

Institution of Chemical Engineers

Annual Report and Consolidated
Financial Statements
for the year ended 31 December 2021

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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 2021.

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, St Philips Point, Temple Row, Birmingham, B2 5AF

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 2021 – 14 June 2021

Prof SM Richardson
Ms LJ Cutler
Mr KJ Rivers
Mr IJ Martin
Mr AB Just
Prof J Glassey
Mr THL White
Prof PJ Ashman
Mrs JV Atkinson
Mrs MD Isles-Ahite
Eur Ing KC Plumb
Mr DM Sutton
Mrs WJ Wilson

From 14 June 2021

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

Chief Executive

Mr JL Prichard

Senior Management Team

Ms J Downham: Director, Finance & Business
Mrs C Flavell-While: Director, Learned Society
Mr A Foster: Director, Regions (from September 2021)
Ms P Kerin: Director, IChemE Safety Centre
Mr D Lloyd-Roach: Director, Qualifications
Mr P Slane: Director, Regions (to July 2021)

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

Overall, 2021 was a year in which IChemE concluded a number of long running business change programmes that will provide the foundations for future success. At a headline level, this included: simplifying and broadening of the qualifications processes thereby ensuring that the Institution can welcome into membership, chemical engineers working in fields beyond those traditionally associated with the profession; and implementing a number of technical solutions that update and upgrade the Institution's information systems. These changes, particularly those relating to technical solutions, will also underpin the Institution's ability to provide targeted and focused knowledge products and services to those who need them most, whether it is members engaged in reducing society's impact on the planet or those improving the health and well-being of the global population.

2021 also illustrated that remote working is here to stay with another year of covid restrictions necessitating virtual operations, further highlighting the importance of IChemE's investment in digital solutions which enabled both staff and members to engage efficiently and effectively with colleagues and peers. 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's focus remained on setting and upholding standards, while supporting professional and technical competence. 2021 saw the implementation of the three-stage membership application process for Chartered status which was introduced to offer flexible routes to professional qualification.

Stage 3: Professional Review was introduced in April 2021, with Stage 1: Educational Base and Stage 2: Initial Professional Development (IPD) following in September 2021. A phased roll-out of the new process caused the number of applications processed in the first half of the year to be lower than in 2020, however the number of applications processed in the second half of the year increased rapidly once the new process had been fully established. A new membership application portal was launched which enabled all grades of membership applications to be inputted into one system, providing a more efficient application process for members.

As part of the new membership application process, the Individual Case Procedure (ICP) route was introduced for Stage 1 to provide a flexible route to Chartered membership for those with a non-accredited degree in Chemical Engineering. A working group was set up and began developing an ICP route for Professional Process Safety Engineer (PPSE) status.

To support the new membership application process, the roles of volunteers required to peer-review applications have changed significantly. The previous roles of assessor and interviewer were combined into one Professional Reviewer role. More volunteers have been recruited as well as retraining offered for current volunteers.

Mentor training to support members through their application for Chartered membership was enhanced with 10 workshops delivered for new mentors and resources added to the website.

IChemE successfully undertook licence reviews with the Engineering Council, Science Council, Society for the Environment and the Energy Savings and Opportunity Scheme. These reviews are undertaken every five years and allow IChemE to continue to offer the professional registrations these regulators control.

The Institution continued to support universities and training providers by accrediting educational programmes and fostering and promoting good practice.

Eight university accreditation visits took place internationally, which, due to Covid-19 restrictions, had to be carried out virtually. The University of Greenwich, UK, and Queen Mary University of London, UK, achieved accreditation of their programmes for the first time. Two benchmarking visits were undertaken at Brunel University, UK, and Canterbury Christ Church University, UK.

Guidance for education providers seeking IChemE accreditation of chemical engineering programmes was updated in line with revised standards from the Engineering Council. Consultation on IChemE's updated guidance was undertaken widely and the final version was published in November 2021. New guidance for the Accreditation of MSc (or equivalent) Process Safety Programmes was also published in November 2021.

Senior leaders at IChemE and BOC gathered online to present the industrial, medical and special gases supplier with their Bronze Corporate Partner Award recognising the company's commitment to its chemical engineers' professional development.

As pledged in Strategy 2024, IChemE has continued to champion members' Continuing Professional Development (CPD) by providing and recognising learning opportunities. Members voted to amend By-law 39 in relation to CPD which granted the Board of Trustees the authority to remove those failing to comply with IChemE's CPD requirements from the Register of Members.

Members were supported with their CPD through the delivery of in-company, online and on-demand training courses. More than 70 live online training courses were delivered across different time zones to over 700 delegates. Over 40 in-company training courses were delivered to a diverse customer base including clients in the chemical, mining, utilities and construction sectors, as well as regulators and universities.

At the end of 2021, IChemE's headline membership figure exceeded 30,000 with 39% being professionally qualified.

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

To achieve IChemE's ambition to be a vibrant learned society that materially impacts on global challenges, a focus for 2021 was further embedding the Learned Society Committee's priority topics. Three priority topics were identified in 2020 to prioritise activity within the learned society: responsible production; major hazards management; and digitalisation.

Following the launch of IChemE's position on climate change in 2020, 2021 saw the creation of a working group responsible for directing and monitoring progress to ensure that the Institution delivers on the commitments contained within the statement. IChemE published eleven climate change action plans, which were produced by IChemE's regional and special interest groups demonstrating how IChemE and its members can contribute to the transition to a net zero world.

One of the commitments within IChemE's position on climate change was to develop plans which enable the Institution to achieve net zero carbon emissions from direct operations globally by 2025. A working group was formed to determine how to achieve this and the criteria for measurement.

To demonstrate how chemical engineers are addressing the climate challenge, IChemE launched a campaign to target delegates and policy makers at the 2021 United Nations Climate Change Conference of the Parties (more commonly known as COP26) in Glasgow, UK. Members and staff attended the conference and presented at sessions on climate engineering solutions, a just transition and national energy scenarios. *The Chemical Engineer* provided live updates from the conference and members shared their experiences in the social media video campaign 'I am a chemical engineer who is working to address climate change' with the #ChemEngatCOP26 campaign gaining 136,490 social media impressions.

At the start of the year, IChemE received a generous donation from former IChemE President, Ian Shott. The donation was made to help IChemE promote the role that every chemical engineer can play in delivering sustainable solutions to societal challenges as described in the UN Sustainable Development Goals (SDGs). The donation has been used to develop the IChemE Sustainability Hub which will provide free training modules for all members in 2022.

During the year IChemE produced, contributed to, or endorsed 11 policy reports. The *Designing infection-resilient environments* report was discussed by the Cabinet Office, Covid Task Force and the Department for Levelling Up, Housing and Communities in the UK, while the report *Decarbonising Construction* received widespread media coverage across the UK.

IChemE's UK policy work has continued to benefit from the Institution's active engagement with the National Engineering Policy Centre, which has established itself as a hub for developing and disseminating engineering policy advice by working collaboratively with a cross section of the 39 licenced professional engineering institutions in the UK.

Established to enable chemical engineers to inform the work of UK Members of Parliament (MPs) and policy makers, IChemE member Amber Keegan was awarded this year's Ashok Kumar Fellowship which, in partnership with the Materials Processing Institute, funds a three-month placement with the UK Parliamentary Office for Science and Technology, where she will contribute to an area of public policy.

2021 saw the creation of IChemE's first Communities of Practice (CoP) with interested members encouraged to join. The Energy CoP and Research & Innovation CoP both succeeded previously existing groups, namely the Energy Centre and several geographically focused research committees. The CoPs cover broad topic areas with the objective of producing outputs targeted at informing or influencing external audiences.

Two new journals were launched in 2021. Digital Chemical Engineering provides a platform for publishing new interdisciplinary research across the domains of chemical engineering and digital sciences and technologies. *Carbon Capture, Science and Technology (CCST)* provides an important platform for the publication of research countering some of the challenges identified in IChemE's published position statement on climate change.

All IChemE journals saw a rise in their Impact Factor, a quantitative measure of a journal in relation to its competitors. The seven wholly owned IChemE journals were supported by 276 volunteer editors from across 46 countries. The number of papers published in these IChemE journals in 2021 was 1,649, an increase of 68% in the last 5 years. The number of manuscripts submitted was 10,366, an increase of 138% in the same period.

The Chemical Engineer magazine published articles in line with IChemE's three priority topics with input from a wide spectrum of volunteers. For the responsible production priority topic, these included [the future of the oil and gas industry](#); [zero carbon electricity](#); [decarbonization of end uses](#); and [materials utilisation](#); as well as a [series on technologies being developed to help tackle the climate crisis](#). For the major hazards management topic, a series of six articles [on safety lessons we can learn from the movies](#) was published. Two articles outlining [how chemical engineers can help improve digital security](#) and [how cloud computing impacts chemical engineering](#) kicked off a series on digitalisation.

Following the provision of free access to the *Loss Prevention Bulletin* (LPB) for all members, page views increased by 77% to 62,471 in 2021 from 2020. A special edition of LPB was published to mark the 10th anniversary of the Fukushima Daiichi Nuclear Power Plant failure in Japan. The special issue also considers other natural hazards leading to technological (Natech) events.

Members from IChemE's process safety community compiled a book showcasing the works of process safety pioneer Trevor Kletz which contain new case studies and insights into latest practices. In partnership with Elsevier, the *Trevor Kletz Compendium: His Process Safety Wisdom Updated for a New Generation* was published covering topics that Kletz identified as the most important to process safety.

Members were able to access over 300 resources, including 25 new technical textbooks, via Knovel, the online resource for books, technical information, interactive equations and analytical tools - with titles added in 2021 including new publications on digitalisation, major hazards management and clean energy.

To showcase chemical engineering research and its impact on society in energy, education, environmental sustainability, water, healthcare and food technology, members in Australia and New Zealand collated contributions from leading researchers for a new [Chemical Engineering Impact booklet](#) – the third in the series to focus on research in the southern hemisphere.

To encourage knowledge transfer, the IChemE Safety Centre (ISC) published five guidance documents throughout the year on permits to work, good practice in virtual Hazard and Operability Study (HAZOP), undergraduate engineering education, delta HAZOP and alarm rationalisation. The IChemE Safety Centre (ISC) delivered 11 technical webinars and recorded a series of process safety podcasts in collaboration with *Chemical Processing* magazine which saw 36% more downloads than 2020 with the top rating podcast being *Lessons learned from the Fukushima Disaster, 10 years on*.

The ISC's social media campaign #MinuteToLearn shares one-minute videos of incidents and related learnings on their anniversaries. Fifty-two videos gained over 2,600 YouTube views during the year.

Knowledge-sharing and supporting CPD continued at the *Hazards 31* conference which was delivered online in November with 230 delegates attending. More than 80 technical presentations were given to process safety and loss prevention professionals showcasing good practice, new approaches and lessons learned. Plenary speaker highlights included Simon Wood from the UK Petroleum Industries Association discussing how the downstream oil sector responded to COVID-19, Peter Baker from the British Health and Safety Executive on what the chemical and process industries can learn from the building sector, and Atula Abeysekera from Imperial College London on managing 'black swan risks'.

Technical knowledge was also shared with over 250 registered delegates attending the virtual *Chemeca 2021* conference in September and with attendees of the *Advances in Digitalisation of the Process Industries* conference in October.

Simon Freakley, Alexander O'Malley and Jack Williams were awarded the Andrew Fellowship. Established in 2012 the Andrew Fellowship commemorates the work of IChemE Fellow Syd Andrew and supports advances in the field of catalysis. The chemical engineering researchers were awarded the fellowship to develop new catalysts, materials that speed up chemical reactions needed to produce the everyday products and fuels that society relies upon.

Prof Stephen Richardson, Past President of IChemE, and Honorary Fellow Dame Sue Ion were invited to give evidence to a UK House of Lords Select Committee. They were invited to give evidence to the Risk Assessment and Risk Planning Committee regarding the resilience and risks within the oil and gas and nuclear sectors.

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

IChemE continued its activities to strengthen member engagement, support the member lifecycle and improve understanding of the profession.

75 members across the world joined IChemE's virtual Annual General Meeting in June, 60 of whom were voting members. A new Deputy President, three Vice Presidents and three Ordinary Trustees were elected and participated in activities to shape the strategic direction of the Institution. In addition, eight members were elected to Congress, the advisory body to the Board of Trustees.

Given IChemE's focus on member engagement as part of *Strategy 2024*, a new Trustee role of Vice President Member Engagement replaced the Vice President Regions role. A Member Engagement Committee was also formed to replace the former Regions Committee, to support this work.

Jane Cutler was inaugurated as the 80th President of the Institution, delivering her Presidential Address from the University of Western Australia in Perth, the first such address to be hosted in Australia. Members and chemical engineering students attended the live event with many other members and invited guests watching the Address online. Entitled *IChemE: Relevant in a Changing World*, the Address focused on the need for chemical engineers to adapt and respond to the opportunities and challenges presented by the changing world. Ahead of IChemE's 100-year anniversary in 2022, Cutler pledged to build on the work of her predecessors to ensure the Institution delivers *Strategy 2024* and remains relevant, contemporary and aligned with its Royal Charter.

Over 70 volunteers finalised plans for marking IChemE's centenary in 2022 including the development of a new centenary website (www.chemengevolution.org), designed to celebrate 100 years of chemical engineering's contribution to society. The team also developed a schedule for a series of centenary webinars to look at how chemical engineers will help to address global challenges over the next 100 years.

Over 2,800 members participated in the member engagement survey with a good representation across all membership grades. Key themes identified by members as priorities include the importance of IChemE fulfilling its role as a qualifying body and maintaining alignment to *Strategy 2024*.

The majority of members groups' and special interest groups' activities remained virtual which enabled members across the world to access networking and knowledge sharing opportunities. More than 19,000 people attended 269 technical webinars with over 800 people attending a webinar on hydrogen safety challenges run by the Safety and Loss Prevention Special Interest Group. Twenty-six On Campus presentations were delivered and were well received by the undergraduate community.

To enable knowledge sharing and networking between members groups and special interest groups, new tools have been introduced, including a Microsoft SharePoint-based collaborative platform.

To support members at an early career stage and those looking for career development, IChemE held a virtual careers fair over two days which was attended by 291 people. The Institution also hosted a series of eight Industry Insight webinars where members shared their career experiences across different UK regions and sectors.

A suite of careers resources was also released to highlight the broad range of careers available to chemical engineers and provide information for anyone considering transitioning to a new sector. With over 5,000 views by the end of the year, a video series featuring graduate engineers through to senior executives sharing their career journeys through different sectors was also produced.

The Chemical Engineer published feature articles which involved direct feedback from the community. For example, students and educators were surveyed and interviewed to understand how chemical engineering courses have responded to the pandemic.

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).

The volunteer area of the IChemE website was further developed alongside regular member communications featuring a variety of volunteering opportunities across all areas including Professional Reviewer, members groups' roles and special interest group task forces.

To improve societal understanding of chemical engineering, six IChemE members featured as experts in the second television series of *Disasters Engineered* on the National Geographic channel. Zsuzsanna Gyenes, Dame Judith Hackitt, Fiona Macleod, Geoffrey Maitland, Ken Patterson and Stephen Richardson shared their technical accounts and lessons that process safety and hazardous industry professionals have learned from several of the incidents in the 10-part series.

Engaging with members and sharing knowledge via the Institution's social media platforms, including LinkedIn, Twitter, Facebook and Instagram, led to IChemE's posts being seen over 2.76m times as well as over 38,000 views of YouTube video content.

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

In 2021 IChemE continued with projects to modernise legacy systems and business processes to facilitate resilient operations that deliver value and enable better connectivity for members.

Minor changes to the Institution's Royal Charter and By-laws to increase the relevance in modern times were approved by the membership at the 2021 AGM and subsequently received formal approval from the Privy Council in July.

With a focus on providing a business architecture and governance structure to deliver long-term member value, the Regions Committee was replaced with the Member Engagement Committee, chaired by the newly elected Vice President Member Engagement.

Peter Slane, Regions Director retired in July after nearly ten years with the Institution and was succeeded by Andrew Foster, a Chartered Chemical Engineer and Fellow of IChemE.

A review began into the subscription rates' structure with a policy for setting rates being introduced and incorporating a simplified approach to the subscription model which involved the standardisation of rates and the move to a single currency across all regions.

A new email marketing tool was introduced that is fully integrated with the Contact Relationship Management (CRM) system, reducing system complexity and GDPR risks. New risk management software was also introduced to streamline processes and draw effectiveness gains and IChemE implemented a digital telephony solution via the Teams platform that provides greater support for remote working.

The Institution has continued to extend the scope of the ISO9001 quality management system with the UK elements of the Regions department and the Marketing and Communications department becoming compliant in 2021. Documenting these additional team processes provides the framework for continuous improvement so that the needs and expectations of members and interested parties can continue to be met. IChemE remains committed to the ISO9001:2015 standard aiming to extend certification across the whole organisation in 2023.

After another year of continued change due to ongoing Covid-19 restrictions around the world, the Institution has regularly reviewed and updated health and safety measures and consulted with staff about the future ways of working that will allow the Institution to lock in the key benefits realised during the pandemic.

A staff survey was carried out in March with the intention to repeat this activity on an annual basis to provide staff with a key feedback channel. The promotion of resilience and wellbeing has remained a priority with a successful 'step in the right direction' campaign where staff were challenged to record 1,922 km during the months of May and June, this distance was chosen as a reminder of the year when the Institution was formed. Staff embraced the challenge and went on to achieve over 300% of the original target with some 6,000 km recorded.

The end of the year saw the launch of a Managers Masterclass training programme, a significant investment in personal development for the Institution's line management. This training will help to improve efficiency and performance across the organisation.

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 2021 are set out on pages 23 to 42.

The charity only financial statements incorporate the results of the UK and Australian branch.

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 £7,886,000 (2020: £7,047,000). The principal sources of income were:

- Membership subscription and accreditation fees totalling £3,904,000 (2020: £3,939,000).
- Within the Learned Society activity, training courses generated income of £1,421,000 (2020: £889,000). In 2020, the training course activity, which had previously been offered predominantly as physical events, was severely impacted by the Covid-19 pandemic. The commercial team, together with the course directors, worked quickly to translate the physical events to online modules. During 2021, the majority of training activity remained as online modules, with new and additional courses being added. This resulted in a 60% increase in income, although this is still approximately 20% down on pre-pandemic levels.
- Income from journals and publications was £1,585,000 (2020: £1,071,000). This included a one-off signing bonus of £350,000 secured as part of the renewal of the journals publishing contract with Elsevier. A further £207,000 (2020: £199,000) was received from conferences, seminars and events, which continued to be held virtually due to the pandemic.
- Income from the Institution's knowledge communities, which includes company subscriptions to the IChemE Safety Centre and Special Interest Group activity was £365,000 (2020: £317,000). Other income, generated from collaboration with other entities, was £7,000 (2020: £7,000).
- In 2020, funding from various government support schemes in response to the Covid-19 pandemic was available to the Institution and some of this support continued into the first half of 2021. In the UK, a total of £6,000 (2020: £72,000) was claimed from the UK government's Coronavirus Job Retention Scheme. A further £110,000 (2020: £114,000) was available from the local government support schemes for the staff and offices based in Australia, and Malaysia. The total funding of £116,000 (2020: £186,000) 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 £190,000 (2020: £155,000).
- A final payment of £26,000 (2020: £230,000) was received from the legacy notified to the Institution in December 2017. There were no other donations or legacies received as unrestricted funds in 2021 (2020: £nil).
- Dividends and interest on the Institution's investment portfolio was £65,000 (2020: £54,000).

Total group expenditure for the year was £7,273,000 (2020: £6,927,000).

Total group expenditure includes the costs of the IT Transformation Programme of £335,000 (2020: £321,000) which was funded from designated funds. The first phase of the IT Transformation Programme, which started in 2019, was completed in 2021 with the implementation of the new finance system, roll out of the new member application system, and de-commissioning of the on-premises servers. The second phase of work under the Future Institution Transformation Programme (FIT Phase 2) will continue in 2022 to enhance the core operating systems to drive efficiency and continuous improvement. A new designated fund of £500,000 was set aside for FIT Phase 2 at the end of 2020 and at the Board of Trustees' meeting in January 2022 it was agreed to add a further £350,000 to the fund.

Details of the designated funds are set out in note 16 to the financial statements.

Overall expenditure increased by 5% compared to 2020, however, this was lower than anticipated and remains approximately 6% behind pre-pandemic levels. The continued lower cost base is a result of running the training courses, conferences and events virtually, and holding the trustee and committee meetings online. Although it is expected that some activity will go back to physical meetings in 2022, the Board of Trustees want to ensure that the benefits realised over the last two years continue, especially where it has resulted in opportunities for increased inclusivity.

The Institution's wholly owned trading subsidiary, IChemE Ltd, achieved an operating profit of £125,000 (2020: £82,000), 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.

A new private limited company was established in Malaysia in October 2020, IChemE Malaysia Sdn Bhd, which started operating with effect from 1 January 2021. The company was set up to replace the Malaysian not-for profit registered society, which was subsequently wound up in October 2021 with any remaining assets being transferred to the company.

Overall net income before gains on investments funds, was £613,000 (2020: £120,000). Gains on investments for the year were £576,000 (2020: £367,000) resulting in an overall net income of £1,189,000 (2020: £487,000).

After the other recognised gains or losses; actuarial gain on the defined benefit pension scheme of £1,191,000 (2020: loss £1,316,000); as well as exchange losses on the retranslation of the balance sheets of the foreign branches and subsidiaries of £110,000 (2020: gain £136,000), the unrestricted fund balance at year end increased by £2,270,000 (2020: decreased by £693,000) to £3,256,000 (2020: £986,000).

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.

In March 2021, the Institution received a donation of £200,000 from one of its members and former IChemE President Mr Ian Shott, who wanted to support 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 will continue to be developed throughout the year. The donation and reclaimed gift-aid of £50,000 has been recognised in restricted funds in 2021.

The net income on restricted funds for 2021 was £75,000 (2020: net expenditure £66,000). The total restricted fund balance at year end was £1,314,000 (2020: £1,239,000).

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

Investment policy and powers

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.

During the year, the investment funds received £65,000 (2020: £54,000) in interest and dividends, and incurred management fees of £64,000 (2020: £55,000). The funds generated unrealised gains of £576,000 (2020: £367,000). The total return for the year, taking into account all income, management fees and market value movements, was an increase of 9.5% (2020: 6.4%).

No disinvestments were made from the funds in 2021 (2020: £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 2021 was £6,678,000 (2020: £6,090,000). The gains and losses on revaluation have been recognised in the Statement of Financial Activities.

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 was formally reviewed by the Finance & HR Committee throughout the year.

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 2021, 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 £6,559,000 (2020: £5,272,000).

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 Strategy 2024, some of which may 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;
- the current economic uncertainties.

Unrestricted free reserves exclude the designated fund of £500,000 (2020: £835,000), fixed asset reserves of £721,000 (2020: £798,000) and are stated before taking account of the pension-funding deficit of £4,524,000 (2020: £5,919,000) 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 £4,570,000 (2020: £2,225,000). The total fund balance includes restricted funds of £1,314,000 (2020: £1,239,000).

The Trustees have considered the level of reserves held at year end and believes they are sufficient to protect it 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 Board of Trustees are elected in accordance with the Royal Charter and By-laws and is comprised of 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 note 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.

During 2021, a new cloud-based risk management tool was implemented to help manage risks and embed effective risk management across the organisation. The highest rated strategic risks in 2021 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.
IChemE outputs or benefits are not valued by individuals and/or organisations	Run regular membership engagement survey with the services of an external research company to ensure appropriate and effective questioning, and to benchmark performance against other similar organisations. Run smaller consultations and surveys with targeted groups of members and other stakeholders. Develop better understanding of member engagement within our new CRM system.
We are not able to deliver on the agreed priorities aligned to the Strategy 2024	Gap analysis conducted on existing activities vs the aims of the strategy in 2021. Business case developed to address any gaps identified within the Future Institution Transformation Programme. Clear prioritisation has been undertaken and effectively communicated to staff, members and stakeholders.
Uncontrolled change impacts resourcing and business plan priorities	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.
Governance structures do not provide leadership and decision making	Governance Panel established in 2020 to continuously review and update governing documents and committee structure. Continue with the roll out of the Business Architecture programme of work. Establish consistent model for project governance that conforms to best practice.

IChemE staff, members, volunteers do not support transformation	Develop as part of the Future Institution Transformation Programme (FIT Phase 2) a cohesive and coherent approach to Stakeholder communications that consistently makes the case for change.
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.
Lose the ability to qualify members	Address any weaknesses in existing processes as part of the replacement Application System, then review further as part of the planned enhancements to this system to be delivered by Q2 2022. Close relationships and engagement with the Regulators to ensure ongoing compliance is fully understood.
Defined Benefit Pension Scheme becomes a disproportionate financial burden and/or unable to reach agreement with Pension Scheme Trustees on recovery plan	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.

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 4 May 2022 and signed on its behalf by:



Ms LJ Cutler
President



Mr IJ Martin
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 2021 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 2021 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 19 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 risk of management override of controls and revenue 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, recognition date and transactions entered into outside the normal course of business, challenging judgments, estimates and timing applied to the recognition of income streams.

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
St Philips Point
Temple Row
Birmingham
B2 5A

Date: 9 May 2022

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 2021

	<i>Notes</i>	Unrestricted Funds £000	Restricted Funds £000	Total 2021 £000	Unrestricted Funds £000	Restricted Funds £000	Total 2020 £000
INCOME							
Donations & legacies	3	26	250	276	230	-	230
Charitable activities:	4						
Qualifying Chemical Engineers		3,904	-	3,904	3,939	-	3,939
Operating a Learned Society for Chemical Engineers		3,585	20	3,605	2,483	20	2,503
Exceptional government funding		116	-	116	186	-	186
Other trading activities:							
Trading operations	2	190	-	190	155	-	155
Investments	5	65	-	65	54	-	54
TOTAL INCOME		7,886	270	8,156	7,047	20	7,067
EXPENDITURE ON							
Raising funds:							
Trading operations	2	(65)	-	(65)	(73)	-	(73)
Investment management costs		(64)	-	(64)	(55)	-	(55)
Charitable activities:	6						
Qualifying Chemical Engineers		(3,263)	-	(3,263)	(2,848)	-	(2,848)
Operating a Learned Society for Chemical Engineers		(3,881)	(195)	(4,076)	(3,951)	(86)	(4,037)
TOTAL EXPENDITURE		(7,273)	(195)	(7,468)	(6,927)	(86)	(7,013)
Net gains on investments	11	576	-	576	367	-	367
NET INCOME / (EXPENDITURE)		1,189	75	1,264	487	(66)	421
Other recognised gains / (losses):							
Actuarial gains / (losses) on defined benefit pension schemes	21	1,191	-	1,191	(1,316)	-	(1,316)
Exchange (losses) / gains arising from retranslation of foreign branches & subsidiaries		(110)	-	(110)	136	-	136
NET MOVEMENT IN FUNDS		2,270	75	2,345	(693)	(66)	(759)
Fund balances brought forward at 1 January		986	1,239	2,225	1,679	1,305	2,984
Fund balances carried forward at 31 December		3,256	1,314	4,570	986	1,239	2,225

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 27 to 42 form part of these financial statements.

Charity statement of financial activities for the year ended 31 December 2021

	<i>Notes</i>	Unrestricted Funds £000	Restricted Funds £000	Total 2021 £000	Unrestricted Funds £000	Restricted Funds £000	Total 2020 £000
INCOME							
Donations & legacies	3	26	250	276	230	-	230
Gift aid from subsidiary company	2	125	-	125	82	-	82
Charitable activities:	4						
Qualifying Chemical Engineers		3,903	-	3,903	3,794	-	3,794
Operating a Learned Society for Chemical Engineers		3,531	20	3,551	2,482	20	2,502
Exceptional government funding		116	-	116	179	-	179
Investments	5	65	-	65	54	-	54
TOTAL INCOME		7,766	270	8,036	6,821	20	6,841
EXPENDITURE ON							
Raising funds:							
Investment management costs		(63)	-	(63)	(55)	-	(55)
Charitable activities:							
Qualifying Chemical Engineers	6	(3,243)	-	(3,243)	(2,786)	-	(2,786)
Operating a Learned Society for Chemical Engineers		(3,802)	(195)	(3,997)	(3,894)	(86)	(3,980)
TOTAL EXPENDITURE		(7,108)	(195)	(7,303)	(6,735)	(86)	(6,821)
Net gains on investments	11	576	-	576	367	-	367
NET INCOME / (EXPENDITURE)		1,234	75	1,309	453	(66)	387
Other recognised gains / (losses):							
Actuarial gains / (losses) on defined benefit pension schemes	21	1,191	-	1,191	(1,316)	-	(1,316)
Exchange (losses) / gains arising from retranslation of foreign branches & subsidiaries		(103)	-	(103)	130	-	130
NET MOVEMENT IN FUNDS		2,322	75	2,397	(733)	(66)	(799)
Fund balances brought forward at 1 January		769	1,239	2,008	1,502	1,305	2,807
Fund balances carried forward at 31 December		3,091	1,314	4,405	769	1,239	2,008

Balance sheets at 31 December 2021

	<i>Note</i>	Group	Charity
		2021	2020
		2021	2020
		£000	£000
Fixed assets			
Tangible assets	10	721	798
Investments	11	6,678	6,090
		<u>7,399</u>	<u>6,888</u>
Current assets			
Debtors	12	873	666
Cash at bank and in hand		3,319	2,819
		<u>4,192</u>	<u>3,485</u>
Creditors: Amounts falling due within one year	13	(2,497)	(2,229)
Net current assets		1,695	1,256
		<u>9,094</u>	<u>8,144</u>
Pension scheme funding deficit	21	(4,524)	(5,919)
Total net assets after pension deficit		4,570	2,225
		<u><u>4,570</u></u>	<u><u>2,225</u></u>
Income Funds			
Unrestricted funds			
General funds		7,280	6,070
Designated funds	16	500	835
Pension reserve	21	(4,524)	(5,919)
		<u>3,256</u>	<u>986</u>
Restricted funds	15	1,314	1,239
		<u>4,570</u>	<u>2,225</u>
Total funds		4,570	2,008
		<u><u>4,570</u></u>	<u><u>2,008</u></u>

These financial statements were approved by the Board of Trustees and authorised for issue on 4 May 2022.

Ms LJ Cutler
President

Mr IJ Martin
Honorary Treasurer

Consolidated cash flow statement for the year ended 31 December 2021

	<i>Note</i>	2021 £000	2020 £000
Cash flows from operating activities	<i>19</i>	563	(323)
Cash flows from investing activities:			
Dividends and interest from investments	<i>5</i>	65	54
Purchase of fixed asset investments	<i>11</i>	(65)	(54)
Net cash provided by / (used in) investing activities		-	-
Change in cash and cash equivalents in the reporting period		563	(323)
Cash and cash equivalents at the start of the reporting period		2,819	3,027
Change in cash and cash equivalents due to exchange rate movements		(63)	115
Cash and cash equivalents at the end of the reporting period		3,319	2,819

Charity cash flow statement for the year ended 31 December 2021

	<i>Note</i>	2021 £000	2020 £000
Cash flows from operating activities	<i>19</i>	545	(113)
Cash flows from investing activities:			
Dividends and interest from investments	<i>5</i>	65	54
Purchase of fixed asset investments	<i>11</i>	(65)	(54)
Net cash provided by / (used in) investing activities		-	-
Change in cash and cash equivalents in the reporting period		545	(113)
Cash and cash equivalents at the start of the reporting period		2,521	2,628
Change in cash and cash equivalents due to exchange rate movements		(14)	6
Cash and cash equivalents at the end of the reporting period		3,052	2,521

Notes forming part of the financial statements for the year ended 31 December 2021

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 2021; the budgets and cashflow predictions for the next three-year period; and the level of free reserves held at year-end. The Trustees have also considered the potential impact of the current economic uncertainties on the Institution's finances.

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	IChemE in Malaysia	IChemE in New Zealand	IChemE in Singapore Ltd	IChemE Malaysia Sdn Bhd	2021 Total	2020 Total
	£000	£000	£000	£000	£000	£000	£000
Income	190	5	-	-	89	284	309
Expenditure	(65)	(31)	(36)	14	(62)	(180)	(193)
Net Income / Expenditure	125	(26)	(36)	14	27	104	116
Amount gift aided to the Institution	(125)	-	-	-	-	(125)	(82)
Retained in subsidiary	-	(26)	(36)	14	27	(21)	34

Balance sheets

	IChemE Ltd	IChemE in Malaysia	IChemE in New Zealand	IChemE in Singapore Ltd	IChemE Malaysia Sdn Bhd	2021 Total	2020 Total
	£000	£000	£000	£000	£000	£000	£000
Fixed assets	-	-	-	-	-	-	-
Current assets	129	-	172	-	102	403	405
Current liabilities	(129)	-	(34)	-	(75)	(238)	(188)
Net current assets	-	-	138	-	27	165	217
Total net assets	-	-	138	-	27	165	217

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) is a company limited by shares, incorporated in Malaysia. The company, established in October 2020, was set up to replace the not-for-profit registered society IChemE in Malaysia (PPM-026-14-23111988). The company started operating with effect from 1 January 2021. The registered society was subsequently wound up in October 2021 with any remaining assets being transferred to the company.

3 Income from donations and legacies

Group and Charity	2021	2020
	£000	£000
Donations (restricted fund)	250	-
Legacies	26	230
	276	230

4 Analysis of income from charitable activities

	Group		Charity	
	2021 £000	2020 £000	2021 £000	2020 £000
<i>Qualifying Chemical Engineers:</i>				
Membership subscription and accreditation fees	3,904	3,939	3,903	3,794
<i>Operating a Learned Society for Chemical Engineers:</i>				
Journals & publications	1,585	1,071	1,585	1,071
Knowledge communities	365	317	362	317
Conferences, seminars & events	207	199	201	198
Provision of training	1,421	889	1,376	889
Other income	7	7	7	7
Subscriptions to technical centres (restricted funds)	20	20	20	20
<i>Exceptional government funding:</i>				
Coronavirus Job Retention Scheme (UK)	6	72	6	72
Government wage subsidy schemes (non-UK)	110	114	110	107
	7,625	6,628	7,570	6,475

During 2021, the Institution was eligible to claim funding in the year from government support schemes in response to Covid-19. In the UK, 1 staff member was furloughed on a part-time basis for the first half of the year. Funding was also available from the local government support schemes for the entities in Australia and Malaysia.

5 Investment income

Group and Charity	2021 £000	2020 £000
Interest receivable	15	2
Dividends receivable	50	52
	65	54

6 Analysis of expenditure on charitable activities

Group	Direct activity costs £000	Support costs £000	2021 Total £000	2020 Total £000
Qualifying Chemical Engineers	2,079	1,184	3,263	2,848
Operating a Learned Society for Chemical Engineers	2,866	1,210	4,076	4,037
	4,945	2,394	7,339	6,885

Expenditure on charitable activities was £7,339,000 (2020: £6,885,000) of which £7,144,000 was unrestricted (2020: £6,799,000) and £195,000 was restricted (2020: £86,000).

Charity	Direct activity costs £000	Support costs £000	2021 Total £000	2020 Total £000
Qualifying Chemical Engineers	2,100	1,143	3,243	2,786
Operating a Learned Society for Chemical Engineers	2,814	1,183	3,997	3,980
	4,914	2,326	7,240	6,766

6 Analysis of expenditure on charitable activities (continued)

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

	Group		Charity	
	2021 £000	2020 £000	2021 £000	2020 £000
Depreciation	77	87	77	86
Operating leases:				
Plant and machinery	9	9	9	9
Land and buildings	75	61	61	44
Exchange rate differences	51	(96)	(18)	(42)
	<u> </u>	<u> </u>	<u> </u>	<u> </u>

7 Analysis of governance and support costs

Included within expenditure on charitable activities are governance and support costs amounting to £2,394,000 (2020: £2,261,000). These are analysed as:

	Group		Charity	
	2021 £000	2020 £000	2021 £000	2020 £000
Staff costs	968	904	922	853
Finance	307	291	317	283
IT	522	505	534	501
Facilities & HR	521	506	502	508
Management & Governance	76	55	51	53
	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	2,394	2,261	2,326	2,198
	<u> </u>	<u> </u>	<u> </u>	<u> </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	
	2021 £000	2020 £000	2021 £000	2020 £000
Qualifying Chemical Engineers	1,184	1,048	1,143	1,013
Operating a Learned Society for Chemical Engineers	1,210	1,213	1,183	1,185
	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	2,394	2,261	2,326	2,198
	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Analysis of governance costs:

	Group		Charity	
	2021 £000	2020 £000	2021 £000	2020 £000
External audit	36	31	31	28
General meeting costs	5	2	5	2
Legal & professional fees	22	4	13	3
Electoral services	3	2	3	2
	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	66	39	52	35
	<u> </u>	<u> </u>	<u> </u>	<u> </u>

8 Analysis of trustee remuneration and expenses

Group and Charity	2021 £000	2020 £000
Expenses paid to or on behalf of nil (2020:5) Trustees in respect of travel, subsistence, and accommodation costs	-	4

The Trustees give freely their time and expertise without any form of remuneration or other benefit in cash or kind (2020: £nil).

9 Analysis of staff costs and remuneration to key management personnel

The average monthly headcount for the group and charity during the year was 94 (2020: 96). The number of full-time equivalent persons employed by the group and charity during the year was as follows:

	Group		Charity	
	2021	2020	2021	2020
Qualifying Chemical Engineers	34	32	30	28
Operating a Learned Society for Chemical Engineers	34	35	33	34
Management and Administration	19	19	18	18
	<u>87</u>	<u>86</u>	<u>81</u>	<u>80</u>

The aggregate payroll costs of these persons were as follows:

	Group		Charity	
	2021 £000	2020 £000	2021 £000	2020 £000
Wages and salaries	3,293	3,187	3,234	3,116
Social security costs	285	273	284	272
Pension scheme contributions	282	277	276	270
Defined benefit pension scheme operating costs	79	81	79	81
Employee benefits	49	45	49	45
	<u>3,988</u>	<u>3,863</u>	<u>3,922</u>	<u>3,784</u>

During 2021, £nil (2020: £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	
	2021	2020	2021	2020
£60,001 - £70,000	3	3	3	3
£70,001 - £80,000	1	1	1	1
£80,001 - £90,000	2	2	2	2
£90,001 - £100,000	-	1	-	1
£100,001 - £110,000	1	1	1	1
£120,001 - £130,000	1	-	1	-
£190,001 - £200,000	1	1	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 6 (2020: 6). Contributions in respect of these employees amounted to £46,000 (2020: £57,000).

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 (2020: 6) key management personnel staff, including employer pension contributions and employer's national insurance, were £821,000 (2020: £774,000).

10 Tangible fixed assets

Group	Freehold Property	Short leasehold property	Office equipment	Computers	Total
	£000	£000	£000	£000	£000
Cost or valuation					
At beginning of year	1,800	19	141	321	2,281
Additions	-	-	-	-	-
Disposals	-	-	-	(290)	(290)
At end of year	1,800	19	141	31	1,991
Depreciation					
At beginning of year	1,003	19	141	320	1,483
Charge for the year	76	-	-	1	77
Disposals	-	-	-	(290)	(290)
At end of year	1,079	19	141	31	1,270
<i>Net book value</i>					
At 31 December 2021	721	-	-	-	721
At 31 December 2020	797	-	-	1	798
Charity	Freehold Property	Short leasehold property	Office equipment	Computers	Total
	£000	£000	£000	£000	£000
Cost or valuation					
At beginning of year	1,800	19	141	312	2,272
Additions	-	-	-	-	-
Disposals	-	-	-	(281)	(281)
At end of year	1,800	19	141	31	1,991
Depreciation					
At beginning of year	1,003	19	141	311	1,474
Charge for the year	76	-	-	1	77
Disposals	-	-	-	(281)	(281)
At end of year	1,079	19	141	31	1,270
<i>Net book value</i>					
At 31 December 2021	721	-	-	-	721
At 31 December 2020	797	-	-	1	798

Freehold property at 31 December 2021 includes land at valuation of £280,000 (2020: £280,000) which is not depreciated.

11 Fixed asset investments

Group and Charity	2021	2020
	£000	£000
Fair value at 1 January	6,090	5,724
Acquisitions at cost	1,832	1,875
Proceeds of disposals	(1,820)	(1,876)
Net gains on revaluation	576	367
	<hr/>	<hr/>
Fair value at 31 December	6,678	6,090
	<hr/> <hr/>	<hr/> <hr/>
Historical cost at 31 December	3,731	3,720
	<hr/> <hr/>	<hr/> <hr/>

All investments are carried at their fair value. An analysis of the fair value of the investments at 31 December 2021 is as follows:

Group and Charity	2021	2020
	£000	£000
Equities	4,048	3,478
Fixed Interest	1,336	1,079
Other	1,001	1,130
Cash	293	403
	<hr/> <hr/>	<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 company was dormant during 2020 with all IChemE activities in Malaysia transferring from the registered society, IChemE in Malaysia, to the private limited company with effect from 1 January 2021. The registered society in Malaysia was subsequently wound up in October 2021.

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

12 Debtors

	Group		Charity	
	2021	2020	2021	2020
	£000	£000	£000	£000
Trade debtors	256	246	200	175
Amount due from subsidiaries	-	-	141	156
Other debtors	1	27	1	38
Prepayments and accrued income	616	393	550	370
	<hr/>	<hr/>	<hr/>	<hr/>
	873	666	892	739
	<hr/> <hr/>	<hr/> <hr/>	<hr/> <hr/>	<hr/> <hr/>

13 Creditors: amounts falling due within one year

	Group		Charity	
	2021 £000	2020 £000	2021 £000	2020 £000
Trade creditors	465	447	461	445
Amounts due to subsidiaries	-	-	7	13
Other creditors	377	427	362	427
Taxation and social security	120	118	108	116
Accruals	230	160	210	149
Deferred income	1,305	1,077	1,266	1,071
	<u>2,497</u>	<u>2,229</u>	<u>2,414</u>	<u>2,221</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	2021		2020	
	Land and buildings £000	Other £000	Land and Buildings £000	Other £000
Amounts falling due:				
In less than one year	71	9	57	9
In the second to fifth years inclusive	34	8	32	17
Over five years	-	-	-	-
	<u>105</u>	<u>17</u>	<u>89</u>	<u>26</u>

Charity	2021		2020	
	Land and buildings £000	Other £000	Land and Buildings £000	Other £000
Amounts falling due:				
In less than one year	61	9	46	9
In the second to fifth years inclusive	34	8	32	17
Over five years	-	-	-	-
	<u>95</u>	<u>17</u>	<u>78</u>	<u>26</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)	Medals & Awards (MM Sharma / SIESO)	John Collier Memorial Fund	Andrew Legacy Fund	Sustainability Hub	Total
	£000	£000	£000	£000	£000	£000
At 1 January 2021	49	39	35	1,116	-	1,239
Income	20	-	-	-	250	270
Expenditure	(24)	(1)	-	(96)	(74)	(195)
At 31 December 2021	45	38	35	1,020	176	1,314

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

In 2018, the Institution received a donation of £13,000 from the JB Joshi Foundation which is to be used for the creation of a new award, to be known as the MM Sharma Medal, for excellence in the field of chemical engineering. An award of £1,000 will be made to the winner(s) of the medal, and the donation will also be used to fund administration expenses of up to £250 a year.

The SIESO Medal was launched early 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, and is awarded to one or more students for an excellent presentation on major accidents and learning outcomes.

The John Collier Memorial Fund seeks to have a two-yearly Lecture and Medal ceremony. The capital and the income generated are to be used to fund the award and lectures in perpetuity.

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 March 2021, the Institution received a donation of £200,000 from one of its members and former IChemE President Mr Ian Shott, who wanted to support 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 will continue to be developed throughout the year. The donation and reclaimed gift-aid of £50,000 has been recognised in restricted funds.

16 Analysis of movements in unrestricted designated funds

Group and Charity	IT Transformation Programme	Institution Transformation Programme	Total
	£000	£000	£000
At 1 January 2021	335	500	835
Expenditure	(335)	-	(335)
Transfer between funds	-	-	-
At 31 December 2021	-	500	500

16 Analysis of movements in unrestricted designated funds (continued)

In 2018, the Trustees set aside £1,000,000 as a designated fund for an IT Transformation Programme to run over a two-to-three-year period. The Programme was made up of a number of projects to improve and modernise the Institution's IT services and platforms, and to address a number of risks by moving business applications off premise and into the cloud.

The first phase of the IT Transformation Programme, which started in 2019, was completed in 2021 with the implementation of the new finance system, roll out of the new member application system, and de-commissioning of the on-premises servers.

A second phase of work under the Future Institution Transformation Programme (FIT Phase 2) will continue in 2022, to enhance the core operating systems 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	
	2021 £000	2020 £000	2021 £000	2020 £000
IChemE Ltd	25	27	107	82
IChemE in Malaysia	(61)	10	-	61
IChemE in New Zealand	(9)	4	(22)	(13)
IChemE in Singapore Ltd	(13)	2	-	13
IChemE Malaysia Sdn Bhd	28	-	28	-
	<u>(30)</u>	<u>43</u>	<u>113</u>	<u>143</u>

IChemE Ltd gift aids its operating profit to the charity and the balance of £125,000 (2020: £82,000) 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 2021 are represented by:

Group	Unrestricted funds £000	Restricted Funds £000	Total £000
Tangible fixed assets	721	-	721
Investments	6,678	-	6,678
Pension scheme funding deficit	(4,524)	-	(4,524)
Net current assets	381	1,314	1,695
	<u>3,256</u>	<u>1,314</u>	<u>4,570</u>
Total net assets	<u>3,256</u>	<u>1,314</u>	<u>4,570</u>
	<u><u>3,256</u></u>	<u><u>1,314</u></u>	<u><u>4,570</u></u>
Charity	Unrestricted funds £000	Restricted Funds £000	Total £000
Tangible fixed assets	721	-	721
Investments	6,678	-	6,678
Pension scheme funding deficit	(4,524)	-	(4,524)
Net current assets	216	1,314	1,530
	<u>3,091</u>	<u>1,314</u>	<u>4,405</u>
Total net assets	<u>3,091</u>	<u>1,314</u>	<u>4,405</u>
	<u><u>3,091</u></u>	<u><u>1,314</u></u>	<u><u>4,405</u></u>

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

Group	2021	2020
	£000	£000
Net Income	1,264	421
Adjustments for:		
Depreciation on tangible fixed assets	77	87
(Gains) on investments	(576)	(367)
Dividends and interest from investments	(65)	(54)
Investment management fees	53	55
Difference between pension charge and cash contribution	(204)	(182)
(Increase)/decrease in debtors	(207)	128
Increase/(decrease) in creditors	268	(432)
Exchange (losses) / gains arising from retranslation of foreign branches & subsidiaries	(110)	136
Change in cash and cash equivalents due to exchange rate movements	63	(115)
	<hr/>	<hr/>
Net cash from / (used in) operating activities	563	(323)
	<hr/> <hr/>	<hr/> <hr/>

Charity	2021	2020
	£000	£000
Net Income	1,309	387
Adjustments for:		
Depreciation on tangible fixed assets	77	86
(Gains) on investments	(576)	(367)
Dividends and interest from investments	(65)	(54)
Investment management fees	53	55
Difference between pension charge and cash contribution	(204)	(182)
(Increase)/decrease in debtors	(153)	179
Increase/(decrease) in creditors	193	(341)
Exchange (losses) / gains arising from retranslation of foreign branches & subsidiaries	(103)	130
Change in cash and cash equivalents due to exchange rate movements	14	(6)
	<hr/>	<hr/>
Net cash from / (used in) operating activities	545	(113)
	<hr/> <hr/>	<hr/> <hr/>

20 Analysis of changes in net debt

Group	At start of year	Cash flows	Foreign exchange movements	At end of year
	£000	£000	£000	£000
Cash	2,819	563	(63)	3,319
	<hr/>	<hr/>	<hr/>	<hr/>
Total	2,819	563	(63)	3,319
	<hr/> <hr/>	<hr/> <hr/>	<hr/> <hr/>	<hr/> <hr/>
Charity	At start of year	Cashflows	Foreign exchange movements	At end of year
	£000	£000	£000	£000
Cash	2,521	545	(14)	3,052
	<hr/>	<hr/>	<hr/>	<hr/>
Total	2,521	545	(14)	3,052
	<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 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 £235,000 (2020: £227,000).

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 £42,000 (2020: £43,000).

Pension costs relating to the employees of the Institution's subsidiaries IChemE in Malaysia and IChemE in New Zealand amounted to £6,000 (2020: £7,000).

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 will be 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:

	2021 %	2020 %
Discount rate	1.80% pa	1.25% pa
Inflation (RPI)	3.50% pa	3.1% pa
Inflation (CPI)	3.10% pa	2.65% pa
Pension increase (LP15)	3.00% pa	2.55% 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 'S2NA' tables with CMI 2017 projections and a long-term rate of improvement of 1.25% pa
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	2021 £000	2020 £000
Liability Driven Investment (LDI)	3,784	4,056
Multi-asset Funds	6,830	6,399
Cash	80	31
Total	10,694	10,486

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:

	2021 £000	2020 £000
Fair value of assets	10,694	10,486
Present value of funded obligations	(15,218)	(16,405)
(Deficit) in scheme	(4,524)	(5,919)

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

	2021 £000	2020 £000
Interest on liabilities	203	276
Interest on assets	(131)	(184)
Total	72	92

Remeasurements over the year:

	2021 £000	2020 £000
(Gain) on assets in excess of interest	(141)	(1,156)
Experience (gains) on liabilities	(264)	-
Losses from changes to demographic assumptions	53	-
(Gains) / losses from changes to financial assumptions	(839)	2,472
Total	(1,191)	1,316

21 Pension scheme (continued)

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

	2021	2020
	£000	£000
Fair value of assets at beginning of period	10,486	9,205
Interest on assets	131	184
Institution contributions	276	274
Benefits paid	(340)	(333)
Return on assets less interest	141	1,156
	<hr/>	<hr/>
Value of assets at end of period	10,694	10,486
	<hr/> <hr/>	<hr/> <hr/>

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

	2021	2020
	£000	£000
Value of liabilities at the beginning of the period	16,405	13,990
Past service cost	-	-
Interest on liabilities	203	276
Benefits paid	(340)	(333)
Experience (gains) / losses on liabilities	(264)	-
Changes to demographic assumptions	53	-
Changes to financial assumptions	(839)	2,472
	<hr/>	<hr/>
Defined benefit obligation at end of period	15,218	16,405
	<hr/> <hr/>	<hr/> <hr/>

	2021	2020
	£000	£000
Actuarial gains / (losses)	1,191	(1,316)
	<hr/> <hr/>	<hr/> <hr/>

The annual contribution level for the period 1 February 2022 to 31 January 2023 will be increased in line with the new Recovery Plan from £275,724 to £320,000.