Volunteer Engagement and Volunteer Management; identify all volunteering roles, put in place process for succession planning, advertise all volunteering opportunities and put in place a mechanism to recognise our volunteers.
Membership lacks diversity and growth	Run a full calendar of marketing communication activities to help existing members progress through a range of membership grades and to recruit new members. Increased focus on diversity through our volunteer engagement programme and the development of a formalised ED&I positioning statement.
Governance structures do not provide leadership and decision making	Governance Panel established in 2020 to continuously review and update governing documents and committee structure. Review of Scheme of Delegation in 2023. Establish consistent model for project governance that conforms to best practice.
IChemE staff, members, volunteers do not support transformation	Keep key Stakeholders informed and engaged with the rationale for the need for change and the agreed priorities.
IChemE outputs or benefits are not valued by individuals and/or organisations	Run regular membership engagement survey, including benchmarking performance against other similar organisations. Review products and services to remain relevant to the breadth and width of members’ career stages. Develop better understanding of member engagement within our new CRM system.

<p>Uncontrolled change impacts resourcing and business plan priorities</p>	<p>Business Plan sets out a detailed prioritisation framework for all essential and secondary activities, and is split between Business as Usual and Change activity. New Change proposals are evaluated by the FIT (Future Institution Transformation) Governance Board and new Business as Usual activities are evaluated by the Senior Management Team.</p>
<p>Defined Benefit Pension Scheme becomes a disproportionate financial burden</p>	<p>Latest triennial valuation carried out in 2021 and revised Recovery Plan agreed. Maintain regular dialogue with Pension Scheme Trustees. Demonstrate strength of employer covenant. Seek independent actuarial advice where necessary.</p>
<p>Lose the ability to qualify members</p>	<p>Address any remaining weaknesses in existing processes as part of the enhancements to the Application System in 2023. Close relationships and engagement with the Regulators to ensure ongoing compliance is fully understood.</p>

The Trustees are satisfied that reasonable steps are being taken to limit the probability and the impact of risk.

## Statement of Trustees' responsibilities

The Trustees are responsible for preparing the trustees' annual report and the financial statements in accordance with applicable law and regulations.

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

In preparing those financial statements, the Trustees are required to:

- select suitable accounting policies and then applies them consistently.
- make judgements and estimates that are reasonable and prudent.
- prepare the financial statements on a going concern basis unless it is inappropriate to presume that the Institution will continue its activities.

The Trustees are responsible for keeping adequate accounting records that are sufficient to show and explain the charity's transactions and disclose with reasonable accuracy at any time the financial position of the charity and enable them to ensure that the financial statements comply with the Charities Act 2011, the Charities and Trustee Investment (Scotland) Act 2005 and regulations 6 and 8 of the Charities Accounts (Scotland) Regulations 2006. They are also responsible for safeguarding the assets of the charity and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Trustees are responsible for the maintenance and integrity of the corporate and financial information included on the charity's website.

Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Approved by the Board of Trustees on 21 April 2023 and signed on its behalf by:



**Prof ID Bogle**  
*President*



**Dr DW Edwards**  
*Honorary Treasurer*

Davis Building  
165-189 Railway Terrace  
Rugby  
CV21 3HQ

## **Independent Auditor's Report to the Trustees of the Institution of Chemical Engineers**

### ***Opinion***

We have audited the financial statements of the Institution of Chemical Engineers (the 'parent charity') and its subsidiaries (the 'group') for the year ended 31 December 2022 which comprise the Consolidated and Charity Statement of Financial Activities, the Group and Charity Balance Sheets, the Consolidated and Charity Cash Flow Statements and notes to the financial statements, including 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 group's and parent charity's affairs as at 31 December 2022 and of the group's and parent charity's incoming resources and application of resources for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Charities and Trustee Investment (Scotland) Act 2005, regulations 6 and 8 of the Charities Accounts (Scotland) Regulations 2006 (as amended) and the Charities Act 2011.

### ***Basis for opinion***

We have been appointed auditors under section 44(1)(c) of the Charities and Trustee Investment (Scotland) Act 2005 and under section 151 of the Charities Act 2011 and report in accordance with regulations made under those Acts.

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the group and parent 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 trustees' 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 group's or parent charity's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

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

### ***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 trustees are responsible for the other information contained within the Annual Report. Our opinion on the financial statements does not cover the other information and, we do not express any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the course of 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 this gives rise to a material misstatement in the financial statements themselves. 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 Accounts (Scotland) Regulations 2006 (as amended) and the Charities Act 2011 require us to report to you if, in our opinion:

- the information given in the financial statements is inconsistent in any material respect with the trustees' annual report; or
- proper and sufficient accounting records have not been kept by the parent charity; or
- the parent charity financial statements are not in agreement with the accounting records and returns; or
- we have not received all the information and explanations we require for our audit.

### ***Responsibilities of trustees***

As explained more fully in the statement of trustees' responsibilities set out on page 20 the trustees are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the trustees determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

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

### ***Auditor's responsibilities for the audit of the financial statements***

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

### ***The extent to which the audit was considered capable of detecting irregularities, including fraud***

Irregularities are instances of non-compliance with laws and regulations. The objectives of our audit are to obtain sufficient appropriate audit evidence regarding compliance with laws and regulations that have a direct effect on the determination of material amounts and disclosures in the financial statements, to perform audit procedures to help identify instances of non-compliance with other laws and regulations that may have a material effect on the financial statements, and to respond appropriately to identified or suspected non-compliance with laws and regulations identified during the audit.

In relation to fraud, the objectives of our audit are to identify and assess the risk 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 and to respond appropriately to fraud or suspected fraud identified during the audit.

However, it is the primary responsibility of management, with the oversight of those charged with governance, to ensure that the entity's operations are conducted in accordance with the provisions of laws and regulations and for the prevention and detection of fraud.

In identifying and assessing risks of material misstatement in respect of irregularities, including fraud, the audit engagement team:

- obtained an understanding of the nature of the sector, including the legal and regulatory frameworks that the group and parent charity operate in and how the group and parent charity are complying with the legal and regulatory frameworks;
- inquired of management, and those charged with governance, about their own identification and assessment of the risks of irregularities, including any known actual, suspected or alleged instances of fraud;
- discussed matters about non-compliance with laws and regulations and how fraud might occur including assessment of how and where the financial statements may be susceptible to fraud.

As a result of these procedures we consider the most significant laws and regulations that have a direct impact on the financial statements are FRS 102, Charities SORP (FRS102), Charities and Trustee Investment (Scotland) Act 2005, regulations 6 and 8 of the Charities Accounts (Scotland) Regulations 2006 (as amended), the Charities Act 2011, the parent charity's governing document and tax legislation.

We performed audit procedures to detect non-compliances which may have a material impact on the financial statements which included reviewing the financial statements including the Trustees' Report, remaining alert to new or unusual transactions which may not be in accordance with the governing documents, inspecting correspondence with local tax authorities and evaluating advice received from internal/external advisors.

The most significant laws and regulations that have an indirect impact on the financial statements are those in relation to General Data Protection Regulation (GDPR). We performed audit procedures to inquire of management and those charged with governance whether the group/charity is in compliance with these law and regulations and read minutes.

The audit engagement team identified the risks of management override of controls and income recognition as the areas where the financial statements were most susceptible to material misstatement due to fraud. Audit procedures performed included but were not limited to testing manual journal entries and other adjustments, evaluating the business rationale in relation to significant, unusual transactions and transactions entered into outside the normal course of business, challenging judgments and estimates and testing of income transactions around the period end.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at <http://www.frc.org.uk/auditorsresponsibilities>. This description forms part of our auditor's report.

### *Use of our report*

This report is made solely to the charity's trustees, as a body, in accordance with section 44(1)(c) of the Charities and Trustee Investment (Scotland) Act 2005, and regulation 10 of the Charities Accounts (Scotland) Regulations 2006 (as amended) and the Charities Act 2011. Our audit work has been undertaken so that we might state to the charity's trustees those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the charity and its trustees as a body, for our audit work, for this report, or for the opinions we have formed.

*RSM UK Audit LLP*

RSM UK Audit LLP

Statutory Auditor  
103 Colmore Row  
Birmingham  
B3 3AG

Date: 27 April 2023

RSM UK Audit LLP is eligible to act as an auditor in terms of section 1212 of the Companies Act 2006

## Consolidated statement of financial activities for the year ended 31 December 2022

	Notes	Unrestricted Funds £000	Restricted Funds £000	Total 2022 £000	Unrestricted Funds £000	Restricted Funds £000	Total 2021 £000
<b>INCOME</b>							
<b>Donations &amp; legacies</b>	3	-	-	-	26	250	276
<b>Charitable activities:</b>	4						
Qualifying Chemical Engineers		4,101	-	4,101	3,904	-	3,904
Operating a Learned Society for Chemical Engineers		4,284	20	4,304	3,585	20	3,605
Exceptional government funding		-	-	-	116	-	116
<b>Other trading activities:</b>							
Trading operations	2	193	-	193	190	-	190
<b>Investments</b>	5	64	-	64	65	-	65
<b>TOTAL INCOME</b>		<b>8,642</b>	<b>20</b>	<b>8,662</b>	<b>7,886</b>	<b>270</b>	<b>8,156</b>
<b>EXPENDITURE ON</b>							
<b>Raising funds:</b>							
Trading operations	2	(71)	-	(71)	(65)	-	(65)
Investment management costs		(66)	-	(66)	(64)	-	(64)
<b>Charitable activities:</b>	6						
Qualifying Chemical Engineers		(3,740)	-	(3,740)	(3,263)	-	(3,263)
Operating a Learned Society for Chemical Engineers		(4,324)	(265)	(4,589)	(3,881)	(195)	(4,076)
<b>TOTAL EXPENDITURE</b>		<b>(8,201)</b>	<b>(265)</b>	<b>(8,466)</b>	<b>(7,273)</b>	<b>(195)</b>	<b>(7,468)</b>
Net (losses) / gains on investments	11	(367)	-	(367)	576	-	576
<b>NET INCOME / (EXPENDITURE)</b>		<b>74</b>	<b>(245)</b>	<b>(171)</b>	<b>1,189</b>	<b>75</b>	<b>1,264</b>
<b>Transfer between funds:</b>	15	-	-	-	-	-	-
<b>Other recognised gains / (losses):</b>							
Actuarial gains on defined benefit pension schemes	21	1,366	-	1,366	1,191	-	1,191
Exchange gains / (losses) arising from retranslation of foreign branches & subsidiaries		114	-	114	(110)	-	(110)
<b>NET MOVEMENT IN FUNDS</b>		<b>1,554</b>	<b>(245)</b>	<b>1,309</b>	<b>2,270</b>	<b>75</b>	<b>2,345</b>
Fund balances brought forward at 1 January		3,256	1,314	4,570	986	1,239	2,225
<b>Fund balances carried forward at 31 December</b>		<b>4,810</b>	<b>1,069</b>	<b>5,879</b>	<b>3,256</b>	<b>1,314</b>	<b>4,570</b>

The results relate to the continuing activities of the Institution. The group has no recognised gains or losses other than the net movement in funds for the year.

The notes on pages 28 to 43 form part of these financial statements.



## Charity statement of financial activities for the year ended 31 December 2022

	Notes	Unrestricted Funds £000	Restricted Funds £000	Total 2022 £000	Unrestricted Funds £000	Restricted Funds £000	Total 2021 £000
<b>INCOME</b>							
Donations & legacies	3	-	-	-	26	250	276
Gift aid from subsidiary company	2	122	-	122	125	-	125
<b>Charitable activities:</b>	4						
Qualifying Chemical Engineers		4,100	-	4,100	3,903	-	3,903
Operating a Learned Society for Chemical Engineers		4,226	20	4,246	3,531	20	3,551
Exceptional government funding		-	-	-	116	-	116
Investments	5	64	-	64	65	-	65
<b>TOTAL INCOME</b>		<b>8,512</b>	<b>20</b>	<b>8,532</b>	<b>7,766</b>	<b>270</b>	<b>8,036</b>
<b>EXPENDITURE ON</b>							
<b>Raising funds:</b>							
Investment management costs		(66)	-	(66)	(63)	-	(63)
<b>Charitable activities:</b>	6						
Qualifying Chemical Engineers		(3,671)	-	(3,671)	(3,243)	-	(3,243)
Operating a Learned Society for Chemical Engineers		(4,267)	(265)	(4,532)	(3,802)	(195)	(3,997)
<b>TOTAL EXPENDITURE</b>		<b>(8,004)</b>	<b>(265)</b>	<b>(8,269)</b>	<b>(7,108)</b>	<b>(195)</b>	<b>(7,303)</b>
Net (losses) / gains on investments	11	(367)	-	(367)	576	-	576
<b>NET INCOME / (EXPENDITURE)</b>		<b>141</b>	<b>(245)</b>	<b>(104)</b>	<b>1,234</b>	<b>75</b>	<b>1,309</b>
<b>Transfer between funds:</b>	15	-	-	-	-	-	-
<b>Other recognised gains / (losses):</b>							
Actuarial gains on defined benefit pension schemes	21	1,366	-	1,366	1,191	-	1,191
Exchange gains / (losses) arising from retranslation of foreign branches & subsidiaries		108	-	108	(103)	-	(103)
<b>NET MOVEMENT IN FUNDS</b>		<b>1,615</b>	<b>(245)</b>	<b>1,370</b>	<b>2,322</b>	<b>75</b>	<b>2,397</b>
Fund balances brought forward at 1 January		3,091	1,314	4,405	769	1,239	2,008
<b>Fund balances carried forward at 31 December</b>		<b>4,706</b>	<b>1,069</b>	<b>5,775</b>	<b>3,091</b>	<b>1,314</b>	<b>4,405</b>

## Balance sheets at 31 December 2022

	<i>Note</i>	<b>2022</b>	<b>Group</b>	<b>2021</b>	<b>2022</b>	<b>Charity</b>	<b>2021</b>
		<b>£000</b>		<b>£000</b>	<b>£000</b>		<b>£000</b>
<b>Fixed assets</b>							
Tangible assets	10	647		721	647		721
Investments	11	6,319		6,678	6,319		6,678
		<u>6,966</u>		<u>7,399</u>	<u>6,966</u>		<u>7,399</u>
<b>Current assets</b>							
Debtors	12	1,201		873	1,397		892
Cash at bank and in hand		3,320		3,319	2,933		3,052
		<u>4,521</u>		<u>4,192</u>	<u>4,330</u>		<u>3,944</u>
<b>Creditors: Amounts falling due within one year</b>	13	<u>(2,687)</u>		<u>(2,497)</u>	<u>(2,600)</u>		<u>(2,414)</u>
<b>Net current assets</b>		<u>1,834</u>		<u>1,695</u>	<u>1,730</u>		<u>1,530</u>
		<u>8,800</u>		<u>9,094</u>	<u>8,696</u>		<u>8,929</u>
Pension scheme funding deficit	21	<u>(2,921)</u>		<u>(4,524)</u>	<u>(2,921)</u>		<u>(4,524)</u>
<b>Total net assets after pension deficit</b>		<u>5,879</u>		<u>4,570</u>	<u>5,775</u>		<u>4,405</u>
<b>Income Funds</b>							
<b>Unrestricted funds</b>							
General funds		7,381		7,280	7,277		7,115
Designated funds	16	350		500	350		500
Pension reserve	21	<u>(2,921)</u>		<u>(4,524)</u>	<u>(2,921)</u>		<u>(4,524)</u>
		<u>4,810</u>		<u>3,256</u>	<u>4,706</u>		<u>3,091</u>
<b>Restricted funds</b>	15	<u>1,069</u>		<u>1,314</u>	<u>1,069</u>		<u>1,314</u>
<b>Total funds</b>		<u>5,879</u>		<u>4,570</u>	<u>5,775</u>		<u>4,405</u>

These financial statements were approved by the Board of Trustees and authorised for issue on 21 April 2023.



**Prof ID Bogle**  
*President*



**Dr DW Edwards**  
*Honorary Treasurer*

## Consolidated cash flow statement for the year ended 31 December 2022

	<i>Note</i>	<b>2022</b> <b>£000</b>	2021 £000
<b>Cash flows from operating activities</b>	<i>19</i>	<b>(74)</b>	563
<b>Cash flows from investing activities:</b>			
Dividends and interest from investments	<i>5</i>	<b>64</b>	65
Purchase of fixed asset investments	<i>11</i>	<b>(64)</b>	(65)
Purchase of property, plant & equipment	<i>10</i>	<b>(3)</b>	-
<b>Net cash provided by / (used in) investing activities</b>		<b>(3)</b>	-
<b>Change in cash and cash equivalents in the reporting period</b>		<b>(77)</b>	563
<b>Cash and cash equivalents at the start of the reporting period</b>		<b>3,319</b>	2,819
<b>Change in cash and cash equivalents due to exchange rate movements</b>		<b>78</b>	(63)
<b>Cash and cash equivalents at the end of the reporting period</b>		<b>3,320</b>	3,319

## Charity cash flow statement for the year ended 31 December 2022

	<i>Note</i>	<b>2022</b> <b>£000</b>	2021 £000
<b>Cash flows from operating activities</b>	<i>19</i>	<b>(154)</b>	545
<b>Cash flows from investing activities:</b>			
Dividends and interest from investments	<i>5</i>	<b>64</b>	65
Purchase of fixed asset investments	<i>11</i>	<b>(64)</b>	(65)
Purchase of property, plant & equipment	<i>10</i>	<b>(3)</b>	-
<b>Net cash provided by / (used in) investing activities</b>		<b>(3)</b>	-
<b>Change in cash and cash equivalents in the reporting period</b>		<b>(157)</b>	545
<b>Cash and cash equivalents at the start of the reporting period</b>		<b>3,052</b>	2,521
<b>Change in cash and cash equivalents due to exchange rate movements</b>		<b>38</b>	(14)
<b>Cash and cash equivalents at the end of the reporting period</b>		<b>2,933</b>	3,052

# Notes forming part of the financial statements for the year ended 31 December 2022

## 1 Accounting policies

### *Basis of preparation*

The financial statements have been prepared in accordance with the Statement of Recommended Practice: Accounting and Reporting by Charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) – (Charities SORP (FRS 102)); and the Charities Act 2011, the Charities and Trustee Investment (Scotland) Act 2005 and regulations 6 and 8 of the Charities Accounts (Scotland) Regulations 2006.

The financial statements have been prepared under the historical cost convention with items recognised at cost or transaction value unless otherwise stated in the relevant note(s) to these accounts.

The financial statements are presented in Sterling (£) and are rounded to the nearest thousand pounds.

The Institution meets the definition of a public benefit entity as defined by FRS 102.

### *Preparation of the accounts on a going concern basis*

The Trustees have assessed whether the use of a going concern basis is appropriate when preparing these financial statements and have concluded that there are no material uncertainties about the Institution's ability to continue as a going concern, and that the Institution has sufficient cash reserves to continue to meet its liabilities as they fall due.

In arriving at this decision, the Trustees have taken into account: the group's financial performance during 2022; the budgets and cashflow predictions for the next three-year period; and the level of free reserves held at year-end.

The principal accounting policies adopted by the Institution are set out below:

### *Basis of consolidation*

The financial statements consolidate the financial statements of the UK and Australian branch, its wholly owned UK trading subsidiary IChemE Ltd and its not-for-profit subsidiaries IChemE in Malaysia, IChemE in New Zealand and IChemE in Singapore Ltd, by virtue of the control exercised by the charity. The results of the subsidiaries are consolidated on a line-by-line basis. The results of the subsidiaries are summarised in note 2 of the financial statements.

### *Income*

Income is recognised when the Institution has entitlement to the income, any performance conditions attached to the income have been met, it is probable that the income will be received, and the amount can be measured reliably.

Donations are recognised when the Institution has entitlement to the funds, it is probable that the income will be received, and the amount can be measured reliably. When donors specify that donations are to be used for a specific purpose, they will be included in income as a restricted fund when receivable.

Legacy gifts are recognised on a case-by-case basis following the granting of probate when the administrator of the estate has communicated in writing both the amount and settlement date. In the event that the gift is in the form of an asset other than cash or financial asset traded on a recognised stock exchange, recognition is subject to the value of the gift being reliably measurable with a degree of reasonable accuracy and the title to the asset having been transferred to the charity.

Subscriptions and events income are accounted for in the year to which they apply. Subscription income received during the year that relates to a subsequent financial accounting period is carried forward as a creditor in the balance sheet and shown as deferred income.

Interest and dividends on investments are accounted for when receivable.

### *Expenditure*

Liabilities are recognised as expenditure as soon as there is a legal and constructive obligation committing the Institution to the expenditure, it is probable that settlement will be required, and the amount of the obligation can be measured reliably.

## **1 Accounting policies (continued)**

All expenditure is included in the statement of financial activities on an accruals basis.

Expenditure is recorded net of value added tax unless irrecoverable.

All expenditure, including support costs, are allocated or apportioned to the applicable expenditure headings in the statement of financial activities.

### ***Allocation of support and governance costs***

Governance costs comprise all costs involving the public accountability of the charity and its compliance with regulation and good practice.

Governance and support costs relating to charitable activities have been apportioned on the basis of staff costs associated with each activity. The allocation of support and governance costs is analysed in note 7.

### ***Operating leases***

Operating lease rentals are charged to the statement of financial activities on a straight-line basis over the terms of the lease.

### ***Tangible fixed assets and depreciation***

Fixed assets are recorded at cost or valuation, net of depreciation and any provision for impairment. Expenditure on individual fixed assets costing over £2,500 is capitalised.

Depreciation is charged on a straight-line basis to write off the cost or valuation less the estimated residual value of assets over their estimated useful lives as at the following rates:

Freehold buildings	-	5%
Leasehold buildings	-	20%
Office equipment	-	15%
Computer software	-	33%

Freehold land is not depreciated.

Freehold property at Rugby was valued on the basis of open fair value for their existing use by Chartered Surveyors in 1999. Depreciation is charged on the building element of property at Rugby at the rate of 5% per annum.

### ***Investments***

Fixed asset investments are initially recorded at their transaction value and subsequently measured at their fair value as at the balance sheet date using the closing bid price. The statement of financial activities includes the net gains or losses arising on revaluation and disposals throughout the year.

Realised gains or losses on investments are calculated as the difference between the sales proceeds and their fair value at 31 December (or historical cost if purchased within the year). Unrealised gains or losses are derived from the movement in fair values during the year.

The Institution does not acquire put options, derivatives or other complex financial instruments.

### ***Fund accounting***

The Institution has different types of funds which require separate disclosure. These are as follows:

#### ▪ Restricted income funds

These are earmarked by the donor for specific purposes within the overall aims of the Institution. The income generated must be used in accordance with the specific purpose.

#### ▪ Unrestricted funds

Unrestricted funds comprise funds which are expendable at the discretion of the Board of Trustees in connection with the objects of the Institution. Designated funds comprise unrestricted funds that have been set aside by the Trustee for a particular purpose.

### ***Foreign exchange gains and losses***

Foreign currency transactions are translated into sterling at the rates ruling when they occurred. Foreign currency monetary assets and liabilities are translated at the rates ruling at the balance sheet dates. Any differences are taken through the statement of financial activities.

## **1 Accounting policies (continued)**

### ***Pension costs***

Employees of the charity are entitled to join a group personal pension plan. This is a defined contribution pension scheme with assets held in the names of the individual members. The charity contribution is restricted to the contributions disclosed in note 21. The costs of the defined contribution scheme are included within staff costs and are charged to the statement of financial activities in the year in which they become payable.

The charity also operates a defined benefit pension scheme. The scheme was closed to new members and future service accruals in 2006. The assets of the scheme are held separately from those of the Institution in an independently administered fund.

The difference between the fair value of the assets held in the defined benefit pension scheme and the scheme's liabilities measured on an actuarial basis using the projected unit method are recognised in the balance sheet as a pension asset or liability as appropriate. Changes in the defined pension scheme asset or liability arising from factors other than cash contribution by the Institution are charged to the Statement of Financial Activities in accordance with FRS 102.

### ***Provisions***

Provisions are recognised when the Institution has a present obligation, legal or constructive, as a result of a past event, it is probable that the Institution will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

### ***Financial instruments***

Financial assets, other than fixed asset investments, are initially measured at transaction price (including transaction costs) and subsequently held at cost, less any impairment.

Financial liabilities are classified according to the substance of the financial instrument's contractual obligations, rather than the financial instrument's legal form. Financial liabilities are initially measured at transaction price (including transaction costs) and subsequently held at amortised cost.

### ***Judgements in applying accounting policies and key sources of estimation uncertainty***

In preparing these financial statements, the Trustees are required to make judgements, estimates and assumptions about the carrying amounts of assets and liabilities. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from those estimates and underlying assumptions are continually reviewed.

The following are critical judgements that the Trustees have made in the process of applying the Institution's accounting policies:

- determining whether leases entered into by the group either as a lessor or a lessee are operating leases or finance leases. These decisions depend on an assessment of whether the risks and rewards of ownership have been transferred from the lessor to the lessee on a lease-by-lease basis.

Other key sources of estimation uncertainty:

- Tangible fixed assets (see note 10). Tangible fixed assets are depreciated over their useful lives taking into account residual values where appropriate. The actual lives of these assets are assessed annually and may vary depending on a number of factors. In assessing asset lives, factors such as life cycle and maintenance programmes are taken into account. Residual value assessments consider issues such as the remaining life of the asset and project disposal values.
- Trade debtors (see note 12). At each reporting date, trade debtors are assessed for recoverability. If there is any evidence of impairment, the carrying amount of the debtor is reduced to its recoverable amount. The impairment loss is recognised immediately in the income statement.
- Pensions costs (see note 21). The defined benefit pension scheme obligations are based on actuarial assumptions such as discount rate, the expected rate of return on scheme assets, and mortality rates, which are extensively detailed in note 21.

## 2 Results of subsidiaries

The summary financial performance and position of the subsidiaries is shown below:

	IChemE Ltd £000	IChemE in New Zealand £000	IChemE in Singapore Ltd £000	IChemE Malaysia Sdn Bhd £000	2022 Total £000	2021 Total £000
Income	193	20	-	38	251	284
Expenditure	(71)	(35)	-	(90)	(196)	(180)
<b>Net income / (expenditure)</b>	<b>122</b>	<b>(15)</b>	<b>-</b>	<b>(52)</b>	<b>55</b>	<b>104</b>
Amount gift aided to the Institution	(122)	-	-	-	(122)	(125)
<b>Retained in subsidiary</b>	<b>-</b>	<b>(15)</b>	<b>-</b>	<b>(52)</b>	<b>(67)</b>	<b>(21)</b>

### Balance sheets

	IChemE Ltd £000	IChemE in New Zealand £000	IChemE in Singapore Ltd £000	IChemE Malaysia Sdn Bhd £000	2022 Total £000	2021 Total £000
Fixed assets	-	-	-	-	-	-
Current assets	319	154	-	88	561	403
Current liabilities	(319)	(25)	-	(113)	(457)	(238)
<b>Net current assets</b>	<b>-</b>	<b>129</b>	<b>-</b>	<b>(25)</b>	<b>104</b>	<b>165</b>
<b>Total net assets</b>	<b>-</b>	<b>129</b>	<b>-</b>	<b>(25)</b>	<b>104</b>	<b>165</b>

IChemE Ltd (company number 2817128) is a company limited by shares, incorporated in the United Kingdom.  
 IChemE in New Zealand (society number 980425) is an incorporated society in New Zealand.  
 IChemE in Singapore Ltd (201523087E) is a company limited by guarantee in Singapore.  
 IChemE Malaysia Sdn Bhd (company number 1390908-U).

## 3 Income from donations and legacies

Group and Charity	2022 £000	2021 £000
Donations (restricted fund)	-	250
Legacies	-	26
	<b>-</b>	<b>276</b>

#### 4 Analysis of income from charitable activities

	Group		Charity	
	2022 £000	2021 £000	2022 £000	2021 £000
<b><i>Qualifying Chemical Engineers:</i></b>				
Membership subscription and accreditation fees	4,098	3,904	4,097	3,903
<b><i>Operating a Learned Society for Chemical Engineers:</i></b>				
Journals & publications	1,369	1,585	1,369	1,585
Knowledge communities	364	365	353	362
Conferences, seminars & events	597	207	595	201
Provision of training	1,943	1,421	1,898	1,376
Other income	14	7	14	7
Subscriptions to technical centres (restricted funds)	20	20	20	20
<b><i>Exceptional government funding:</i></b>				
Coronavirus Job Retention Scheme (UK)	-	6	-	6
Government wage subsidy schemes (non-UK)	-	110	-	110
	<b>8,405</b>	<b>7,625</b>	<b>8,346</b>	<b>7,570</b>

During 2021, the Institution was eligible to claim funding in the year from government support schemes in response to Covid-19. No Further income was received in 2022.

#### 5 Investment income

Group and Charity	2022 £000	2021 £000
Interest receivable	3	15
Dividends receivable	61	50
	<b>64</b>	<b>65</b>

#### 6 Analysis of expenditure on charitable activities

Group	Direct activity costs £000	Support costs £000	2022 Total £000	2021 Total £000
Qualifying Chemical Engineers	2,414	1,326	3,740	3,263
Operating a Learned Society for Chemical Engineers	3,291	1,298	4,589	4,076
	<b>5,705</b>	<b>2,624</b>	<b>8,329</b>	<b>7,339</b>

Expenditure on charitable activities was £8,329,000 (2021: £7,339,000) of which £8,099,000 was unrestricted (2021: £7,144,000) and £230,000 was restricted (2021: £195,000).

Charity	Direct activity costs £000	Support costs £000	2022 Total £000	2021 Total £000
Qualifying Chemical Engineers	2,376	1,295	3,671	3,243
Operating a Learned Society for Chemical Engineers	3,252	1,280	4,532	3,997
	<b>5,628</b>	<b>2,575</b>	<b>8,203</b>	<b>7,240</b>



## 6 Analysis of expenditure on charitable activities (continued)

Net income for the year is stated after charging / (crediting):

	Group		Charity	
	2022 £000	2021 £000	2022 £000	2021 £000
Depreciation	77	77	77	77
Operating leases:				
Plant and machinery	10	9	10	9
Land and buildings	74	75	60	61
Exchange rate differences	(53)	51	26	(18)
	<u>77</u>	<u>77</u>	<u>77</u>	<u>77</u>
	<u>10</u>	<u>9</u>	<u>10</u>	<u>9</u>
	<u>74</u>	<u>75</u>	<u>60</u>	<u>61</u>
	<u>(53)</u>	<u>51</u>	<u>26</u>	<u>(18)</u>

## 7 Analysis of governance and support costs

Included within expenditure on charitable activities are governance and support costs amounting to £2,624,000 (2021: £2,394,000). These are analysed as:

	Group		Charity	
	2022 £000	2021 £000	2022 £000	2021 £000
Staff costs	1,062	968	1,028	922
Finance	414	307	410	317
IT	476	522	474	534
Facilities & HR	523	521	512	502
Management & Governance	149	76	151	51
	<u>1,062</u>	<u>968</u>	<u>1,028</u>	<u>922</u>
	<u>414</u>	<u>307</u>	<u>410</u>	<u>317</u>
	<u>476</u>	<u>522</u>	<u>474</u>	<u>534</u>
	<u>523</u>	<u>521</u>	<u>512</u>	<u>502</u>
	<u>149</u>	<u>76</u>	<u>151</u>	<u>51</u>
	<u>2,624</u>	<u>2,394</u>	<u>2,575</u>	<u>2,326</u>

The governance and support costs have been apportioned across the charitable activities on the basis of staff time associated with each activity. The charge to each activity was as follows:

	Group		Charity	
	2022 £000	2021 £000	2022 £000	2021 £000
Qualifying Chemical Engineers	1,326	1,184	1,295	1,143
Operating a Learned Society for Chemical Engineers	1,298	1,210	1,280	1,183
	<u>1,326</u>	<u>1,184</u>	<u>1,295</u>	<u>1,143</u>
	<u>1,298</u>	<u>1,210</u>	<u>1,280</u>	<u>1,183</u>
	<u>2,624</u>	<u>2,394</u>	<u>2,575</u>	<u>2,326</u>

Analysis of governance costs:

	Group		Charity	
	2022 £000	2021 £000	2022 £000	2021 £000
External audit	41	36	35	31
General meeting costs	9	5	7	5
Legal & professional fees	27	22	26	13
Electoral services	3	3	3	3
	<u>41</u>	<u>36</u>	<u>35</u>	<u>31</u>
	<u>9</u>	<u>5</u>	<u>7</u>	<u>5</u>
	<u>27</u>	<u>22</u>	<u>26</u>	<u>13</u>
	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>
	<u>80</u>	<u>66</u>	<u>71</u>	<u>52</u>

## 8 Analysis of trustee remuneration and expenses

Group and Charity	2022 £000	2021 £000
Expenses paid to or on behalf of six (2021: nil) Trustees in respect of travel, subsistence, and accommodation costs	19	-

The Trustees give freely their time and expertise without any form of remuneration or other benefit in cash or kind (2021: £nil).

## 9 Analysis of staff costs and remuneration to key management personnel

The average monthly headcount for the group during the year was 94 (2021: 94) and for the charity during the year was 89 (2021: 89). The number of full-time equivalent persons employed by the group and charity during the year was as follows:

	Group		Charity	
	2022	2021	2022	2021
Qualifying Chemical Engineers	33	34	30	30
Operating a Learned Society for Chemical Engineers	33	34	33	33
Management and Administration	20	19	18	18
	<u>86</u>	<u>87</u>	<u>81</u>	<u>81</u>

The aggregate payroll costs of these persons were as follows:

	Group		Charity	
	2022 £000	2021 £000	2022 £000	2021 £000
Wages and salaries	3,408	3,293	3,350	3,234
Social security costs	327	285	326	284
Pension scheme contributions	300	282	295	276
Defined benefit pension scheme operating costs	81	79	81	79
Employee benefits	64	49	64	49
	<u>4,180</u>	<u>3,988</u>	<u>4,116</u>	<u>3,922</u>

During 2022, £nil (2021: £nil) was paid out as redundancy or termination payments.

The numbers of employees, including the Chief Executive, whose total employee benefits, excluding employer pension contributions, exceeded £60,000, fell within the following ranges:

	Group		Charity	
	2022	2021	2022	2021
£60,001 - £70,000	3	3	3	3
£70,001 - £80,000	1	1	1	1
£80,001 - £90,000	1	2	1	2
£90,001 - £100,000	2	-	2	-
£100,001 - £110,000	-	1	-	1
£110,001 - £120,000	1	-	1	-
£120,001 - £130,000	-	1	-	1
£150,001 - £160,000	1	-	1	-
£190,001 - £200,000	-	1	-	1

The number of employees who earned more than £60,000 for whom pension benefits are accruing under the defined contribution pension scheme is 8 (2021: 6). Contributions in respect of these employees amounted to £62,000 (2021: £46,000). The Institution considers its key management personnel to comprise the Board of Trustees, the Chief Executive, and the Senior Management Team. The total employment benefits of 6 (2021: 7) key management personnel staff, including employer pension contributions and employer's national insurance, were £749,000 (2021: £821,000).

## 10 Tangible fixed assets

Group	Freehold Property	Short leasehold property	Office equipment	Computers	Total
	£000	£000	£000	£000	£000
<b>Cost or valuation</b>					
At beginning of year	1,800	19	141	31	1,991
Additions	-	-	-	3	3
Disposals	-	(19)	-	(3)	(22)
At end of year	<b>1,800</b>	<b>-</b>	<b>141</b>	<b>31</b>	<b>1,972</b>
<b>Depreciation</b>					
At beginning of year	1,079	19	141	31	1,270
Charge for the year	76	-	-	1	77
Disposals	-	(19)	-	(3)	(22)
At end of year	<b>1,155</b>	<b>-</b>	<b>141</b>	<b>29</b>	<b>1,325</b>
<i>Net book value</i>					
<b>At 31 December 2022</b>	<b>645</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>647</b>
At 31 December 2021	721	-	-	-	721
<b>Charity</b>	<b>Freehold Property</b>	<b>Short leasehold property</b>	<b>Office equipment</b>	<b>Computers</b>	<b>Total</b>
	£000	£000	£000	£000	£000
<b>Cost or valuation</b>					
At beginning of year	1,800	19	141	31	1,991
Additions	-	-	-	3	3
Disposals	-	(19)	-	(3)	(22)
At end of year	<b>1,800</b>	<b>-</b>	<b>141</b>	<b>31</b>	<b>1,972</b>
<b>Depreciation</b>					
At beginning of year	1,079	19	141	31	1,270
Charge for the year	76	-	-	1	77
Disposals	-	(19)	-	(3)	(22)
At end of year	<b>1,155</b>	<b>-</b>	<b>141</b>	<b>29</b>	<b>1,325</b>
<i>Net book value</i>					
<b>At 31 December 2022</b>	<b>645</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>647</b>
At 31 December 2021	721	-	-	-	721

Freehold property at 31 December 2022 includes land at valuation of £280,000 (2021: £280,000) which is not depreciated.

## 11 Fixed asset investments

<b>Group and Charity</b>	<b>2022</b>	<b>2021</b>
	<b>£000</b>	<b>£000</b>
Fair value at 1 January	6,678	6,090
Acquisitions at cost	2,935	1,832
Proceeds of disposals	(2,927)	(1,820)
Net (losses) / gains on revaluation	(367)	576
	<hr/>	<hr/>
<b>Fair value at 31 December</b>	<b>6,319</b>	<b>6,678</b>
	<hr/>	<hr/>
<b>Historical cost at 31 December</b>	<b>3,739</b>	<b>3,731</b>
	<hr/>	<hr/>

All investments are carried at their fair value. An analysis of the fair value of the investments at 31 December 2022 is as follows:

<b>Group and Charity</b>	<b>2022</b>	<b>2021</b>
	<b>£000</b>	<b>£000</b>
Equities	2,639	4,048
Fixed Interest	1,828	1,336
Other	1,563	1,001
Cash	289	293
	<hr/>	<hr/>

### Investments in Subsidiaries

The Institution holds 2 shares of £1 each in its wholly owned trading subsidiary company IChemE Ltd which is incorporated in the United Kingdom. These are the only shares allotted, called up and fully paid.

IChemE in Singapore Limited, which is incorporated in Singapore, is a company limited by guarantee and is a wholly owned subsidiary of the Institution.

A new private limited company was established in Malaysia in October 2020, IChemE Malaysia Sdn Bhd. The Institution holds 100 shares of MYR 1 each in the wholly owned subsidiary.

The activities and results of these companies are summarised in note 2.

## 12 Debtors

	<b>Group</b>		<b>Charity</b>	
	<b>2022</b>	<b>2021</b>	<b>2022</b>	<b>2021</b>
	<b>£000</b>	<b>£000</b>	<b>£000</b>	<b>£000</b>
Trade debtors	367	256	263	200
Amount due from subsidiaries	-	-	351	141
Other debtors	8	1	4	1
Prepayments and accrued income	826	616	779	550
	<hr/>	<hr/>	<hr/>	<hr/>
	<b>1,201</b>	<b>873</b>	<b>1,397</b>	<b>892</b>
	<hr/>	<hr/>	<hr/>	<hr/>

### 13 Creditors: amounts falling due within one year

	Group		Charity	
	2022 £000	2021 £000	2022 £000	2021 £000
Trade creditors	384	465	367	461
Amounts due to subsidiaries	-	-	10	7
Other creditors	292	377	292	362
Taxation and social security	199	120	185	108
Accruals	412	230	392	210
Deferred income	1,400	1,305	1,354	1,266
	<u>2,687</u>	<u>2,497</u>	<u>2,600</u>	<u>2,414</u>

Deferred income relates to annual subscriptions payments and events income which have been paid to the Institution in advance. All deferred income is released to the statement of financial activities in the following year.

### 14 Commitments

Total future commitments under non-cancellable operating leases are as follows:

Group	2022		2021	
	Land and buildings £000	Other £000	Land and Buildings £000	Other £000
Amounts falling due:				
In less than one year	38	7	71	9
In the second to fifth years inclusive	-	1	34	8
Over five years	-	-	-	-
	<u>38</u>	<u>8</u>	<u>105</u>	<u>17</u>

  

Charity	2022		2021	
	Land and buildings £000	Other £000	Land and Buildings £000	Other £000
Amounts falling due:				
In less than one year	34	7	61	9
In the second to fifth years inclusive	-	1	34	8
Over five years	-	-	-	-
	<u>34</u>	<u>8</u>	<u>95</u>	<u>17</u>

A first charge of £500,000 was placed on the freehold premises at Rugby in favour of the Defined Benefit Pension Scheme in March 2017.

## 15 Analysis of movements in restricted funds

Group and Charity	International Process Safety Group (IPSG) £000	Medals & Awards (MM Sharma / SIESO) £000	John Collier Memorial Fund £000	Andrew Legacy Fund £000	Sustainability Hub £000	Total £000
At 1 January 2022	45	38	35	1,020	176	1,314
Income	20	-	-	-	-	20
Expenditure	(25)	(3)	(35)	(137)	(65)	(265)
Transfer between Funds	-	-	-	-	-	-
<b>At 31 December 2022</b>	<b>40</b>	<b>35</b>	<b>-</b>	<b>883</b>	<b>111</b>	<b>1,069</b>

The IPSG funds relates to an industry funded technical centre which is administered in accordance with its Statute.

The MM Sharma Medal was created following a donation of £13,000 from the JB Joshi Foundation in 2018. An award of £1,000 is made to the winner(s) of the medal for excellence in the field of chemical engineering. The donation will also be used to fund IChemE's administration expenses for the medal of up to £250 a year.

The SIESO Medal was launched in 2019 following a bequest of £29,500 from SIESO (a society that Shared Information and Experience for Safer Operation) which ceased operations in 2018. The medal seeks to raise awareness of process safety among science, business, and engineering students. It consists of an award of £750 and up to £250 in travel allowance to attend the presentation.

In 2020, it was agreed that the remaining balance in the John Collier Memorial Fund could be assigned to IChemE's centenary project and the Fund balance was spent accordingly in 2022.

The Andrew Legacy Fund seeks to hold a medal lecture on the theme of 'The Science of Formulation of Heterogeneous Catalysts' and to support academic research in enhancing the science of formulation of heterogeneous catalysts. The medal and lecture are normally awarded every three years. The Institution has also set up the Andrew Fellowship which funds up to two early career researchers a year to undertake research in the field of Heterogeneous Catalysts. The Fellowship consists of a stipend of £10,000 a year plus £5,000 a year in expenses for a period of up to four years. Additionally, in 2020 the Institution agreed to fund the 'Sydney Andrew PhD Scholarship in Multiscale Catalysis Research' run by the University of Bath. Funding for the Scholarship has been agreed at £25,300 a year for the period 2020-2024. In 2022, the Fund paid for up to 20 PhD, EngD or MSc students to attend the week-long summer school Catalysis: Fundamental and Practice about the fundamentals of heterogenous catalysis. The summer school is organised by, and held at, the University of Liverpool's Department of Chemistry every two years.

In March 2021, the Institution received a donation of £200,000 to be used for the development of sustainability knowledge for chemical engineers. A programme of work began in May 2021 to create the Sustainability Hub, with a vision to create and deliver a sustainability knowledge resource. The Sustainability Hub was formally launched in February 2022, and additional training and content was developed throughout the year. The donation and reclaimed gift-aid has been recognised in restricted funds.

## 16 Analysis of movements in unrestricted designated funds

Group and Charity	Future Institution Transformation Programme £000	Total £000
At 1 January 2022	500	500
Expenditure	(500)	(500)
Transfer between funds	350	350
<b>At 31 December 2022</b>	<b>350</b>	<b>350</b>

## 16 Analysis of movements in unrestricted designated funds (continued)

From 2019 onwards, IChemE has undertaken a significant amount of work in improving and modernising the Institution's IT services and platforms. The first stage of work, completed in 2021, addressed a number of risks by replacing all core operating systems with cloud based applications and moving any remaining systems off premise and into the cloud.

A second phase of work under the Future Institution Transformation Programme (FIT Phase 2) was subsequently planned for 2022 and 2023 to make further enhancements to the core operating systems in order to drive efficiency and continuous improvement. A sum of £500,000 was designated in December 2020 for this second phase of work, and at the Board of Trustees' meeting in January 2022 it was agreed to add a further £350,000 to the designated fund.

## 17 Related party transactions

During the year recharges have been made between the charity and its subsidiary undertakings. These relate to direct costs and staff costs incurred by one party on behalf of the other. The net amount recharged was:

	Net amount recharged from / (to) the charity in the year		Balance outstanding at year end included in debtors / (creditors) for the charity	
	2022 £000	2021 £000	2022 £000	2021 £000
IChemE Ltd	192	25	299	107
IChemE in Malaysia	-	(61)	-	-
IChemE in New Zealand	(11)	(9)	(33)	(22)
IChemE in Singapore Ltd	-	(13)	-	-
IChemE Malaysia Sdn Bhd	15	28	43	28
	<u>196</u>	<u>(30)</u>	<u>309</u>	<u>113</u>

IChemE Ltd gift aids its operating profit to the charity and the balance of £122,000 (2021: £125,000) is included in debtors for the charity at year end.

## 18 Analysis of group and charity net assets between funds

Fund balances at 31 December 2022 are represented by:

Group	Unrestricted funds £000	Restricted Funds £000	Total £000
Tangible fixed assets	647	-	647
Investments	6,319	-	6,319
Pension scheme funding deficit	(2,921)	-	(2,921)
Net current assets	765	1,069	1,834
	<u>4,810</u>	<u>1,069</u>	<u>5,879</u>
Total net assets	4,810	1,069	5,879
	<u>4,810</u>	<u>1,069</u>	<u>5,879</u>
Charity	Unrestricted funds £000	Restricted Funds £000	Total £000
Tangible fixed assets	647	-	647
Investments	6,319	-	6,319
Pension scheme funding deficit	(2,921)	-	(2,921)
Net current assets	661	1,069	1,730
	<u>4,706</u>	<u>1,069</u>	<u>5,775</u>
Total net assets	4,706	1,069	5,775
	<u>4,706</u>	<u>1,069</u>	<u>5,775</u>

## 19 Reconciliation of net movement in funds to net cash flow from operating activities

<b>Group</b>	<b>2022</b>	2021
	<b>£000</b>	£000
Net (expenditure) / income	<b>(171)</b>	1,264
<b>Adjustments for:</b>		
Depreciation on tangible fixed assets	77	77
Losses / (gains) on investments	367	(576)
Dividends and interest from investments	(64)	(65)
Investment management fees	56	53
Difference between pension charge and cash contribution	(237)	(204)
(Increase)/decrease in debtors	(328)	(207)
Increase/(decrease) in creditors	190	268
Exchange gains / (losses) arising from retranslation of foreign branches & subsidiaries	114	(110)
Change in cash and cash equivalents due to exchange rate movements	(78)	63
	<hr/>	<hr/>
<b>Net cash (used in) / provided by operating activities</b>	<b>(74)</b>	563
	<hr/> <hr/>	<hr/> <hr/>
 <b>Charity</b>	 <b>2022</b>	 2021
	<b>£000</b>	£000
Net (expenditure) / income	<b>(104)</b>	1,309
<b>Adjustments for:</b>		
Depreciation on tangible fixed assets	77	77
Losses / (gains) on investments	367	(576)
Dividends and interest from investments	(64)	(65)
Investment management fees	56	53
Difference between pension charge and cash contribution	(237)	(204)
(Increase)/decrease in debtors	(505)	(153)
Increase/(decrease) in creditors	186	193
Exchange gains / (losses) arising from retranslation of foreign branches & subsidiaries	108	(103)
Change in cash and cash equivalents due to exchange rate movements	(38)	14
	<hr/>	<hr/>
<b>Net cash (used in) / provided by operating activities</b>	<b>(154)</b>	545
	<hr/> <hr/>	<hr/> <hr/>

## 20 Analysis of changes in net debt

<b>Group</b>	<b>At start of year</b>	<b>Cash flows</b>	<b>Foreign exchange movements</b>	<b>At end of year</b>
	<b>£000</b>	<b>£000</b>	<b>£000</b>	<b>£000</b>
Cash	3,319	(77)	78	3,320
	<hr/>	<hr/>	<hr/>	<hr/>
<b>Total</b>	<b>3,319</b>	<b>(77)</b>	<b>78</b>	<b>3,320</b>
	<hr/> <hr/>	<hr/> <hr/>	<hr/> <hr/>	<hr/> <hr/>
 <b>Charity</b>	 <b>At start of year</b>	 <b>Cashflows</b>	 <b>Foreign exchange movements</b>	 <b>At end of year</b>
	<b>£000</b>	<b>£000</b>	<b>£000</b>	<b>£000</b>
Cash	3,052	(157)	38	2,933
	<hr/>	<hr/>	<hr/>	<hr/>
<b>Total</b>	<b>3,052</b>	<b>(157)</b>	<b>38</b>	<b>2,933</b>
	<hr/> <hr/>	<hr/> <hr/>	<hr/> <hr/>	<hr/> <hr/>



## 21 Pension scheme

### Defined contribution scheme

The Institution's Defined Contribution Pension Scheme for UK based staff was established in April 2006 following the closure of the Defined Benefit Scheme. The assets of the Scheme are held separately from those of the charity and from January 2021 were administered by The People's Partnership (formerly The People's Pension), provided by B&CE. The Institution pays one and a half times the percentage that the employee contributes up to a maximum of 12%. The total pension cost charge to the Institution, representing contributions payable to the fund amounted to £258,000 (2021: £235,000).

The total pension cost for the staff of the branch in Australia, which is paid under the superannuation scheme at 9.5% of base salary, was £36,000 (2021: £42,000).

Pension costs relating to the employees of the Institution's subsidiaries IChemE in Malaysia and IChemE in New Zealand amounted to £6,000 (2021: £6,000).

### Defined benefit scheme

The Institution operates a defined benefit pension arrangement called the Institution of Chemical Engineers Pension Scheme. The Scheme provides benefits based on salary and length of service on retirement, leaving service or death. In 2006, the Scheme was closed to new members, future service accruals and salary revaluations were limited with effect from 5 April 2006.

The scheme is funded with the assets being held by the pension scheme's trustees separately from the assets of the Institution.

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

The most recent triennial valuation of the Scheme as at 31 December 2020 was carried out during 2021. The results of that valuation showed that the deficit in the Scheme had increased from £4.89m to £5.26m. In order to address the deficit, a new Recovery Plan was agreed for the Institution to pay an annual contribution level of £320,000 a year, increasing in line with CPI, from 1 February 2022 to 31 July 2032.

The results of the valuation are updated by an independent qualified actuary on an annual basis allowing for cashflows in and out of the Scheme and for changes to assumptions over that period.

The Institution has also provided additional security to the Scheme by way of a charge of £500,000 on the freehold property in Rugby. The security agreement to put the charge in place was submitted to the Land Registry in March 2017.

Administrative and other expenses of the Scheme are payable separately by the Institution.

#### *The principal assumptions used to calculate Scheme liabilities include:*

	2022	2021
	%	%
Discount rate	4.70% pa	1.80% pa
Inflation (RPI)	3.40% pa	3.50% pa
Inflation (CPI)	3.00% pa	3.10% pa
Pension increase (LP15)	2.90% pa	3.00% pa
Post-retirement mortality	90% of 'S3NA' tables with CMI 2020 projections and a long-term rate of improvement of 1.25% pa. The initial addition is 0.25% p.a. and the 2020 weight parameter is 0%	90% of 'S3NA' tables with CMI 2020 projections and a long-term rate of improvement of 1.25% pa. The initial addition is 0.25% p.a. and the 2020 weight parameter is 0%
Commutation	All members are assumed to take 25% of their pension as tax-free cash	All members are assumed to take 25% of their pension as tax-free cash

## 21 Pension scheme (continued)

### *The major categories of assets are as follows:*

Asset category	2022 £000	2021 £000
Liability Driven Investment (LDI)	3,470	3,784
Multi-asset Funds	3,562	6,830
Cash	34	80
	<hr/>	<hr/>
Total	7,066	10,694
	<hr/> <hr/>	<hr/> <hr/>

The return on the Scheme's assets (net of investment manager expenses) over the period to the Review Date was approximately 2.6%.

### *Amounts recognised in the balance sheet:*

	2022 £000	2021 £000
Fair value of assets	7,066	10,694
Present value of funded obligations	(9,987)	(15,218)
	<hr/>	<hr/>
(Deficit) in scheme	(2,921)	(4,524)
	<hr/> <hr/>	<hr/> <hr/>

### *Amounts recognised in the statement of financial activities over the year:*

	2022 £000	2021 £000
Interest on liabilities	270	203
Interest on assets	(191)	(131)
	<hr/>	<hr/>
Total	79	72
	<hr/> <hr/>	<hr/> <hr/>

### *Remeasurements over the year:*

	2022 £000	2021 £000
Loss / (gain) on assets in excess of interest	3,643	(141)
Experience losses / (gains) on liabilities	459	(264)
Losses / (gains) from changes to demographic assumptions	-	53
(Gains) / losses from changes to financial assumptions	(5,468)	(839)
	<hr/>	<hr/>
Total	(1,366)	(1,191)
	<hr/> <hr/>	<hr/> <hr/>

## 21 Pension scheme (continued)

### *The change in the value of the assets over the period was:*

	<b>2022</b>	2021
	<b>£000</b>	£000
Fair value of assets at beginning of period	<b>10,694</b>	10,486
Interest on assets	<b>191</b>	131
Institution contributions	<b>316</b>	276
Benefits paid	<b>(492)</b>	(340)
Return on assets less interest	<b>(3,643)</b>	141
	<hr/>	<hr/>
Value of assets at end of period	<b>7,066</b>	10,694
	<hr/> <hr/>	<hr/> <hr/>

### *The change in the value of the defined benefit liabilities over the period was:*

	<b>2022</b>	2021
	<b>£000</b>	£000
Value of liabilities at beginning of the period	<b>15,218</b>	16,405
Past service cost	-	-
Interest on liabilities	<b>270</b>	203
Benefits paid	<b>(492)</b>	(340)
Experience loss / (gain) on liabilities	<b>459</b>	(264)
Changes to demographic assumptions	-	53
Changes to financial assumptions	<b>(5,468)</b>	(839)
	<hr/>	<hr/>
Value of liabilities at end of the period	<b>9,987</b>	15,218
	<hr/> <hr/>	<hr/> <hr/>

	<b>2022</b>	2021
	<b>£000</b>	£000
Actuarial gains / (losses)	<b>1,366</b>	1,191
	<hr/> <hr/>	<hr/> <hr/>

The annual contribution level for the period 1 February 2022 to 31 January 2023 will be increased by CPI inflation of 10.5% in line with the Recovery Plan from £320,000 to £353,600.

