

Institution of Railway Signal Engineering

England & Wales · Charity number 1046999

Details

Other names THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS, I R S E

Status Registered

Legal form Charitable company

Company number [00125685](#)

Registered 1995-06-06

Register [View on the Charity Commission register](#)

Contact

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Activities

Objects: A) THE ADVANCEMENT FOR THE PUBLIC BENEFIT OF THE SCIENCE AND PRACTICE OF SIGNALLING (WHICH SHALL MEAN THE WHOLE OF THE APPARATUS, ELECTRICAL, MECHANICAL OR OTHERWISE, METHODS, REGULATIONS AND PRINCIPLES WHEREBY THE MOVEMENT OF RAILWAY OR OTHER TRAFFIC IS CONTROLLED) BY THE PROMOTION OF RESEARCH, THE COLLECTION AND PUBLICATION OF EDUCATIONAL MATERIAL AND THE HOLDING OF CONFERENCES, SEMINARS AND MEETINGSB) THE MAINTENANCE OF HIGH STANDARDS OF PRACTICE AND PROFESSIONAL CARE AMONGST THOSE WORKING WITHIN THE INDUSTRY AND PROMOTION OF IMPROVED SAFETY STANDARDS FOR THE PROTECTION OF THE GENERAL PUBLIC

Activities: World-wide professional engineering institution, licensed by the Engineering Council UK, for railway signal, telecommunication and other engineers and operators involved or interested in railway signalling, control and communications.

Classification

- **How:** Provides Services, Provides Advocacy/advice/information, Sponsors Or Undertakes Research, Acts As An Umbrella Or Resource Body
- **What:** Education/training
- **Who:** Other Defined Groups, The General Public/mankind

Geography

- Argentina
- Australia
- Austria
- Belgium
- Botswana
- Brazil
- Canada
- Chile
- China
- Czech Republic
- Denmark
- Eswatini
- Finland
- France
- Germany
- Greece
- Hong Kong
- Hungary
- India
- Indonesia
- Ireland
- Israel
- Italy
- Japan
- Latvia
- Luxembourg
- Macau
- Malaysia
- Netherlands
- New Zealand
- Nigeria
- Northern Ireland
- Norway
- Portugal

- Qatar
- Romania
- Saudi Arabia
- Scotland
- Serbia
- Singapore
- South Africa
- South Korea
- Spain
- Sweden
- Switzerland
- Taiwan
- Thailand
- Trinidad And Tobago
- United Arab Emirates
- United States
- Zambia
- Zimbabwe
- Throughout England And Wales

Finances

Period end	Income	Expenditure	Assets	Employees
2024-12-31	£1,446,165	£1,444,806	£1,995,248	13
2023-12-31	£1,250,301	£1,265,654	£1,905,124	13
2022-12-31	£1,152,004	£1,216,729	£1,814,826	12
2021-12-31	£918,851	£999,540	£2,297,179	10
2020-12-31	£886,353	£931,939	£2,119,762	10

Trustees

Name	Role	Appointed
Bernardus Johannes Van Schijndel		2024-05-24
Bogdan Godziejewski		2018-04-27
Christian Glaetli		2025-04-24
Desirae Faber		2024-10-07
Gordon Bik Shun Lam		2020-04-23
Harvinder Singh Bhatia		2020-04-23
Ian James Allison		2019-04-26
Ir Nin Sang Henry Cheung		2026-04-22
Jane Copperthwaite		2021-10-07
Jane Elizabeth Power		2017-04-21
Jeetendra Gautamchand Dhelaria		2023-04-28
Jeremy Morling		2025-04-24
Keith Upton		2019-04-26
Mahesh Gadge		2024-04-25
Martin Ramzi Fenner		2024-04-24
Paul Darlington		2026-04-22
Paul McSharry		2018-04-27
Peter Pequignot Gracey		2022-04-21
Pierre-Damien Jourdain		2024-04-24
Professor Roderick Muttram		2019-04-26
Robert Lord Cooke		2020-04-23
Roy Andrew Brammer		2023-04-28
Stephen Allday		2024-04-24
Stephen Walter Boshier		2016-04-22
Yousef Kimiagar		2023-04-28

Institution of Railway Signal Engineering

England & Wales - Charity number 1046999

Accounts

IRSE ///

Institution of Railway Signal Engineers

Annual Report

Number 112

1 January to 31 December 2024

Contents

This Annual Report briefly describes the activities undertaken by the Institution of Railway Signal Engineers (IRSE) throughout the world during 2024. Our president from April 2024 has been Jane Power FIRSE from the UK.

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For up to date information about the Institution or its activities, or to download a membership application form, visit the IRSE website www.irse.org.

IRSE, 1 Birdcage Walk, Westminster,
London, SW1H 9JJ, United Kingdom



Institution of Railway Signal Engineers

An introduction from our President

As the 100th president, my presidential theme is 'Power to the people'. Even though technology is getting smarter and we are introducing more automation, engineers are still crucial. We need smart engineers to understand the capabilities and constraints of the new technology in order to maximise its potential. Just as importantly, we need to understand where technology can't be trusted and how we can still achieve the levels of safety and security needed.

One of the first things I organised was an in-person seminar on Artificial Intelligence (AI) in Railways – as news of the technology seems to pervade all industries it felt appropriate to explore whether it was a real proposition for railways. We had professors from universities and representatives from software development companies as well as railway professionals presenting on the topic. Many of the talks addressed the issues of safety and assurance of machine learning or AI generated systems as well as real-world applications. It was a very interesting and informative day. Sales of the recording went live in the latter half of the year (irse.info/aivideo).

Engineers who know 'why' we do things and not just 'how' are more important than ever, so that lessons from the past are not forgotten. With more automation there could be a tendency to use processes without fully understanding them, so we must work hard to retain this vital knowledge in the industry. The title for my presidential lecture series is 'Unsung heroes' and there were seven lectures delivered in 2024 (see page 14). In addition, as part of the series, we released a video of a test weekend on the London Underground 4 Lines Modernisation programme – by Lee Tarr. These have highlighted where people are carrying out vital roles in the industry that perhaps we don't usually celebrate. They are all on the IRSE vimeo channel at irse.info/unsungheroes

In August 2024 the IRSE Convention, held in Toronto, was a great success. There is a full report on page 16. It was a week-long event where many members enjoyed a seminar day and technical visits focusing on railways and projects in Canada and North America. The seminar day is now available free to watch online on the IRSE's vimeo channel at irse.info/torontovideo

In the vote at the AGM on 25 April, the results were overwhelmingly in favour of applying for the IRSE to have a Royal Charter. Building on our continuing commitment to excellence, Royal Charters are reserved for bodies which



work in the public interest and are able to demonstrate pre-eminence, stability and permanence in their particular field. Achieving such status further recognises and endorses the talent and expertise of our membership. It is not a fast process but progress is being made towards the formal application.

Last year saw the 35th anniversary of the Clapham Junction railway accident in London, UK. It was one of the worst accidents in the UK's railway history and it was the catalyst for the introduction of the IRSE Licensing scheme. The Licensing scheme has now been running for 30 years. It is a highly respected scheme that has served the industry well. I am leading the team to review the scheme, we have created a survey that we are aiming to share with as many people as possible, including all licence holders, to get honest feedback on the scheme.

In 2024 the Council approved the formation of the technical department – this is headed by Judith Ward and is dedicated to engaging directly with industry, government departments, academic institutions and stakeholders around the world. The pilot event is planned to be a symposium in the UK on the perceived rise of failures. Planning is underway for the IRSE to reach out to partner organisations.

The third annual IRSE Strategy Day was held in Toronto and while we caught up with the task and finish groups set up in 2023, we also debated the IRSE strategy going forwards. Plans are in place to crystallise the output from the day into a new strategy leading us to 2030. More information can be found on page 5.

The Equality, Diversity and Inclusion group continues its work to develop policy for the IRSE, refer to page 7.

In memory of past president Eddie Goddard, we launched the Younger Members' Systems Engineering short papers competition, and the first winner will be announced at the AGM in 2025.

Steve Boshier's presidency spanned the first quarter of 2024. He completed his programme of visits to IRSE sections and businesses within New Zealand, Australia and the UK. His presidential theme of 'Global Integration: people, process and technology' resonated with members, companies and organisations around the world, and has ensured that we are better connected.

Whilst in New Zealand, Steve met with CRL, Kiwi Rail, Auckland Transport, Siemens Mobility, JMDR, WSP, Aurecon, and Arup to promote the benefits of the IRSE whilst developing a broader networking support. In Wellington, meetings were held with IRSE younger members to promote training and education within the profession and to gain the support of their companies.

In March, Steve attended the Australasian Section AGM and Technical Meetings in Brisbane where he presented on his presidential theme and progress that had been made during his time as president. He also presented several awards to members present at the meetings.

With the training, education, and technology being key pillars supporting Global Integration, meetings were also held in Newcastle, Australia with Competency Australia to view their training facility. A visit was made to Siemens Mobility in Chippenham, UK, to view technology developments and to discuss IRSE Licensing and support of the industry required. To round off his year, Steve met with the global office team in London to thank them for their ongoing support.

Finally, throughout the year I have been engaging with as many local sections as possible, to keep in touch with the worldwide membership. I would like to thank the sections for making me so welcome. It is great to see that so many of the sections are thriving and organising interesting and informative presentations and site visits. These really are the beating heart of the IRSE.

Jane Power, president 2024–2025.

Charitable objects of the Institution

The Institution’s charitable objects are recorded in its Articles of Association. They can be traced back to the formation of the Institution in 1912 and are:

- a) The advancement for the public benefit of the science and practice of signalling by the promotion of research, the collection and publication of educational material and the holding of conferences, seminars, and meetings, and
- b) The maintenance of high standards of practice and professional care amongst those working within the industry and the promotion of improved safety standards for the protection of the general public.

Although it might appear that the IRSE is concerned only with railway signalling, the full text of the objects makes clear that all forms of train control and traffic management, and communications systems, are all within our scope of interest.

There is a clear emphasis in the objects on ‘public benefit’. This is most obvious in the sense of contributing to safety on the world’s railways, where train control systems play a critical role. But we are also interested in ensuring that railways are efficient, cost-effective, and sustainable (in the widest sense).

We meet our obligations to the public through the following principal mechanisms:

- The dissemination of knowledge, experience, and good practice in the fields of railway signalling, control and communications and allied topics, to help ensure that those working in the profession do so with the best available knowledge for the safe, efficient and cost-effective construction and operation of the world’s railways;
- The delivery of examinations at certificate and advanced level which contribute to the assurance of knowledge gained. In addition, through the application of the Engineering Council UK licenses the assessment and entry of Chartered, Incorporated and Engineering Technicians onto the Register of Professional Engineers;

- The provision and management of the IRSE Licensing Scheme to assure the competence of those working in the profession. The Scheme is focussed predominantly, but not exclusively, on ensuring safety in the design, construction, testing and maintenance of signalling and telecommunications systems;
- Our Code of Professional Conduct, with which IRSE members are required to comply in the course of their work. It emphasises topics such as personal responsibility for work undertaken or managed by IRSE members, the importance of safeguarding the public interest (particularly safety), environmental management, the efficient use of resources, handling conflicts of interest etc.
- Undertaking specific initiatives to help ensure the safety and efficiency of railways.
- By bringing the IRSE sections around the world together, we will facilitate the sharing of best practice and new initiatives to help engineers and others enhance their knowledge and professionalism. We will continue to reach out and grow our network of professionals around the world to harness the collective knowledge they possess for the benefit of all operators and users of railway transport.

The financial resources of the Institution are applied to achieve the objects of the Institution, in addition to which members make a significant contribution to delivering the Institution’s aims by their volunteer activities. The Institution has only a small number of full and part- time staff and most of the activities are organised by our members acting in a voluntary capacity.

Reported on other pages in this report is the Institution’s intention to petition for a Royal Charter. The charitable objects of the Institution will not be changed because of this action. It is expected, however, that the gaining of a Royal Charter will help to increase the influence the Institution has on the global stage.



Our Strategy

Our five-year strategy document 'Beyond a 2020 vision' is coming to the end of its period. As a result, work began at the IRSE Council strategy day to begin to draft the strategy for 2025 and beyond. Currently under the working title of Horizon '25 this document will set out the direction of the Institution for the next five years taking us to 2030. Many of the objectives which were set in Beyond a 2020 vision have been delivered or will be by the end of 2025.

As a result, a new set of milestones and targets will form the backbone of the new strategy document. Key elements will still address the main charitable objects of the IRSE. Focus on giving more people access to the information provided by the Institution for all those who have an interest in safe and efficient railways will continue to be a main driver for the IT systems. Enhanced communications, taking advantage of improvements in intelligent systems will contribute to this goal. This annual report elaborates on the work we continue to do to facilitate more access to the vast wealth of knowledge that exists within our global membership.

Our engagement with international members has grown through international travel by the presidential team and the executive. This has led to important discussions on how we can better serve the growing numbers of members in what currently stands at 58 countries around the world.

There is strong commitment from staff and volunteers, and this has resulted in a growth in our operational areas aligned with our key focuses of Engage, Grow, Develop, Network and Assure. A study of the key indicators within this report will show an increase in all these areas. Building on the study of the international workforce in train control, there is a



greater outreach to a wider audience. As a result of a better understanding of the markets we are operating in, we can target specific groups and respond to requests to engage with different bodies. The development of an International committee of senior leaders in the sector is a direct result of this work.

Following the agreement of the membership to increase the standing of the IRSE in political circles by petitioning for a Royal Charter, work on this will continue into 2025.

While the Horizon '25 document is being drafted, the Beyond a 2020 vision document remains in action and the key elements can be seen in the infographic at the bottom of the page.

The IRSE International Convention in Canada gave attendees the opportunity to get a closer look at how the work of the IRSE is impacting the skills and knowledge of the sector in a practical setting. Later in the report there will be information regarding the impacts of our international engagement on competence development, including work with the Australian engineering licensing authority, and Indian railways.

The five key elements of the IRSE strategic plan are



Engage

Digital platform for a global professional body 24/7/365, early careers support, communicate best practice in ethics, diversity, inclusivity, produce technical documentation, knowledge transfer activities.



Grow

Peer recognition, professional development, practice support and guidance, support in professional obligations, Advance profession.



Network

Global local section development, International Technical Committee support, conferences, seminars and conventions, facilitate collaboration, latest information and news.



Develop

Signpost professional development, awards & bursaries, upskilling and re-skilling, examination, apprenticeships, promote benefits to the public.



Assure

International professional recognition, flexible pathways to professional registration, offer regulation in professional conduct, operate the licensing scheme.

Governance

Council

The IRSE is governed by an elected Council of 18 Corporate members, together with the presidential team and two co-opted past presidents, who are the trustees and directors of the Institution. The president takes the role of chair of Council. The full list of Council members for 2024 can be found on page 19.

Seven meetings of the Council were held during the year in which the business of the Institution was conducted. In addition, the Council held a strategy day on 25 August prior to the start of Convention '24 in Toronto.

To assist members of Council in different time zones to attend meetings, start times are adjusted so that not all meetings are held during UK business hours.

Although this was to improve attendance for international members, the numbers attending are not as high as previous years. This has been addressed through the publication of a code of conduct for Council members which will be adopted in 2025 when the new Council takes their seats. This code of conduct will set out the expectation of members who represent those who have elected them to office, including regular attendance at meetings.

The Articles of Association permit the current chairs of all local sections, principal committees and country vice-presidents to attend Council meetings as

observers. During the year several chairs and country vice-presidents attended meetings all of which were conducted via video conferencing. The strategy day was a mixture of face to face and online discussion. That meeting was only for Council members.

In addition to conducting all the normal Council business during the year, Council discussions included the following topics:

- The application for recognition as a Chartered Professional Body, in line with the increased standing of the Institution in an international capacity.
- Monitoring the implementation of a trial of the role of the regional section leader.
- Receiving the work of the various Council mandated working groups including Equality Diversity and Inclusivity, Volunteer recruitment, Fees working group and the newly renamed Governance oversight Committee formerly the Governance working group by the Council portfolio holders.
- Monitoring the succession plan for the office of president.
- Advising on the legal challenge to the PWI rebrand to the Institution of Railway Engineering.

Council also receives and reviews the annual report from each of the international sections of the IRSE.



irse.info/governance

Committees

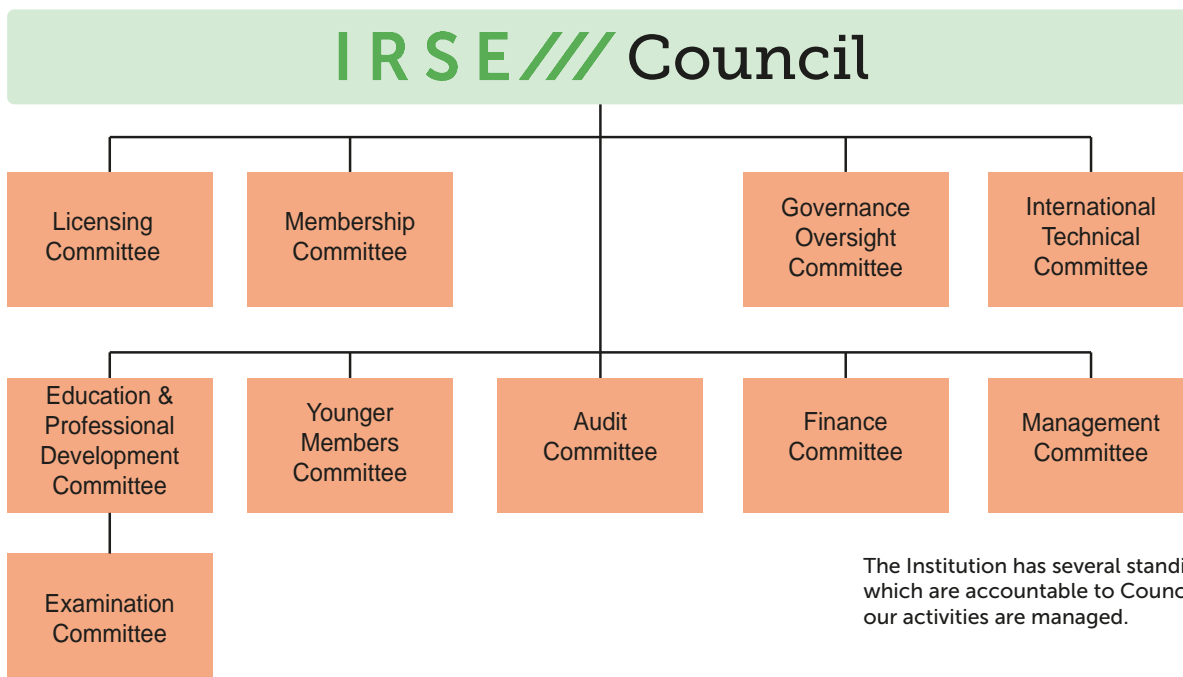
The Institution has several standing committees which are accountable to Council, through which our activities are managed. The principal committees and their relationships to Council are shown in the diagram below. In addition, task and finish working groups are formed from time to time which focus on specific areas of interest.

To assist in driving key areas of the Institution members of Council are allocated portfolios of responsibility.

External audit

Several areas of the Institution's business are audited on a regular basis by various external audit bodies:

- All areas of finance are subject to audit annually by independent external auditors who submit their report to the Annual General Meeting.
- The Licensing Scheme is subject to an annual external audit by the United Kingdom Accreditation Service (UKAS).



The Institution has several standing committees which are accountable to Council, through which our activities are managed.

- As a registered Charity, the Institution is subject to periodic external review by the Charity Commission.
- As the Institution is licensed by the Engineering Council in the UK to register Chartered and Incorporated Engineers and Engineering Technicians, it is subject to a review every five years by the Engineering Council to ensure compliance with their registration standards.

Internal audit

The IRSE’s internal Audit Committee undertakes independent audits to complement the external audits, to ensure the Institution is running efficiently and effectively. The audits focus primarily on the role and remit of each of the principal committees of the Institution.

The Audit Committee normally performs two audits per annum. Each audit results in a report, which is presented to the chair of that committee, the chief executive and subsequently the Council, which uses the recommendations to improve the management of the Institution’s affairs for public benefit and for the benefit of its members. The Institution maintains a risk register, which is reviewed annually by Council, and this is used as the basis for audit.

IRSE Enterprises

IRSE Enterprises Ltd is the trading company wholly owned by the Institution. The trading company handles several activities which are associated with but outside the direct scope of the charity.

The board is made up of representatives of Council and is chaired by the immediate past president.

The directors of the company appointed for the year April 2024 to April 2025 were:

- Chair (immediate past president): Steve Boshier FIRSE
- President: Jane Power FIRSE
- Senior vice-president: Bogdan Godziejewski FIRSE
- Junior vice-president: Rod Muttram FIRSE
- Junior vice-president: Harvinder Bhatia FIRSE
- Chair of Finance Committee: Andy Knight FIRSE
- Licensing Committee Representative: Paul McSharry MIRSE
- IRSE treasurer: Andrew Smith FIRSE
- Company secretary (CEO): Blane Judd

Profits from the company when generated are gift-aided back to the Institution.

Sections

The IRSE sections around the world exist by authority of the IRSE Council, and they operate in accordance with a set of Articles of Association (or Bye-laws) that have been approved by Council. At the end of 2024 there were 23 sections in total, 15 sections outside the UK in various parts of the world (Australasia, China, France, Hong Kong, Indian, Indonesia, Ireland, Japan, Malaysia, Netherlands, North America, Singapore, Southern Africa, Switzerland, Thailand) and six UK-based. The North America Section includes the USA, Canada, and Mexico. The Irish Section includes both Northern Ireland and the Republic of Ireland.

Two other sections also exist – the Younger Members’ Section and the Minor Railways’ Section. These are not geographically based, and their activities are predominantly within the UK, although work is being undertaken to extend this internationally where geographical sections also have younger members’ groups.

Each section has an organising committee, with elected officers for key roles.

Equality, Diversity, Inclusivity

The IRSE Equality, Diversity, and Inclusivity (EDI) Group, chaired by IRSE junior vice president Harvinder Bhatia FIRSE, has been meeting regularly to formulate an approach towards developing the IRSE’s vision, strategy, and plan for EDI.

This is important for the IRSE so that it is able to attract and retain members from diverse groups – both nationally and internationally – including those who may previously have had challenges joining professional institutions.

Through this, the IRSE aims to create a sense of belonging for its members and stakeholders. An initial EDI culture survey was sent to IRSE section committees last year to gain insight around the key issues from their perspectives.

The EDI Group also became aware of the Royal Academy of Engineering’s Diversity & Inclusion (D&I) Progression framework which is made available to professional institutions to measure EDI maturity. Council endorsed a recommendation from the EDI Group

to adopt this framework and use it to develop the IRSE’s vision, strategy, and plan for EDI. The framework looks at progress in 10 key areas, in terms of four levels of good practice.

The framework has initially been applied to five areas: governance and leadership; membership and professional registration; meetings, conferences and events; education and training, accreditation, and examinations; and prizes, awards, and grants.

The EDI Group concluded that whilst the IRSE is predominantly at level 1 in these areas, there are pragmatic actions that we can take to improve.

Just a few of the examples of some of the initial actions identified are:

- Updating the existing IRSE statement on EDI to ensure our vision and ambition is made clear.
- Making the process of appointment to leadership positions clear and transparent.



- Requiring committees to actively consider how they can increase diversity of their membership.
- Gathering data on the demographics of the organisation and its leadership across all IRSE committees. Also gathering data to understand the current position in relation to EDI items so that we can establish where we need to improve.
- Increasing diversity of speakers and attendees at IRSE conferences events.

Work on this important area of the Institution’s development continues, and we will continue to keep members informed of our progress.

Professional development

A key objective of the IRSE is to support the professional development of IRSE members, prospective members and licence holders. To do this, we have the Education and Professional Development (E&PD) committee and the Examination committee working with Judith Ward FIRSE, our head of technical, and Zachary Smythe, our professional development officer.

E&PD Workplan

The E&PD committee is now working to the workplan derived from feedback from the membership.

There are 31 specific initiatives aligned to the IRSE’s strategic goals which are designed to:

- Improve the availability and accessibility to technical knowledge.
- Increase engagement with younger engineers.
- Reduce the UK centric focus in the committee’s work and membership.
- Provide increased learning opportunities.
- Continually review and improve the content, profile and governance of the IRSE examinations.

The E&PD committee is primarily made up of volunteers and this limits the volume of activities that can be delivered. Anyone who would like to get involved in delivering the committee’s work is welcome to contact the secretary via contact@irse.org

IRSE Professional Examination

The IRSE Professional Examination, now known as the Advanced Diploma in Railway Control Engineering, is a Masters-level academic qualification which tests knowledge and understanding of railway systems with a particular emphasis on safety. Successful exam candidates must pass all four mandatory modules.

Passing the IRSE Advanced Diploma is one route to obtain Corporate membership of the IRSE and it can ‘top up’ engineering or technology qualifications for professional registration with UK’s Engineering Council.

The Certificate in Railway Control Engineering Fundamentals covers all aspects of railway control engineering at a foundation level. It is a stand-alone qualification as well as a mandatory module for anyone wishing to pass the Advanced Diploma. It is a valuable qualification for those in the railway control systems industry – for new entrants and those wanting to demonstrate their wider knowledge, as well as for those who are outside our industry – those working in other interfacing disciplines and those who are interested in potentially joining the industry. Candidates for the Certificate do not have to be IRSE members. Passing the IRSE Certificate is one route to becoming an Accredited Technician or Associate Member.

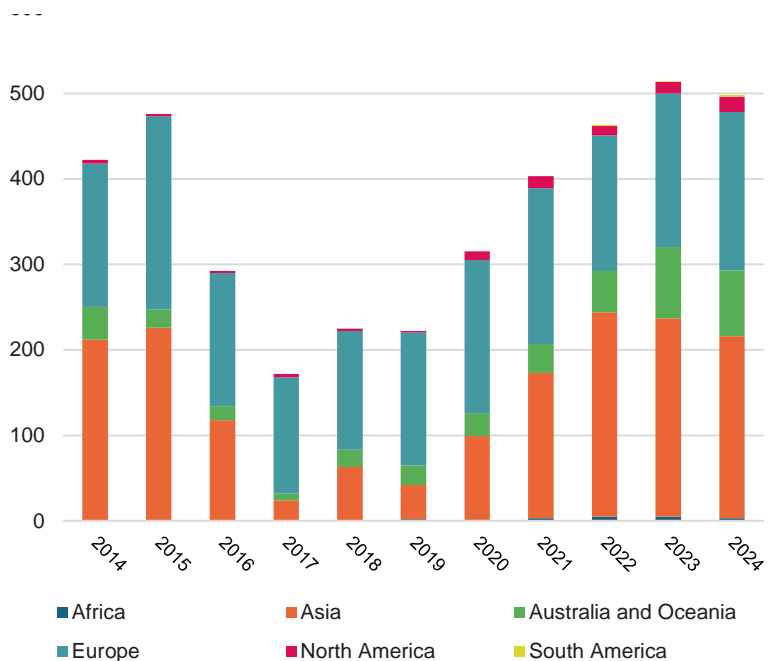


Exams were held in 2024 on Saturday 23 March (Certificate only) and Saturday 5 October (all modules). Most exam candidates are now outside Europe, reflecting the continued global diversity that this core activity of the IRSE now achieves. All exams were held online again, with candidates monitored by remote invigilation software and answers checked by anti-plagiarism software.

The quality of answers from candidates was good, with the overall percentage of those achieving pass grade or higher in the Certificate was 68% in March and 59% in October, remaining with the norms, and for Modules B-D was 50%.

Yet again for the Certificate, not only was the number of non-UK candidates significantly higher than UK candidates, but also the number of IRSE non-members who passed was higher than IRSE members.

Looking at exam entries by continent 2014 to 2024 shows the breadth of appeal of our qualification.



All non-members who sit the Certificate are encouraged to become members, particularly those who have passed.

Many volunteers run exam study groups, the independent exam forum website and support the younger members' exam workshops to provide support for prospective examination candidates. All these continued to be run throughout 2024, some in-person, hybrid, or online.

The E&PD committee extends its thanks to all those who contributed significant amounts of time and efforts to these various learning opportunities.

Continuing Professional Development (CPD)

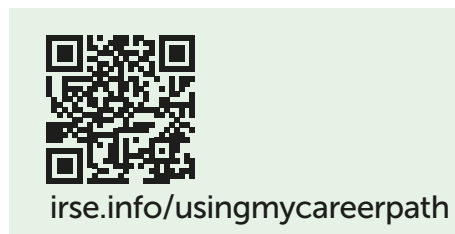
The Engineering Council requires that as of 2020, those who do not engage in the CPD monitoring process are removed from their register. Monitoring took place during 2024 of randomly chosen members for their CPD activities in the previous year.

Information about the importance of developing and maintaining members' professional competence through CPD has continued to be provided through IRSE News and the website.

The IRSE recommends the use of the Engineering Council 'Mycareerpath' system for CPD planning, recording, reflecting and reviewing. More information about Mycareerpath is available on the IRSE website, irse.info/usingmycareerpath

Certified courses

The IRSE offers a process by which training providers can have their courses assessed and certificated by the IRSE. Some training providers are in the process of having their signalling and telecommunications courses assessed, and RT-Infrastructure and Wray Castle had their courses certified in 2024.



Learning materials

The IRSE publishes a number of textbooks which are useful to IRSE members and non-members for their study and information within railway control and communications systems. A textbook synopsis is published on the website (covering 15 volumes) is to help people find the most suitable textbook(s).

Licensing

The IRSE Licensing Scheme provides assurance about the competence of individuals to carry out technical safety critical or safety-related work on rail control systems.

During the year, there were some changes to the licensing staff. Roger Button retired in February 2024, and Jahanara Khatun joined the team as a licensing administrator in April, replacing Lise Marie Ake-Danho.

The Licensing team continues to work closely with the Licensing Committee, which is now chaired by Andrew Simmons following the retirement of Colin Porter HonFIRSE (see page 11).

In 2024 a total of 1747 licences were issued, which is an increase of 417 on the previous year. As of December 2024, there were 5,856 active licence holders, which represents an increase in the total number of licences held in December 2023 (5,678).

The Licensing Scheme holds full accreditation by the United Kingdom Accreditation Service (UKAS) for all its operations and was satisfactorily audited by UKAS in April against the competence standard for bodies involved with the certification of persons: ISO17024:2012.

IRSE Assessing Agents are approved and appointed for the purposes of performing assessments of candidates for licences, and they are an essential



part of the Licensing Scheme. The number of approved assessing agencies now stands at 23 as we now have two new assessing agencies, Metro Trains Australia (MTA) and NILA.

RailTel in India and TPS have also now applied to open agencies.

IRSE volunteers

Our volunteers have continued to support the institution throughout 2024, giving their expertise, time and enthusiasm. Areas of this work include, but are not limited to: local section committees; organisation of Toronto International Convention 2024; annual dinner; the International Technical Committee; running study groups, being on and contributing to Council; exam question setting and marking; reviewing

applications for professional registration; and writing, producing and editing IRSE News and textbooks.

Our volunteers develop useful skills, knowledge, experience and networking contacts through the work which they do for the Institution which they may not get the opportunity to gain within a work environment. If you are interested in becoming a volunteer for to the IRSE,

please contact your local section or contact@irse.org saying how you would like to contribute.

Thank you, to all our IRSE volunteers, you are an essential part of our institution, without whom the Institution would not be able to perform all its duties, supporting the governance, running and reputation of the IRSE locally and nationally.

Membership and Registration

Membership and Registration committee meetings and professional registration interviews continue to be held online using Microsoft Teams. We have 15 members of the committee and 14 active professional registration assessors, some of whom also sit on the Membership and Registration Committee. The time, commitment and contribution of all involved is invaluable to the membership and registration process and is much appreciated. We actively welcome additional volunteers to support the process.

The Membership and Registration team continues to improve and strengthen processes to ensure that the data we hold for our members is as accurate as possible. We continue to improve our subscription collection processes so that the Institution can continue to support its members in the best way possible and continue to improve the services it provides.

Membership

The total membership of the Institution increased by 17 over last year's reported figure, with 5,156 members as of 31 December 2024 across 58 countries, 51% of members are within the UK and 49% are overseas.

We have processed 329 successful new membership applications during 2024, 157 for corporate grades and 172 for non-corporate grades. However, unfortunately 21 of the 329 new and a further five from 2023, members failed to pay their first membership subscription, despite several reminders, resulting in their membership being terminated, 21 were non-corporate and five were a corporate grade.

The final number of new members joining the IRSE over the year was therefore 308 (152 corporate and 156 non-corporate).

In addition to the new members detailed above there were 76 successful applications from existing members transferring to a higher grade of membership.

During 2024 the IRSE Council received and supported nominations for transfer of two existing members to the grade of Honorary Fellow (HonFIRSE). These were Hedley Calderbank HonFIRSE and Colin Goodman HonFIRSE.

The IRSE Council has also approved nominations for a further two Companion members bringing the total number to 21. These were Richard Leary – CEO of the Toronto

Transit Commission (TTC); and Sanyawit Aphichatapong – deputy chief signalling engineer for the State Railway of Thailand (SRT).

In February 2024, 176 memberships were terminated due to non-payment of the 2023/24 membership subscription. However, seven memberships were then reinstated following late payment of their subscription and a further four after payment of current and previous years subscriptions.

There were 106 membership resignations over the year, including one member who joined and resigned in 2024. We track and report the reasons for resignation which continues to be primarily due to retirement from the industry or people changing direction in their careers.

The Institution was sad to report the deaths of 17 members during 2024, these are listed below. Many were strong supporters of the Institution, including three IRSE past presidents, who had held membership for a considerable number of years, eight of whom had held membership for more than 50 years. In various ways they had all made significant contributions to the Institution's work and will be missed.

- Robert Henry Blyth FIRSE
- Willem (Wim) Jan Coenraad HonFIRSE
- Alex John Daley AMIRSE
- Marmaduke Westell Dodds (Affiliate)
- Robert Edward Duffy MIRSE
- William Ronald Farrow-Smith (Affiliate)
- Geoffrey (Ian) Foster FIRSE
- Richard Griffin AMIRSE
- Edward Peter Ashley Holman FIRSE
- Trevor Richard Lampen FIRSE
- Malcolm Lionel Menadue HonFIRSE
- John Richard Sadler FIRSE
- Peter William Stanley CEng HonFIRSE
- John Adrian Sweet (Affiliate)
- Guy Whaley FIRSE
- Stephen Glenn White MIRSE
- Francis Philip Wiltshire CEng HonFIRSE

Membership by grade at 31 December 2024.

Membership grade	Members
Affiliate	1283
Accredited Technician	179
Associate Member	1088
Member	1961
Fellow	567
Honorary Fellow Corporate	55
Honorary Fellow Non-Corp	2
Companion	21



irse.info/membership



irse.info/proreg

Professional registrants

The total number of members holding professional registration with the Engineering Council, the UK regulatory body for the engineering profession, increased by 44 over last year's reported figure, with 498 members holding professional registration as of 31 December 2024.

During 2024 the Institution has supported a further 52 engineers to achieve their professional registration goals – 12 Chartered Engineers (CEng), nine Incorporated Engineers (IEng) and 32 Engineering Technicians (EngTech). In addition, we have had six members transfer their registration from another institution to the IRSE, five CEng and one EngTech, and one existing IEng member transfer to CEng. In 2024 12 members lost their registration due to resignation or non-payment of subscriptions – four CEng, two IEng and six EngTech. There were also two CEng members who have sadly passed away.

On 31 December 2024, the Membership and Registration team were supporting a further 135 applicants who were at various stages of their professional registration journey.

Professional registrants at 31 December 2024.

Professional title	Members
CEng	197
IEng	104
EngTech	197

Awards

The IRSE makes several awards each year which recognise, reward and celebrate excellence, inspire colleagues and encourage the professional development of engineers, particularly

those in the early stages of their careers and promote the Institution within train control and communication systems engineering.

A number of the awards are presented by the presidential team at the annual member's lunch.

Special Lifetime Achievement Award

Colin Porter

The IRSE Council unanimously resolved to present Colin Porter HonFIRSE with the first-ever Special Lifetime Achievement Award for his decades of exceptional service.

Colin began his S&T career in 1968 as an engineering scholar with British Rail and joined the IRSE in 1969. His contributions started in the 1970s when he joined the Student and Graduate Committee. He became a Graduate Member in 1974, received a

Thorrowgood scholarship in 1975, and became a Member in 1981. Elected to Council in 1983, he implemented the IRSE's first computerised membership records system.

As a Fellow and treasurer, he introduced the Institution's first computerised financial records in 1986. In 1991, he chaired the Licensing Subcommittee, developing the IRSE Licensing Scheme after the Clapham accident, launching it in 1994.

Colin served on key committees, including Management, Finance, Membership, and Licensing. In 2005, he was a founding Director of IRSE Enterprises Ltd. Elected IRSE President in 2003, he remained on Council until 2006 before becoming Chief Executive and General Secretary (2006–2015).

He was made an Honorary Fellow in 2007 and awarded the President's Medal in 2015. From 2015 to 2024, he chaired the Licensing Scheme.

Dell Award

Byron de Lange

The Dell Award is made annually under a bequest of the late Robert Dell OBE (past president). It is awarded to a member of the Institution employed by London Underground (or its successor bodies) for achievement of a high standard of skill in the science and application of railway signalling. The award takes the

form of a plaque with the recipient's name engraved upon it.

Byron de Lange AMIRSE was the recipient of this award for 2024. He began his career in 2014, joining Transnet's signalling design office in Durban, South Africa. After eight years at Transnet Byron was appointed as a

senior signal engineer for Equipment Engineering Services at Transport for London. Since then, he has supported signal operations, undertaking a wide range of projects to improve overall system reliability and performance which have delivered clear benefits to Transport for London and its passengers.

IRSE-Signet Award

Scott Cadzow

The IRSE-Signet Award is made annually to the candidate who achieves the highest marks in any single module of the Exam (modules B, C or D). The Award is made jointly by the IRSE and Signet Solutions Ltd and was introduced on the 20th anniversary of the formation of the company. The winner receives an

trophy and £1500 funding to support attendance at the annual International Convention or ASPECT conference.

This year's winner was Scott Cadzow MIRSE, a principal signalling engineer with Network Rail. Scott joined Network Rail in 2008, working in a number of

signalling and maintenance roles before moving to asset management last year.

Scott has completed the Certificate in Railway Control Engineering Fundamentals (Module A) and Railway safety and systems engineering (Module B) of the Advanced Diploma in Railway Control Engineering.

Thorrowgood Scholarship

Jennifer Kirk

The Thorrowgood Scholarship is awarded under a bequest of the late W J Thorrowgood (past president) to assist the development of a young engineer employed in the signalling and telecommunications field of engineering. The award is made to a candidate who has excelled in the IRSE professional examination and comprises of an engraved medallion and funding for a study tour of railway

signalling installations or signalling manufacturing facilities

Our winner this year was Jennifer Kirk AMIRSE who joined the railway as a Year-in-Industry student whilst studying at Manchester University. She returned to Network Rail, becoming an assurance analysis specialist, during which time she completed an MSc in Railway Systems Engineering and Integration at the University of Birmingham.

Jennifer is currently a senior project engineer on the TransPennine Route Upgrade ETCS project. In the IRSE professional examination, she earned a distinction in Module C and a pass in Module D in October 2023, following credits in Module B (October 2022) and the Certificate in Railway Control Engineering Fundamentals (Module A) (March 2022).

Frank Hewlett Bequest and Alan Fisher Memorial Fund

Hewlett Fisher Bursaries are awarded annually to enable IRSE early careers members to travel to the international Convention or ASPECT conference in the year. They are made through a bequest of the late Frank Hewlett (IRSE member) and a fund established in the memory of the late Alan Fisher, who died during his IRSE presidential year. A number of bursaries are awarded each year and provide funding towards travel and accommodation.

Fifteen IRSE members in their early careers were awarded Hewlett Fisher Bursaries to attend Convention 2024 in Toronto: Davis Kitagawa AMIRSE, Rohit Yadav MIRSE, Yuk Fei Poon (Affiliate), Glenn Mitchell MIRSE, John Carter (Affiliate), Tiffany Wong AMIRSE, Anastasia Ivanova AMIRSE, Rushan Pun (Affiliate), Spoorthi R (Affiliate), Hanumesh Pujar (Affiliate), Harry Morgan (Affiliate), Wessel van den Brink AMIRSE, Pavitra Utlal (Affiliate), Jack Neil AMIRSE and Ben Stockton (Affiliate).



irse.info/awards

IRSE Companions

Richard Leary and Sanyawit Aphichatapong

IRSE Companions are persons who are, by their association with the profession, or through their occupation of a position of eminence, desirous of furthering the objectives of the Institution and (in the opinion of the Council) are worthy of such admission.

In 2024 Richard Leary, CEO of Toronto Transit Commission, and Sanyawit Aphichatapong, The State Railway of Thailand, were made IRSE Companions.

Honorary Fellows

Hedley Calderbank and Colin Goodman

IRSE Honorary Fellows are persons who, in the opinion of the Council, have rendered outstanding or exceptional services to the profession, or the Institution, or have furthered the objects of the Institution, and are deemed by the Council worthy of such admission.

Hedley Calderbank HonFIRSE

Hedley has been the strongest supporter for the development and evolution of Module A of the IRSE examination to become the Certificate in Railway Control Engineering Fundamentals. He has encouraged and numerous members to write exam

support materials and has written material himself.

He re-organised the structure of the Certificate to simplify preparation and presentation of relevant reading material and led the evaluation, selection and introduction of a new online question system for the exam.

Colin Goodman HonFIRSE

The IRSE received Engineering Council approval in 2000 to register members for professional registration (EngTech and IEng) and later in 2003 (CEng). Non-standard route applications, those

who do not follow the accredited degree programmes, are assessed on an individual basis by the Individual Case Panel (ICP). Colin has had a large part in these assessments and joined the ICP through his academic background at the University of Birmingham since 2009/2010.

Colin has also been involved in the set up and teaching of the Master of Science (Safety and Control Systems & Railway Systems Engineering and Integration) and the equivalence of the Safety and Control Systems MSc to the IRSE professional exam.

Merit Awards

Derek Hotchkiss, Rod Muttram, Frazer Howie and Michael Murphy

Nominations for IRSE Merit Awards are welcomed from IRSE members and section committees. They are made to an IRSE member, member of staff, or another person to recognise meritorious service to the IRSE. This could be by making a substantial contribution to the Institution's work over a period of time by organising activities or carrying out specific tasks which have furthered the IRSE's aims and objectives.

Derek Hotchkiss HonFIRSE

Derek has been an active member of the institution's examination committee since 1969. He has contributed to the setting of hundreds of exam questions and has undertaken the marking of thousands of written answers from candidates who have

sat the examination. Derek is one of the examiners aligned with the examination's Module C 'Principles of railway control and communication systems' and his work for the committee continues unabated.

Rod Muttram FIRSE

Rod has supported the London & South-East Section since its inception in 2018 as a committee member. He has arranged presentations, technical visits and supported the work of the committee. As a member of the IRSE's International Technical Committee he has contributed greatly to the academic resources of the Institution, delivering papers as part of presidential programmes and at ASPECT conferences and IRSE conventions.

Frazer Howie MIRSE

Frazer was presented with his Merit award in recognition of his tireless contribution to the Scottish Section as secretary over the past 10 years. Each year he takes an active role within the Scottish Section IRSE exam study group willingly sharing his own experience and knowledge with students.

Michael Murphy MIRSE

As events organiser Michael has been a key member of the IRSE Irish Section committee since its creation in 2014. Over the years, Michael has been a key driver in the organisation the annual dinner dance, technical papers, highly successful technical visits, Rivval Golf annual event and IRSE presidential visits.

Global office and personnel

The Institution continues to lease offices on the 5th floor of the Institution of Mechanical Engineers (IMechE) building at One Birdcage Walk, London, UK. It is from this self-contained space that the centrally organised activities of the IRSE are managed – membership and professional registration, licensing, IRSE exam and events administration as well as financial administration.

We continue to operate a hybrid working environment with staff spending time within the global office and working from home.

Chief executive

The chief executive and general secretary of the Institution is Blane Judd, a Chartered Engineer and Fellow of the Institution of Engineering and Technology. He is responsible for directing and managing the resources of the Institution to implement decisions of the Council in an efficient manner and in compliance with UK company and charity law. He is accountable to the Council and provides the focal point of contact for other institutions and external organisations, including the UK’s Engineering Council, the Royal Academy of Engineering, government agencies, the chief officers of other professional bodies, and the scientific, engineering and technology community. He is also responsible for ensuring

compliance with the requirements of the Institution’s Articles of Association, Companies House, the Charities Commission and relevant legislation. The chief executive is supported by a senior leadership team.

IRSE staff team

Our organisation structure as of 31 December 2024 is as shown in the chart below. There have been the following staff changes during 2024.

Role changes: In June Judith Ward, previously director of operations took on a new role as head of technical and reduced to three days per week; Polly Whyte moved from head of membership & registration to the head of operations role and reduced to four days per week and Sophie Hunter was promoted from membership & registration officer to head of membership & registration.

Joiners: Jahanara Khatun in April as licensing administrator (assessments); Parma Singh in July as membership & registration officer.

Leavers: Roger Button in February, previously licensing officer; Lise Marie Ake-Danho in March, previously licensing co-ordinator; Parma Singh in November, previously membership & registration officer;

Zachary Smythe in December, previously professional development officer.

Contract support

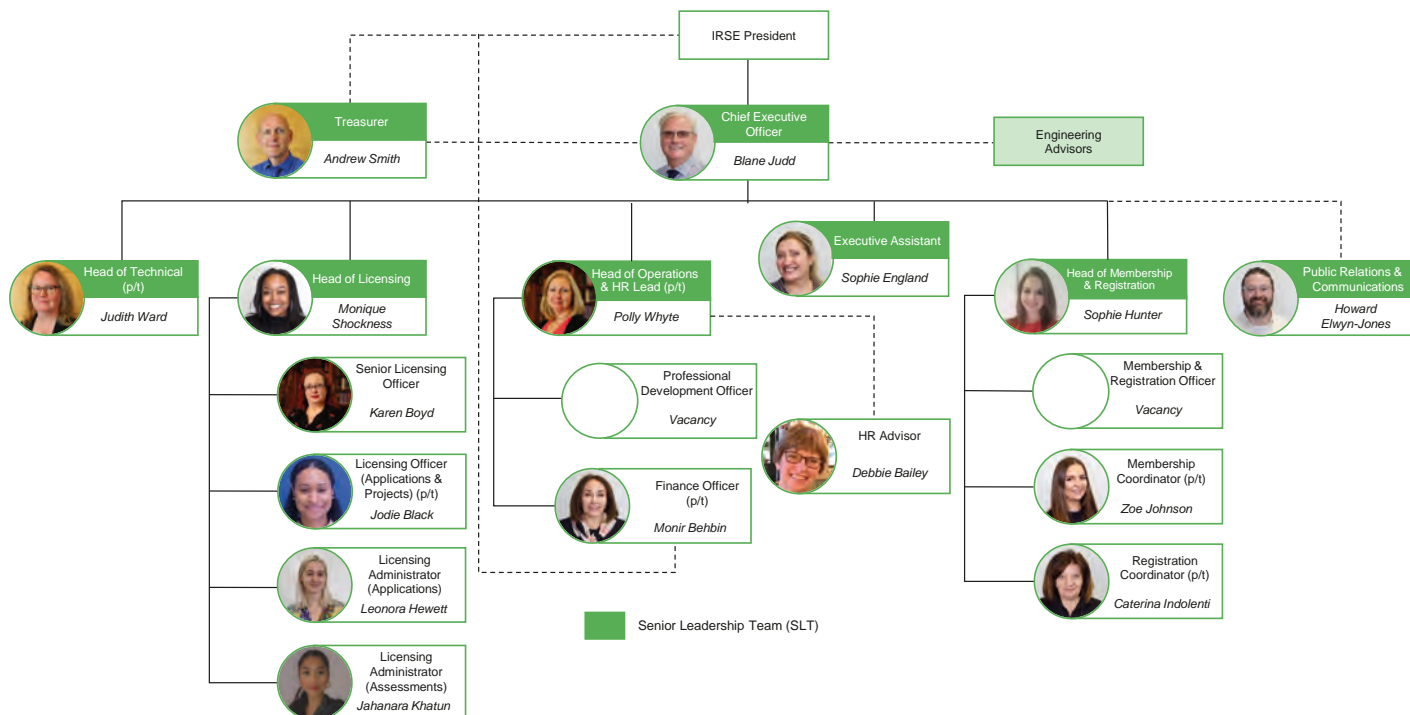
The following members of the team work on a part-time contract basis.

The IRSE is supported in its PR and communication activities by Howard Elwyn-Jones and his team at Prettybright. We also receive excellent support from Prettybright on a wide range of social media activity, which includes the e-bulletin and the recording and video livestreaming of many of our events.

Andrew Smith is the Institution’s treasurer, with responsibility for producing budgets and accounts, and for monitoring the health of the Institution’s savings and investments.

Debbie Bailey is a Chartered Member of the Chartered Institute of Personnel and Development and supports Polly Whyte as HR Advisor, Polly continues to have the role of HR Lead in addition to being head of operations.

Lindsay Jones of LJPR Ltd, a qualified journalist with an MSc in PR, continues to support the IRSE with specific PR and communications projects, namely around the Institution’s work to secure a Royal Charter.



Presidential programme

Each year the IRSE president plans a programme of major events, comprising a series of high-profile technical papers, lectures, face to face events and visits to IRSE sections across the world. Our president to April 2024 was Steve Boshier FIRSE whose presidential theme was 'Global Integration – people process and technology'.

The final two papers in Steve's year were 'Signalling globalisation from a New Zealand perspective' presented by John Skilton, programme director, Future Rail Systems, KiwiRail and 'Training and management of signalling competency for railway infrastructure across Aus/NZ will it ever be simplified?' delivered by Richard Mifsud, JMD Railtech Group.

Jane Power FIRSE, our president from April 2024, chose 'Power to the People' as the theme for her year focusing on 'Unsung Heroes' to shine a light on some under-appreciated areas of the industry.

The seven lectures in the presidential programme in 2024 were:

- 'Workforce challenges and successes in London Underground's 4 Lines Modernisation Project' presented by Richard Kirby from Hitachi Rail and Sam Etchell from Transport for London.
- 'Demystifying the Safe Braking Model' delivered by Matthew Shelley, Hitachi Rail.
- 'The role of the operator' by Mike Palmer, Parsons Corporation, Toronto.
- 'Lessons remembered – the Asset Engineer' presented by Jerry Carter MIRSE, retired TfL.
- 'Assuring resilient interfaces' delivered by Stephen Turner MIRSE, Stockton Engineering Management.
- 'Engineering technicians' presented by Paul McSharry MIRSE, Kilborn Consulting and James Heaton MIRSE, KeolisAmey Docklands.



irse.info/unsungheroes

- 'Knowledge retention of legacy systems within the railway industry' delivered by Istvan Darazsi, Iarnród Éireann Irish Rail.

Two more papers in the series were to be presented in 2025.

All presidential papers are published in our monthly journal, IRSE News, and the presentations are available to watch on the IRSE Vimeo channel irse.info/unsungheroes

Jane also initiated a new seminar on Artificial Intelligence in railways, available on a pay to view basis at irse.info/aivideo

Section activities

In addition to the presidential programme, every year there is a programme of lectures, seminars and technical visits organised by the Institution's 23 sections across the globe.

Our sections are in Australasia, China, France, Hong Kong, India, Indonesia, Ireland, Japan, Malaysia, Netherlands, North America, Singapore, Switzerland, Thailand, and Southern Africa. Within the UK, sections cover London & South East, Midland & North Western, Plymouth, Scottish, Western, York and Minor Railways. We also have a Younger Members section.

The geographical sections vary considerably in size, from around 20 members up to several hundred, and in levels of activity.

Each has its own organising committee, elected officers and programme of technical and social events. They report annually to the Council on their work.

During 2024 sections across the world settled into their new post-Covid-19 'normal'. The pandemic necessitated major advances in on-line communication methods, and for some IRSE sections the ability to host virtual meetings had the effect of driving up membership.

Sections have found a happy balance between on-line, hybrid and face-to-face meetings and enjoyed being able to host international visitors once again. Highlights from 2024 include:

Australasian Section: held its first hybrid event with face-to-face attendance in Melbourne and online attendance via Teams. The event was attended by Global IRSE president Jane Power and included two papers and a panel session Jane also delivered a paper to their Younger Members Section.

China Section: held nine competency training sessions on Chinese railway signalling attended by over 500 engineers.

French Section: hosted IRSE president Steve Boshier at a section technical visit to the tram-train maintenance and storage site at SNCF Réseau.

Hong Kong Section: 23 members made a technical visit to Shenzhen BYD and sky-shuttle.

Indonesia Section: held an international webinar on 'Cyber Security in Railway in with 90 participants.

Indian Section: held three technical sessions and an evening programme in honour of Jane Power in her then role as senior vice president which was attended by 80 IRSE/ IRSTE members.



irse.info/nearyou

Irish Section: held its tenth anniversary annual dinner dance, attended by Jane Power. A presidential programme lecture was also delivered.

Japan Section: was planning for ASPECT 2025 to be held in Yokohama.

Malaysia Section: hosted an online evening talk on 'Future Railway Mobile Communications System (FRMCS)' presented by Hugh Lin Xiuduan, director of enterprise wireless network solution at Huawei APAC. Jane Power visited the section and gave a talk.

Netherlands Section: enjoyed a visit from Jane Power and a technical visit to York (UK).

North America Section: supported the 2024 IRSE International Convention in Toronto. Its AGM in Louisville was attended by Jane Power who also attended a trade show there.

Singapore Section: President Jane Power attended a joint seminar with the Institution of Engineers, Singapore (IES), and judged the young engineers presentation competition.

Swiss Section: a technical visit to the new interlocking at Geneva station attended by Jane Power.

Thailand Section: held technical meetings at Kasetstart University. Jane Power attended the AGM and visited Mahidol University.

Southern Africa Section: hosted Jane Power on a week long visit which included site visits, boardroom discussions with rail operators, manufacturers, rail safety regulator, and signalling service providers across Gauteng and in Cape Town.

London & South East Section: made a well subscribed technical visit to the ETCS simulator at Hornsey depot.

Midland & North Western Section: held an online technical presentation on 'Technology and Engineering Solutions for Improving Level Crossing Safety' with 132 participants.

Plymouth Section: held its annual social beer and curry night.

Scottish Section: held its very popular dinner with the pre-dinner panel discussion based on IRSE president Jane Power's presidential theme of 'unsung heroes'. Jane also attended the event.

Western Section: enjoyed a technical visit to see the latest control systems technologies including the Controlguide Westcad control panel at Siemens Mobility in Chippenham, with Jane Power in attendance.

York and the North East Section: held its annual dinner at the National Railway Museum.

Minor Railways Section: Joint visits with members from the Midland & North Western Section and the IRSE president to the private Fawley Hill railway and the Ffestiniog and Welsh Highland Railways.

The Council of the IRSE wishes to extend their sincere thanks to everyone involved in the operation of the local sections, for the excellent work they undertake. Council also very much appreciates the help and support given by many companies to the work of the sections. Charles Page continues his excellent work in the role of local section coordinator, supporting the sections.

Younger Members

The IRSE Younger Members (YM) Section is open to all IRSE members under 35 years of age, or those who are within the first ten years of being in the industry. The YM Section has held online and in-person events over the past year and will continue to do so for the foreseeable future.

The events organised by the younger members can be attended by a person of any age and experience but are generally geared towards people who are within the first ten years of being in the industry.

In May, we hosted a presentation by members of the Transport for London Operational Technology Cyber Security Advisory team who presented on cyber security in the rail environment.

In 2024 we ran two study days. The practical-focused Signet Solutions study weekend took place in June 2024, where the focus was to look at and interact with physical equipment. A theory-based event took place at the University of Birmingham in July, providing sessions built around the Module B, C and D syllabus, including example scenarios and exam type questions to help with preparation for all exam modules.

The intent of these events is to take full advantage of the in-person aspect to differentiate from all the online events taking place. Unfortunately, over recent years it has become apparent that there may be challenges in retaining attendees between signing up and the day of the

event. This is something that we need to address going forward to ensure events remain accessible whilst also providing confidence to the volunteer organisers and presenters that events will be well attended.

The in-person study events are run by a dedicated group of volunteers and supporting organisations Signet Solutions and University of Birmingham, without whom it would not be possible to offer these fantastic opportunities. The YM section is incredibly grateful for the time, effort and generosity put in to planning, delivering and hosting these events.

In October, we facilitated the return of the Younger Members Conference in London, offering people in their early career the chance to explore the future of railway signalling and telecommunications and provide an excellent opportunity to hear from industry experts a grow their network.

Due to the issues around signups vs. actual attendances at the study events earlier in the year, we trialled applying a nominal fee at the point of sign up to reaffirm the commitment made when signing on to these in-person events and reduce the impact of last-minute cancellations and non-attendance. This trial was largely a success, as all who signed up and paid the nominal fee did indeed attend, however it is not clear at this stage whether this approach acted as a blocker to potential attendees who did not sign up as a result.



irse.info/youngermembers



irse.info/ymevents

This approach is something we expect to continue to pursue next year for our more significant in person events, such as the weekend study events and conference, with the fee determined as appropriate for the content and commitment provided.

New members joined the committee this year and we continue to seek volunteers to help support in managing the YM Section activities. We will be looking to introduce changes to named positions on the committee to provide fresh impetus to our ongoing engagement with members and the industry.

To get involved contact us at younger.members@irse.org. We are always looking for members to get involved from around the world. For details of future events follow us on our Eventbrite page irse.info/ymevents

IRSE International Convention 2024

For the organisers of the 2024 International Convention Toronto the event was the culmination of a long journey.

The contract with the Marriott hotel for the Convention was originally signed in 2018. But then Covid-19 hit, and the event had to be postponed, before finally being able to take place in 2024.

In his opening address, conference organiser Yousef Kimiagar FIRSE, thanked the sponsors, organising committee, IRSE events co ordinator Paul Booth FIRSE and the venue for their continuing support during the lengthy intervening period. He then drew delegates' attention to the fact that a rising number of North American engineers were now licensed by the IRSE. Extolling the advantages of IRSE membership, he encouraged those licencees to become members and join the growing North American IRSE Section. Yousef acknowledged the presence of the current president, Jane Power FIRSE and thanked her for her support.

A total of 119 delegates attended the full Convention at the Marriott Courtyard Hotel in Toronto, with another 56 joining for the seminar day. Participants hailed from various sectors including rail operators (both private and public), equipment and technology suppliers, government delivery organisations, regulators, academic institutions, contractors, and consultants, creating an ideal mix of professionals in rail-related areas.

The conference provided an excellent opportunity to renew old industry relationships, share knowledge, and forge new connections.

The event was held from 26–30 August 2024. A land acknowledgment was made, recognising the traditional territories of Indigenous peoples.

The five day conference began with a seminar day divided into four sessions focusing on railway signalling. Adrian Peach FIRSE director of assurance at Hatch in Canada, welcomed delegates to the Convention seminar day and invited past president Dr Daniel Woodland FIRSE to give the first presentation. Fittingly, Dr Woodland was IRSE president at the time the Convention should have taken place.

The first session featured speakers covering their experience in bringing their methodologies and products into signalling applications in Canada and the USA followed by a section on metro control systems. The final discussions of the day focused on main line rail applications in Canada.

Delegates at the conference enjoyed 12 presentations from industry experts including a presidential programme lecture from Mike Palmer with the title 'Unsung heroes – the role of the operator in signalling projects', all of which are available free to view on the IRSE Vimeo channel at [irse.info/torontovideo](https://www.irse.info/torontovideo)



Technical visits to Eglinton Crosstown Light Rail Project and Hitachi Rail, Toronto Transit Commission (TTC) subway & streetcars and GO Transit and Union Station rail corridor followed over the next three days.

The conference began with a networking reception and ended with a gala dinner. The guest programme included a '30,000 Islands' boat cruise and visits to the Black Creek Pioneer Village, museums and art galleries. Thanks to the hosts Hitachi Rail, TTC and Metrolinx for allowing us to visit their facilities and to the generous support from our sponsors: Hatch for the cocktail reception; Platinum – TUV Rheinland and WSP; Gold – AtkinsRéalis, Frauscher, HNTB, Mott Macdonald, Unipart Rail, and Bronze – CPC, Gannett Fleming and Signet Solutions.





International Technical Committee

The International Technical Committee (ITC) celebrated another successful year in 2024, holding their 83rd meeting. The committee's mission is to provide thought leadership for the IRSE and steer the direction of the Institution with respect to technical topics addressed through papers and other publications. A key gift of the ITC is the diversity of its constituents; it now has many fully participating and corresponding members from all over the world, including Japan, the UK, Germany, Switzerland, Belgium, Finland, France, the Netherlands, Spain, Singapore, Canada and Australia. The ITC also welcomed its first Indian member, Anshul Gupta in December. This diversity allows a truly worldwide perspective of the railway industry, enabling identification of best practices and principles for the global application and integration of train control and communication systems.

The ITC held four quarterly meetings this year, of which two were in-person, the first at the IRSE global office in London and the second during the IRSE Convention in Toronto which provided a fantastic opportunity for ITC members to ensure alignment with the overarching direction and strategic priorities of the IRSE. It gained a new perspective of current president Jane Power's theme of 'Power to the People' and her lecture series on 'Unsung Heroes' – the type of engineers who are not always highlighted but are the foot soldiers of the profession doing critical work to keep the railway running.

The ITC sadly lost a crucial member this year, Wim Coenraad, who passed away in July. Wim was an Honorary Fellow of the IRSE and member of the Netherlands Section. He made a significant contribution to the IRSE, and was a long-standing member of the ITC, having written numerous papers.



irse.info/itc

His loss will be greatly felt and our thoughts are with his family.

Papers published this year, include 'Satellite Navigation and Positioning Systems' 'Assurance of AI in Railway Safety Systems' and 'Cyber security and signalling'. There are many exciting papers in the pipeline, for example a study of the signalling implications of BIM, the data analytics of signalling, an investigation into the reduced capability and capacity of R&D in the industry, and the lessons learnt from the tragic Voorschoten accident. All ITC papers can be found on the IRSE website.

Collaboration and global engagement

The IRSE continues to foster dynamic and productive relationships with engineering and railway organisations both in the UK and worldwide reinforcing the IRSE's truly international presence. Through direct engagement and its regional sections, the Institution has built strong connections with organisations in Australia, Canada, India, Singapore, Thailand, and Malaysia. This year, members of the presidential team and the chief executive have had the opportunity to meet with several of these international partners, strengthening these vital links.

These partnerships extend beyond rail industry companies to include other influential organisations, fostering mutual growth and impact. While IRSE already enjoys substantial support from industry players, we aim to expand this further for collective benefit.

We remain an active participant in the Rail Engineer Forum, which brings together representatives from key Professional Engineering Institutions (PEIs) with a vested interest in the rail sector. This group includes IMechE, IET,

ICE, PWI, CIRO, INCOSE, CILT, RCEA, and the Young Railway Professionals (theref.org.uk). The chair of this forum rotates annually, with John Easton from Birmingham University representing the IET this year. Additionally, our close collaboration with the Rail Industry Association UK (RIA) ensures stronger connections between professional employees and the wider rail industry enabling both bodies to identify and implement meaningful changes within the sector.

Our involvement with the Royal Academy of Engineering and Engineering UK plays a crucial role in inspiring young people to pursue careers in engineering disciplines.

The IRSE also maintains a close alliance with the UK's Engineering Council, ensuring the effective regulation of engineers. Encouragingly, we have observed a rise in members pursuing professional registration. As a licensed body of the Engineering Council, the IRSE has the authority to register Chartered Engineers, Incorporated Engineers, and Engineering Technicians.



irse.info/collaboration

The growing international interest in professional registration is a positive trend that underscores the Institution's expanding influence.

Diversity and inclusion remain high on our agenda. Led by junior vice president Harvinder Bhatia FIRSE, our Equality, Diversity, and Inclusivity (EDI) group is focused on attracting a broad spectrum of talent from diverse backgrounds and cultures, ensuring the rail industry becomes a more inclusive and welcoming environment for all.

Through these collaborative efforts, the IRSE continues to position itself as a leading force in the global rail engineering community, driving innovation, professionalism, and inclusivity forward.

Annual General Meeting

The IRSE’s 110th Annual General Meeting, chaired by the retiring president, Steve Boshier FIRSE, was held at Transport for London, 5 Endeavour Square, London, UK, United Kingdom on 25 April 2024. During the meeting the link to those members attending by video conference was lost. Because of this the numbers attending fell below the level required for a quorum. This resulted in the meeting being adjourned and reconvened on Wednesday 15 May 2024 at the same location in accordance with the Memorandum and Articles of Association.

The Presidential Address was given at the first AGM and available to be viewed at irse.info/p1thu

Since Jane Power FIRSE had already been appointed as president, she chaired the reconvened meeting.

There was an overall attendance of 164 online and 19 in person.

In accordance with the Memorandum and Articles of Association all ordinary

business was concluded at this meeting, and it was resolved to appoint HPH Chartered Accountants for 2024.

A Special Resolution to authorise the Council of the IRSE to proceed to draft a petition for a Royal Charter and to produce such governance documents as necessary and present them to the Corporate Membership at a General Meeting in the future for final approval prior to formally petitioning was approved with 93.5% voting for and 6.5% voting against.

After conducting the formal business of the reconvened AGM, Jane presented the Annual Report for 2023 (published on 1 April 2024), and the treasurer, Andrew Smith FIRSE, commented on the Accounts for 2023.

The membership received copies of the Annual Report for 2023 (published on 1 April 2024), and there being no comments or questions received through correspondence this report was adopted.

Jane announced that the ballot for the election of members to Council had resulted in the following being elected:

Fellows: Martin Fenner (United Kingdom), Pierre-Damien Jourdan (Rest of the World, France) and Steve Allday (Australasia, Hong Kong, India, Netherlands).

Members: Jane Copperthwaite (Australasia, Hong Kong, India, Netherlands), Ben van Schijndel (Australasia, Hong Kong, India, Netherlands).

Associate Member. Mahesh Gadge (Australasia, Hong Kong, India, Netherlands).

Jane welcomed the new Council members and expressed grateful thanks to Peter Allen FIRSE, Firas Al-Tahan MIRSE, Georgina Hartwell MIRSE, Charles Page FIRSE and Andy Stringer FIRSE who retired from Council.

IRSE Council

IRSE Council 2024–2025



President Jane Power FIRSE	From the class of Fellow Stephen Allday FIRSE Ian J Allison FIRSE Michael Ewart FIRSE Martin Fenner FIRSE Pierre-Damien Jourdain FIRSE Yousef Kimiagar FIRSE Gordon Lam FIRSE Pete Gracey FIRSE Clive Roberts FIRSE	From the class of Member Andy (Roy) Brammer MIRSE Rob Cooke MIRSE Jane Copperthwaite MIRSE Jeet Dhelaria MIRSE Paul McSharry MIRSE Ben van Schijndel MIRSE	From the class of Associate Member Mahesh Gadge AMIRSE Keith Upton AMIRSE Xialou Rao MIRSE resigned and was replaced by Rae Faber AMIRSE
Vice-presidents Bogdan Godziejewski FIRSE Rod Muttram FIRSE Harvinder Bhatia FIRSE	Chief Executive Blane Judd	Treasurer Andrew Smith FIRSE	
Co-opted past-presidents Steve Boshier FIRSE Andy Knight FIRSE Ian Bridges FIRSE			

Members' Lunch

The annual IRSE Members' Lunch, organised once again by past president Clive Kessell (pictured below, centre) took place at the Union Jack Club, Waterloo, London on 4 July.

The event gives members the opportunity to meet and network with colleagues from across the industry and also celebrate the success of those who recently won IRSE awards.

Award winners present at the lunch were Scott Cadzow (Signet Award), Byron De Lange (Dell Award), Rod Muttram (Merit Award), Jennifer Kirk (Thorowgood Award), and Colin Porter (Lifetime Achievement Award) (below right).



Annual Dinner

The 58th Annual Dinner was held once again at The Grand Connaught Rooms in London on Thursday 9 May 2024. The dinner was attended by 278 members and guests. This represented a 25% decrease on last year.

We were again fortunate to retain the services of Paul Deacon as toastmaster. He has become a fixture of the event

since his first outing in 2015 with his light touch and wrangling of the crowd. The president introduced guest speaker Adam Riccoboni, CEO of Critical Future. He spoke extensively about artificial intelligence and its use in society. The Institution's support of international disaster recovery organisation RedR UK continues, and £855 was raised through

donations and commitments given on the night. The IRSE is grateful for the support and contributions from Kilborn Consulting, Signet Solutions, JMDR and Brightsea Print Group.

The 2025 event will be held on 8 May at the Sheraton Grand London Park Lane.



Publications and communications

In keeping with this year's presidential theme of 'Unsung Heroes', we would like to pay particular thanks to the members, volunteers and staff of the IRSE and its partners who produce our diverse events, lectures, publications, video and online content, giving us so much to share with our community.

We share this wealth of information through many channels, online in print, and in person.

IRSE News

We are extremely grateful to the hard work of all those involved in creating content for IRSE News, as well as to the dedicated team of reviewers and content editors who maintain the high standards of our flagship publication. Paul Darlington HonFIRSE, and production manager Mark Glover HonFIRSE have guided the publication through another excellent year, curating and presenting expert content for members.

Published monthly in both print and digital formats, IRSE News is the most downloaded item of content from the website and keeps our members up to date with its wide range of internationally sourced educational papers and articles.

Proceedings

The Proceedings provide a summary of the Institution's activities and have been produced annually since the very first issue in 1913. A hard copy

of the Proceedings is supplied to the British Library and to the library of the Institution of Engineering and Technology. PDF versions of the Proceedings are available for all to read via our website.

Website

With over 170k visits in the last year, the IRSE website remains the main point of contact for our members and other interested parties. From accessing the digital version of IRSE news to seeking out information on our programme of events, it is an essential communications tool. Under the surface, we have worked on new integrations to build better links between the website and our video content, as well as working to ensure that the immense volume of information online is kept up to date.

Member-only content and our events pages are top amongst our page views, but these are closely followed by access to our Licensing Scheme pages and other information which are integral to competency assessment and underline our commitment to keeping railways safe.

E-bulletins

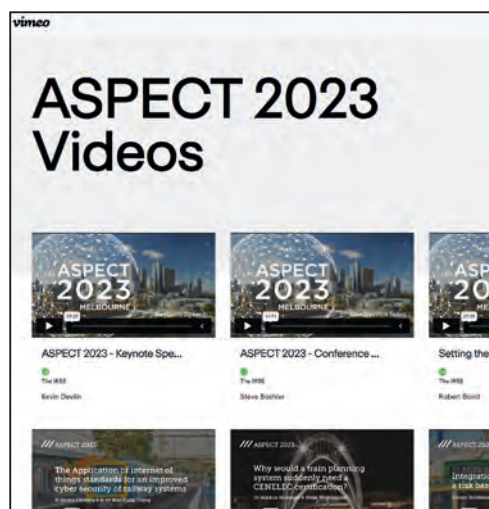
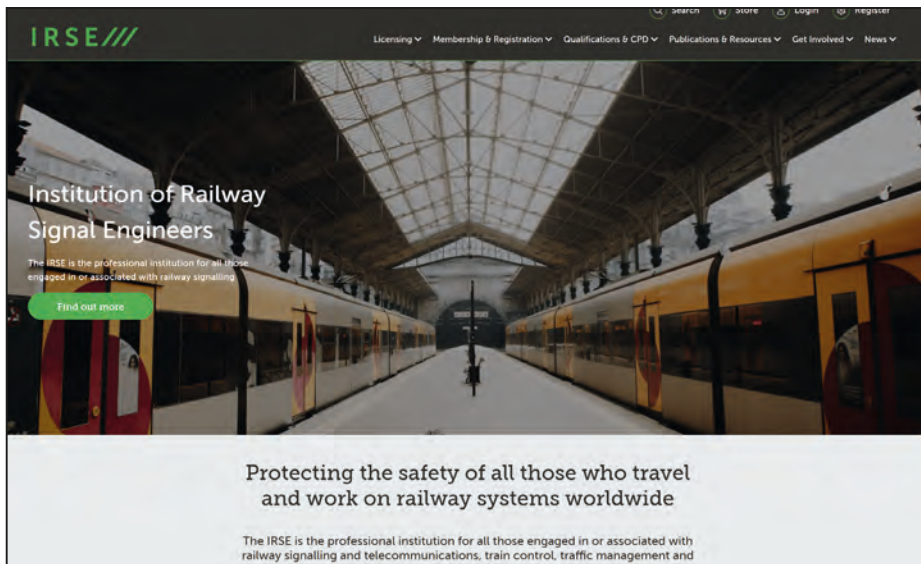
Our monthly email bulletin is sent to all members, containing information about upcoming events and other topical information. In addition, we send out ad-hoc electronic communications to members highlighting key presidential events and other important information.



As the way email works continues to change, (not least because of the increasing use of AI Tools to sort and prioritise mail), we encourage all members to ensure that your regular IRSE bulletins are whitelisted by your mail software so as to ensure you always have the latest events and information from your Institution.



In 2024, our monthly publication, IRSE News, contained 476 pages of content relevant to our members, over 11 issues.



We share our work with our membership, and beyond, through a range of digital and print media.

Video

The Institution's Vimeo channel ([irse.info/vimeo](https://www.vimeo.com/irse)) continues to grow with content added constantly by our local sections, younger members and programme of Presidential lectures. In addition, the platform hosts content from our major events, with content from ASPECT 2023 and the 2024 International Convention in Toronto being made available this year.

In total, our content has received over 18.6k views this year, with viewers in 50 countries watching over 5,250 hours of IRSE generated content. Our top titles this year included a 'Back to basics' review of telecoms, aimed principally at those taking the IRSE Professional Exam. Another popular item was a behind the scenes look at weekend system testing

on the TfL 4LM project, produced as part of Jane Power's 'Unsung heroes' series, in partnership with Hitachi Rail.

Vimeo is also the principal platform for the Institution's live and hybrid webinars and interactive content, providing both live and on-demand access to our rich programme for members in different time zones. ([irse.info/vimeo](https://www.vimeo.com/irse))

We also have a paid-for video platform through which we sell content, currently including videos from the AI seminar held this year. ([irse.info/aivideo](https://www.vimeo.com/irse)).

Social media

The IRSE has seen its reach across social media increase over the year, gaining over 2200 new followers in 2024 and seeing an improvement in follower engagement and reposting.

Despite a mass exodus from the X (formerly Twitter) platform, our following is largely unchanged (down only four followers), but with a 20% increase in follower engagement.

The Institution continues to find its primary voice on LinkedIn, with a presence that has grown with a 21% increase in link clicks for our posted content. Engagement for the IRSE also sits at four times the platform average (8% vs 2%). Beginning February 2025, the Institution will also post on Bluesky as [irseglobal.bsky.social](https://bsky.app/profile/irseglobal.bsky.social)

This platform is gaining mainstream support as an alternative to X.

IT systems

The Institution's operations are supported by four key IT components: the Membership and Licensing Customer Relationship Management (CRM) system (Silverbear CRM), the website, the examination platform, and the office IT systems.

The upgrade of the CRM system was successfully implemented at the beginning of 2024, introducing some additional challenges that the global office team has managed commendably. While the system is now stable, several processes still require significant manual intervention. The website's membership portal enables members to access exclusive content, verify membership and licensing validity through real-time reports, and update personal and employment details. Additionally, the Institution's video content library on the IRSE Vimeo channel continues to expand.

Concerns remain regarding the usability of the website, particularly in relation to event booking. Given that the website serves as the front end for the CRM

system, this raises questions about the overall suitability of the current IT infrastructure.

During the 2023 Council Strategy Day in Melbourne, a specialist group was established to evaluate the IT tools utilised by the Global Office to meet the growing demand for online services. At the 2024 Strategy Day in Toronto, it was agreed that a thorough review of the CRM and web content management system was necessary to assess their continued viability. The cost implications of transitioning to an alternative solution are a key consideration, and a comprehensive audit is currently underway, leveraging external experts with experience supporting similar sized professional engineering institutions. The findings of this assessment will be reviewed in 2025.

The adoption of virtual meeting platforms has significantly enhanced membership engagement. Meetings are scheduled across various time zones to accommodate the Institution's international membership base.

The transition to an online examination platform has led to increased candidate participation. This platform is supplemented by two specialised software packages: a proctoring tool that monitors candidates' surroundings to detect unauthorised reference material, and an anti-plagiarism checker that ensures originality in submissions. These tools have proven effective in assisting volunteer examiners in maintaining the integrity of the examination process. Cases of misconduct have been addressed by the Council, resulting in disciplinary actions such as membership downgrades, temporary exam bans, or removals.

The ability of volunteers, members, and staff to adapt to the rapidly evolving IT landscape is creditable. Their dedication is instrumental in ensuring the Institution remains a relevant and forward-thinking professional body in the 21st century.

Finances

The financial results are shown on pages 24 to 28. They are extracted from the consolidated accounts for the IRSE and its wholly owned trading subsidiary, IRSE Enterprises Limited. The term 'Group' at the top of a set of tables refers to the two companies combined, and 'Charity' to the IRSE alone. As far as possible, these extracted results use the titles and the format of the consolidated accounts.

This year, with the dropping out of the need to show references to the former investments with the UK Government's National Savings and Investments it has become possible to provide some explanation of the first line of the Consolidated Cash Flow Statement on page 24. To achieve this the former note 5 has been deleted and the former notes 3 and 4 reordered as notes 4 and 5 respectively. This allowed the introduction of a new note 3 which works back from the overall net income for the combined IRSE and IRSE Enterprises to the actual change in cash for the group.

In addition, it has been necessary to introduce a new note 9 and renumber the remaining notes.

It is encouraging, after several years of deficits for the combined IRSE and IRSE Enterprises, to be able to report that there was a small surplus in the Consolidated Statement of Financial Activities of £1,359 on financial activities before the change in investment values.

However, this is a consequence of a few one-off events during 2024, particularly receipt of an additional surplus transfer from the Australasian section following the ASPECT 2023 Conference.

(A significant transfer was made during 2023, but the final figure did not become clear until too late for it to be included in the 2023 accounts.)

In addition, the refund from the International Technical Seminar held in India in 2022 was finally received. As there had been no certainty this would be achieved, this became an unexpected windfall income for 2024. Sadly we cannot anticipate a similar series of beneficial receipts during 2025.

The advantageous changes in the stock markets also meant that the total funds of the charity, as represented in the Consolidated Balance Sheet, continued to increase.

This may prove useful as an increasing need has been identified to review the software systems the IRSE has available in order to better match the expectations of members in an increasingly on-line world. This activity is planned for early 2025 and it may be determined to be necessary to undertake some system updates to ensure the IRSE's staff can continue to serve members as efficiently as possible.

The only disappointing result is the reduction in value of the Restricted funds (Thorowgood and Dell), see the Consolidated Balance Sheet. Much of these funds was invested in UK Government Securities which reached the end of their term. They were cashed in and have now been transferred to our investment managers, Rathbones.

Consolidated accounts (extract)

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS CONSOLIDATED BALANCE SHEET AS AT 31st DECEMBER 2024

	Notes	Consolidated 2024 £	Consolidated 2023 £	Charity 2024 £	Charity 2023 £
Fixed assets					
Tangible fixed assets		63,681	55,582	32,706	28,750
Investments	1	2,093,585	1,982,152	1,521,399	1,452,725
Total fixed assets		2,157,266	2,037,734	1,554,105	1,481,505
Current assets					
Stocks	4	58,912	65,008	55,773	58,719
Debtors	5	237,484	241,062	392,774	347,626
Cash at bank and in hand		556,481	481,918	124,804	232,415
Total current assets		852,877	787,988	573,351	638,760
Creditors: amounts falling due within one year	6	(608,188)	(587,964)	(340,628)	355,464
Net current assets		244,689	200,024	232,723	283,296
Total assets less current liabilities		2,401,955	2,237,758	1,786,828	1,764,801
Creditors: amount falling due after more than one year	7	(406,707)	(332,634)	-	-
Total net assets		1,995,248	1,905,124	1,786,828	1,764,801
Funds of the Charity	2				
Unrestricted funds		1,957,819	1,865,074	1,749,399	1,724,751
Restricted funds		37,429	40,050	37,429	40,050
Total charity funds		1,995,248	1,905,124	1,786,828	1,764,801

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS CONSOLIDATED CASH FLOW STATEMENT AS AT 31st DECEMBER 2024

	Notes	2024 £	2023 £
Net cash (provided by) operating activities	3	91,690	254,365
Cash flow from investing activities:			
Purchase of tangible fixed assets		(44,989)	(15,660)
Purchase of fixed asset investments		(229,895)	(465,653)
Sale of fixed asset investments		207,227	392,595
Interest received		1,002	919
Dividends received		49,528	43,168
Net cash provided by / (used in) investing activities		(17,127)	(44,631)
Change in cash and cash equivalents in the year		74,563	209,734
Cash and cash equivalents at start of year		481,918	272,184
Cash and cash equivalents at end of year		556,481	481,918

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS
CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES AND INCOME AND EXPENDITURE
ACCOUNT FOR THE YEAR ENDED 31st DECEMBER 2024

	Notes	Unrestricted £	Restricted £	Total 2024 £	Total 2023 £
Income and Endowments from:					
Charitable activities:					
Donations and legacies	10	175	-	175	6,192
Other trading activities:					
Non-ancillary trading income	11	666,084	-	666,084	517,027
Other activities	11	729,376	-	729,376	682,995
Investments:					
Investment income	12	49,663	867	50,530	44,087
Total Income		1,445,298	867	1,446,165	1,250,301
Expenditure on:					
Raising funds					
Other activities	13	8,457	-	8,457	8,519
Investment		11,844	-	11,844	9,003
Non-ancillary trading		654,589	-	654,589	501,398
		674,890	-	674,890	518,920
Charitable activities					
Awards	13	52,098	447	52,545	43,632
Promoting best practice		717,371	-	717,371	703,102
		769,469	447	769,916	746,102
Total Expenditure		1,444,359	447	1,444,806	1,265,654
Net Expenditure before (loss) / gain in investments		939	420	1,359	(15,353)
Net (loss) / gain on investments	1	91,806	(3,041)	88,765	105,561
Net Income / (Expenditure)		92,745	(2,621)	90,124	90,298
Reconciliation of funds					
Total funds brought forward		1,865,074	40,050	1,905,124	1,814,826
Total funds carried forward		1,957,819	37,429	1,995,248	1,905,124

ANNUAL MEMBERS' REPORT WITH SUPPLEMENTARY MATERIAL

The tables set out on pages 16 to 20 are extracted from the full audited accounts of the Institution for the year ended 31 December 2024. They constitute supplementary material to this Annual Members' Report. Section 426A of the Companies Act 2006 requires the following statements to be made in respect of the supplementary material:

1. This annual report is only part of the company's annual accounts and reports prepared under the Companies Act.
2. A full copy of the company's annual accounts and reports may be obtained upon request from The Institution of Railway Signal Engineers, 5th Floor, 1 Birdcage Walk, Westminster, London SW1H 9JJ, UK.
3. The auditor's report on the annual accounts was unqualified.
4. The auditor's statement under section 496 of the Companies Act (whether the Trustees' Report is consistent with the accounts) was unqualified.

A P Smith
Treasurer

Approved by the Trustees on 20 March 2025.

JE Power
President
Director and Trustee

B Godziejewski
Vice-President
Director and Trustee

**THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS
NOTES TO THE CONSOLIDATED ACCOUNTS
FOR THE YEAR ENDED 31ST DECEMBER 2024**

1 Fixed Asset Investments (Group)

	Equities £	Government Securities £	Total £
Market value			
At 1 January 2024	1,799,150	188,002	1,982,152
Additions	124,447	105,448	229,895
Disposals	(100,753)	(106,474)	(207,227)
Revaluations	91,744	(2,979)	88,765
At 31 December 2024	1,914,588	178,997	2,093,585

2 Movement in Funds (Group)

	At 1.1.24 £	Net movement in funds £	At 31.12.24 £
<u>Designated funds</u>			
Scholarship Fund	80,112	(43)	80,069
Alan Fisher / Frank Hewlett Fund	435,002	(5,311)	429,691
General Fund - Unrestricted fund	1,133,129	30,002	1,163,131
IRSE Enterprises - Non-charitable trading fund	216,831	68,097	284,928
	1,865,074	92,745	1,957,819
<u>Restricted funds</u>			
Dell Bequest	25,700	(2,262)	23,438
Thorrowgood Bequest	14,350	(359)	13,991
TOTAL FUNDS	40,050	(2,621)	37,429

The company holds 20% or more of the issued share capital of the following company:

<u>Company</u>	<u>Country of incorporation</u>	<u>Share class</u>	<u>%age owned</u>
IRSE Enterprises Limited	England and Wales	Ordinary	100

	<u>Share capital and reserves</u>	<u>Profit for year</u>
IRSE Enterprises Limited	212,835	68,097

3 Reconcile Net Income to Net Cash Flow - Operating Activities

	2024 £	2023 £
Net income for the reporting period - notes 8, 9, 10, 11, 12, 14	90,124	90,298
Depreciation of tangible Fixed Assets	36,890	7,050
Gains on investments	(88,765)	(105,651)
Interest and Dividends received	(50,530)	(44,087)
Decrease in Stocks and Debtors	(9,674)	(48,599)
Decrease in Current Asset Investments	-	211,198
Increase in Creditors	94,297	144,156
Net cash provided by operating activities	91,690	254,365

4 Stock

	Consolidated 2024 £	Consolidated 2023 £	Charity 2024 £	Charity 2023 £
Stock	58,912	65,008	55,773	58,719

5 Debtors

	Consolidated 2024 £	Consolidated 2023 £	Charity 2024 £	Charity 2023 £
Trade debtors	107,855	124,987	-	-
Other debtors	3,403	3,656	3,403	3,656
Pre-payments and accrued income	22,457	25,466	13,917	180
VAT	103,769	86,953	103,769	86,953
Amounts owed by group undertakings	-	-	271,685	256,837
	237,484	241,062	392,774	347,626

6 Creditors: fall due within one year

	Consolidated 2024 £	Consolidated 2023 £	Charity 2024 £	Charity 2023 £
Trade creditors	31,141	60,135	25,463	47,943
Accruals	19,327	22,416	13,488	18,074
Taxation and social security	7,458	5,255	-	-
Deferred income	531,419	475,553	283,079	266,761
Other creditors	18,833	24,605	18,598	22,686
	608,188	587,964	340,628	355,464

7	Creditors: amounts falling due after one year	Consolidated 2024 £	Consolidated 2023 £	Charity 2024 £	Charity 2023 £
	Other creditors	332,634	332,634	-	-

Representing the proportion of licence fees receive which will be credited to Income after more than one year.

8	Activities of IRSE Enterprises	2024 £	2023 £
	<u>Turnover</u>		
	Donations	431	53
	Proceeds - Conventions and Conferences	180,947	57,000
	Proceeds - Dinners	57,188	63,775
	Proceeds - Technical visits and Seminars	10,407	39,477
	Licensing - Licence fees received	265,062	240,062
	Licensing - Appraisal fees	10,108	3,447
	Licensing - Assessing agents fees	129,707	99,121
	Licensing - Technical publications	12,234	14,092
		666,084	517,027
	<u>Cost of sales</u>		
	Costs - Conventions and Conferences	119,870	7,650
	Costs - Dinners	37,102	47,675
	Costs - Technical visits and Seminars	10,803	31,250
	Costs - Young members' Seminars and Visits	-	-
	Licensing - Logbooks opening stock	6,289	10,732
	Licensing - Engineer's fees	9,790	15,758
	Licensing - IRSE administration charges	305,650	253,257
	Licensing - Audit engineers	57,521	46,014
	Licensing - Accreditation	8,473	6,284
	Licensing - Logbooks closing stock	(3,139)	(6,289)
		552,359	412,331
	Gross profit	113,725	104,696
	<u>Other income</u>		
	Dividends receivable	8,435	7,936
	Bank interest receivable	1,789	265
		10,224	8,201
			112,897
	<u>Expenditure</u>		
	IRSE Admin charges	28,496	24,514
	Telephone	7,358	7,722
	Post and stationery	3,099	5,840
	Accommodation and refreshments	3,576	4,818
	Computer costs	5,512	12,208
	Professional indemnity insurance	4,328	3,741
	Licensing - Treasurer's, Chief Executive's and Registrar's Fees	28,018	29,610
	Licensing Continuous Improvement	1,185	-
	Logbook purchases	1,319	-
	Investment Manager's fees	3,952	3,724
	Auditor's remuneration	4,740	2,250
	Donations	-	60,000
	Exchange rate variance	7,020	(7,678)
		98,603	146,749
	<u>Finance costs</u>		
	Licensing - Bank charges	3,627	2,318
	Net figure	21,719	(36,170)
	<u>Gain / Loss on revaluation of assets</u>		
	Gain on revaluation of investments	46,378	44,423
	Net profit	68,097	8,253

9	Fixed Asset Investments - Charity				Govt. Securities	Equities	Total
	Revaluation during 2024				£	£	£
					(1,861)	44,248	42,387
10	Donations and Legacies (Group)					2024	2023
	Donations					£	£
						175	6,192
11	Other Trading Activities (Group)						
	Subscriptions					596,335	547,349
	Professional reviews					6,945	7,095
	Advertising					36,180	33,525
	Booklets and text books					10,099	20,847
	IRSE ties, badges & cufflinks					-	-
	Examination fees and materials					77,313	71,368
	Proceeds from members' lunch					2,504	2,811
	IRSE Income					729,376	682,995
	Trading income: Turnover of trading subsidiary - Note 8					666,084	517,027
12	Investment Income (Group)						
	Equities and government stocks					39,304	34,967
	Interest receivable					1,002	919
	Charity total					40,306	35,886
	IRSE Enterprises Ltd					10,224	8,201
	Group total					50,530	44,087
13	Analysis of Expenditure	Staff Costs	Other	Depreciation		2024	2023
		£	£	£		£	£
	Raising funds						
	Other activities	2,964	5,315	178		8,457	8,519
	Investment	-	11,844	-		11,844	9,003
	Non-ancillary trading	247,676	387,804	19,109		654,589	501,398
	Total raising funds	250,640	404,963	19,287		674,890	518,920
	Charitable activities						
	Awards	11,858	39,976	711		52,545	43,632
	Technical Department	37,665	20,729	2,259		60,653	-
	Promoting best practice	243,957	398,128	14,633		656,718	703,102
	Total charitable activities	293,480	458,833	17,603		769,916	746,714
	Total expenditure	544,120	863,796	36,890		1,444,806	1,265,654
14	IRSE Charitable Expenditure					2024	2023
	Raising donations and legacies					£	£
	Fund raising dinners					2,274	2,625
	Charitable activities						
	Proceeding: editing and printing					7,314	4,684
	Newsletter: editing and printing					105,939	120,340
	Booklets and textbooks					5,066	5,808
	IRSE ties, cufflinks and badges					118	105
	Prizes					2,022	32
	Awards					27,812	20,058
	Activities funded by country subscription supplements					8,361	11,254
	Professional review costs					1,035	1,000
	Thorowgood medals					97	-
	Support costs						
	Staff costs					296,444	263,597
	Office rent and services					18,258	18,626
	Fees and honoraria					85,485	87,935
	Membership database					-	1,039
	Other administrative costs					195,487	210,814
	Investment manager's fees					11,844	9,003
	Fixtures and fittings					17,781	2,336
	Governance costs						
	Auditor's remuneration					4,880	5,000
	Total expenditure					790,217	764,256

Institution of Railway Signal Engineering

England & Wales - Charity number 1046999

Accounts

IRSE

Institution of Railway Signal Engineers

Annual Report

Number 111

1 January to 31 December 2023

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This Annual Report briefly describes the activities undertaken by the Institution of Railway Signal Engineers (IRSE) throughout the world during 2023. Our president from April 2023 has been Steve Boshier IRSE from Australia.

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For up to date information about the Institution or its activities, or to download a membership application form, visit the IRSE website www.irse.org.

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Institution of Railway Signal Engineers

The
Professional Engineering Institution
for all those engaged or interested in
railway signalling, control and
communications
and allied disciplines

Over **5,000** members in
locations **across the world**

Providing world-class **presentations, seminars,**
conventions and **conferences**

Industry leading competence assessment and
licensing
scheme

The world's leading
professional examination
for railway signalling, control and communications

11 issues of
IRSE News each year:
our specialist railway signalling, control and
communications magazine

23 Sections
representing the needs of members in their
geographic region or specialism

Accredited by the
Engineering Council to add
Chartered Engineers, Incorporated
Engineers and Engineering Technicians
to the Professional Register

Vibrant
Younger Members
sections

Run by
engineers for engineers

Founded in **1912**

An introduction from our president

As the 2023/2024 president, my theme for my term in office is **Global Integration: People, Process & Technology**. Following on from my predecessor, Andy Knight FIRSE whose presidential term ended in April, I've focused strongly on listening to the membership's needs during this last year and determining how we can best provide the required processes and technologies to support them. Living in a highly connected, high-tech society demands that we explore the most effective ways to leverage the global expertise present within the IRSE membership for the safe and efficient operation of railways. The year began for Andy with a visit to the South African Section followed by visits to Australia, Malaysia and Indonesia. Since then, as the 99th president of the IRSE, I've managed to attend a range of local section meetings in various countries, both face-to-face and online, ensuring I reach as many of our members as possible.

I've also actively engaged with various rail businesses worldwide to raise the IRSE's profile and seek their support for the work we provide. This outreach has opened doors for local sections, enabling them to leverage the business support and opportunities it has generated.

The Younger Members (YM) Section has been a primary focus area, and it's been gratifying to witness the recent rejuvenation of the UK and Australasian sections with the support of enthusiastic members. Younger members represent our future leaders, and it's crucial that we support and nurture them through the early stages of their careers. During my discussions with rail businesses, I've emphasised the importance of supporting younger members by enabling their participation in IRSE events, dinners, conferences, conventions, and covering the costs of their professional development.

We have continued to evolve as a professional organisation, supported by our global office in London and our worldwide base of volunteers. Notably, for the first time in the institution's history, the Annual General Meeting in 2023 and the inauguration of a president were held outside of the UK, in Melbourne, Australia, where I reside. Utilising technology, we live-streamed the event globally and recorded it for members unable to attend at that time. To date, it's been viewed online 252 times.

Some achievements during my presidential year include a heightened focus on supporting our global membership. We reinstated presidential team meetings for regular strategic and tactical planning sessions. Additionally, we conducted our inaugural full-day strategic planning session, with most Council members meeting face-to-face and some joining online. This has led to the establishment of four task and finish teams to drive key strategies ensuring the IRSE's relevance for the future.

The ASPECT 2023 conference held in November 2023 was a resounding success (see page 16).



As a business, the global office staff have continued to enhance our membership services and support. We have initiated exploration of new market opportunities and identified areas for investment to maintain relevance for the future. Implementing a longer-term financial budget planning process, we're now projecting our efforts over five years to support our future growth.

As previously mentioned, younger members have been a pivotal focus. With Council's support, I secured approval for 50% more IRSE bursaries, enabling 15 younger members to attend Aspect 2023. Building on this, I collaborated with the Australasian Section, resulting in an additional 10 bursaries being approved, supporting a total of 25 younger members to attend Aspect 2023, a substantial increase from the usual ten. Feedback from many recipients highlighted how this opportunity was life-changing and unforgettable.

Regarding younger members' engagement, I facilitated a meeting between the UK and Australasian YM Sections to encourage sharing and networking. I actively participated in a one-day hands-on signalling installation & testing training day for younger members and presented at an Apprentice Masterclass in the UK. Additionally, I hosted several "Meet the president" sessions with younger members, and we've now included the UK YM chair at recent Council meetings to enhance YM visibility.

I extend my heartfelt thanks to the IRSE membership for all your support and encouragement throughout my tenure as IRSE president.

Steve Boshier FIRSE
President IRSE 2023-2024

Charitable objects of the Institution

The Institution’s charitable objects are recorded in its Articles of Association. They can be traced back to the formation of the Institution in 1912 and are:

- a) The advancement for the public benefit of the science and practice of signalling by the promotion of research, the collection and publication of educational material and the holding of conferences, seminars and meetings, and
- b) The maintenance of high standards of practice and professional care amongst those working within the industry and the promotion of improved safety standards for the protection of the general public.

Although it might appear that the IRSE is concerned only with railway signalling, the full text of the objects makes clear that all forms of train control and traffic management, and communications systems, are all within our scope of interest.

There is a clear emphasis in the objects on ‘public benefit’. This is most obvious in the sense of contributing to safety on the world’s railways, where train control systems play a critical role. But we are also interested in ensuring that railways are efficient, cost-effective and sustainable (in the widest sense).

We meet our obligations to the public through the following principal mechanisms:

- The dissemination of knowledge, experience and good practice in the fields of railway signalling, control and communications and allied topics, to help ensure that those working in the profession do so with the best available knowledge for the safe, efficient and cost-effective construction and operation of the world’s railways;
- The delivery of examinations at certificate and advanced level which contribute to the assurance of knowledge gained. In addition, through the application of the Engineering Council UK licenses the assessment and entry of Chartered, Incorporated and Engineering Technicians onto the Register of Professional Engineers;
- The provision and management of the IRSE Licensing Scheme to assure the competence of those working in the profession. The Scheme is focussed predominantly, but not exclusively, on ensuring safety in the design, construction, testing and maintenance of signalling and telecommunications systems;

- Our Code of Professional Conduct, with which IRSE members are required to comply in the course of their work. It emphasises topics such as personal responsibility for work undertaken or managed by IRSE members, the importance of safeguarding the public interest (particularly safety), environmental management, the efficient use of resources, handling conflicts of interest etc.
- Undertaking specific initiatives to help ensure the safety and efficiency of railways.

By bringing the IRSE sections around the world together, we will facilitate the sharing of best practice and new initiatives to help engineers and others enhance their knowledge and professionalism. We will continue to reach out and grow our network of professionals around the world to harness the collective knowledge they possess for the benefit of all operators and users of railway transport.

The financial resources of the Institution are applied to achieve the objects of the Institution, in addition to which members make a significant contribution to delivering the Institution’s aims by their volunteer activities. The Institution has only a small number of full and part-time staff and most of the activities are organised by our members acting in a voluntary capacity.



Our Strategy

As we continue to deliver against our "Beyond a 2020 vision", details of which are available on the website, we are refining elements so that we can remain in line with changes in the sector and our priorities. The objective of making the IRSE accessible to members 24 hours a day 7 days a week throughout the year, has improved the general access for members and has been well received and used. This report will elaborate on the work we continue to do to facilitate more access to the vast wealth of knowledge that exists within our global membership.

Our engagement with international members has grown through international travel by the presidential team and the executive. These have led to important discussion on how we can better serve the growing numbers of members in what currently stands at 56 countries around the world.

The commitment of staff and volunteers has seen a growth in our operational areas aligned with our key focuses of Engage, Grow, Develop, Network and Assure. A study of the key indicators within this report will show an increase

in all these areas. We also undertook the first study of the international workforce in train control. This highlighted very similar patterns regarding those employed in UK, Australasia, Hong Kong, India, and the Netherlands, our five largest sections representing 80% of our membership. This information will help us to focus on growth with a better understanding of the markets we are operating in.

In 2023 the Council decided to consider increasing the IRSE standing in political circles by seeking permission to petition for a Royal Charter. This is something that many of our sister Professional Bodies already hold and is the highest accolade that can be bestowed on an Institution. Work on this will continue into 2024 subject to the endorsement of the membership. The work of the Equality, Diversity and Inclusion working group has already produced output which is being incorporated into the communications and recruitment materials. The work of this group will continue into next year and further inform our practice. In line with our policy of Council holding a strategic



irse.info/strategy

evaluation session annually the Council met in Melbourne just prior to the ASPECT 2023 conference. The outputs from that event are now shaping the focus for 2024. The event was increased to a full day as indicated in last year's report and focused on communications, recruitment, and progression.

The five key elements of the plan are shown in the infographic below.

The ASPECT 2023 conference helped to drive forward the important aspect of bringing the skills and knowledge of the sector together. We have also engaged with the Greek and Indian railways following the tragic loss of life in both countries due to rail accidents. Work is under way with India to support further competence development.

The five key elements of the IRSE strategic plan are



Engage

Digital platform for a global professional body 24/7/365, early careers support, communicate best practice in ethics, diversity, inclusivity, produce technical documentation, knowledge transfer activities.



Grow

Peer recognition, professional development, practice support and guidance, support in professional obligations, Advance profession.



Network

Global local section development, International Technical Committee support, conferences, seminars and conventions, facilitate collaboration, latest information and news.



Develop

Signpost professional development, awards & bursaries, upskilling and re-skilling, examination, apprenticeships, promote benefits to the public.



Assure

International professional recognition, flexible pathways to professional registration, offer regulation in professional conduct, operate the licensing scheme.

Governance

Council

The IRSE is governed by an elected Council of eighteen Corporate Members, together with the presidential team and two co-opted past presidents, who are the trustees and directors of the Institution. The president takes the role of chair of Council. The full list of Council members for 2023 can be found on p19.

Six meetings of the Council were held during the year in which the business of the Institution was conducted. The Council also met for a day strategy meeting just before ASPECT 2023 in Melbourne. To assist members of Council in different time zones, meeting start times have been adjusted so that not all meetings are held during UK business hours, as had previously been the case.

The Articles of Association permit the current chairs of all local sections, principal committees and country vice-presidents to attend Council meetings, and throughout the year several did so via video conferencing. The strategy day was a mixture of face-to-face and online discussion. This meeting was only for Council members.

In addition to conducting all the normal Council business during the year, discussions also covered:

- The application for recognition as a Chartered Professional Body, in line with the increase standing of the Institution in an international capacity.
- Review of the role of the country vice-presidents.
- Receiving the work of the various Council mandated working groups including Equality Diversity and Inclusivity, Volunteer recruitment, Fees working group and the newly renamed Governance Oversight Committee, formerly the Governance Working Group, by the Council portfolio holders.
- Monitoring the succession plan for the office of President.

Council also receives and reviews the annual report from each of the international sections of the IRSE.

Committees

The Institution has several standing committees which are accountable to Council, through which our activities are managed. The principal committees and their relationships to Council are shown in the diagram on p7.

In addition, task and finish working groups are formed from time to time which focus on specific areas of interest.

To assist in driving key areas of the Institution members of Council are allocated portfolios of responsibility.

Audit

External Audit

Several areas of the Institution's business are audited on a regular basis by various external audit bodies:

- All areas of finance are subject to audit annually by independent external auditors who submit their report to the Annual General Meeting.
- The Licensing Scheme is subject to an annual audit by the United Kingdom Accreditation Service (UKAS).
- As a registered charity, the Institution is subject to periodic external review by the Charity Commission.
- As the Institution is licensed by the Engineering Council in the UK (ECUK) to register Chartered and Incorporated Engineers and Engineering Technicians, it is subject to a review every five years by ECUK to ensure compliance with their registration standards.

Internal audit

The IRSE's internal Audit Committee undertakes independent audits to complement the external audits, to ensure the Institution is running efficiently and effectively. The audits focus primarily on the role and remit of each of the principal committees of the Institution.

The Audit Committee normally performs two audits each year. Each audit results in a report, which is presented to the chair of that committee, the chief executive and subsequently the Council, which uses the recommendations to improve the management of the Institution's affairs for public benefit and for the benefit of its members. The Institution maintains a Risk Register, which is reviewed annually by Council, and this is used as the basis for audit.

IRSE Enterprises

IRSE Enterprises Ltd is the trading company wholly owned by the Institution. The trading company handles several activities which are associated with but outside the direct scope of the charity.

The board is made up of representatives of Council and is chaired by the immediate past-president.



irse.info/governance

The directors of the company for the year April 2022 to April 2023 were:

- Chair (immediate past-president): Andy Knight FIRSE
- President: Steve Boshier FIRSE
- Senior vice-president: Jane Power FIRSE
- Junior vice-president: Bogdan Godziejewski FIRSE
- Junior vice-president: Rod Muttram FIRSE
- Licensing Committee representative: Paul McSharry MIRSE
- IRSE treasurer: Andrew Smith FIRSE
- Company secretary (CEO): Blane Judd

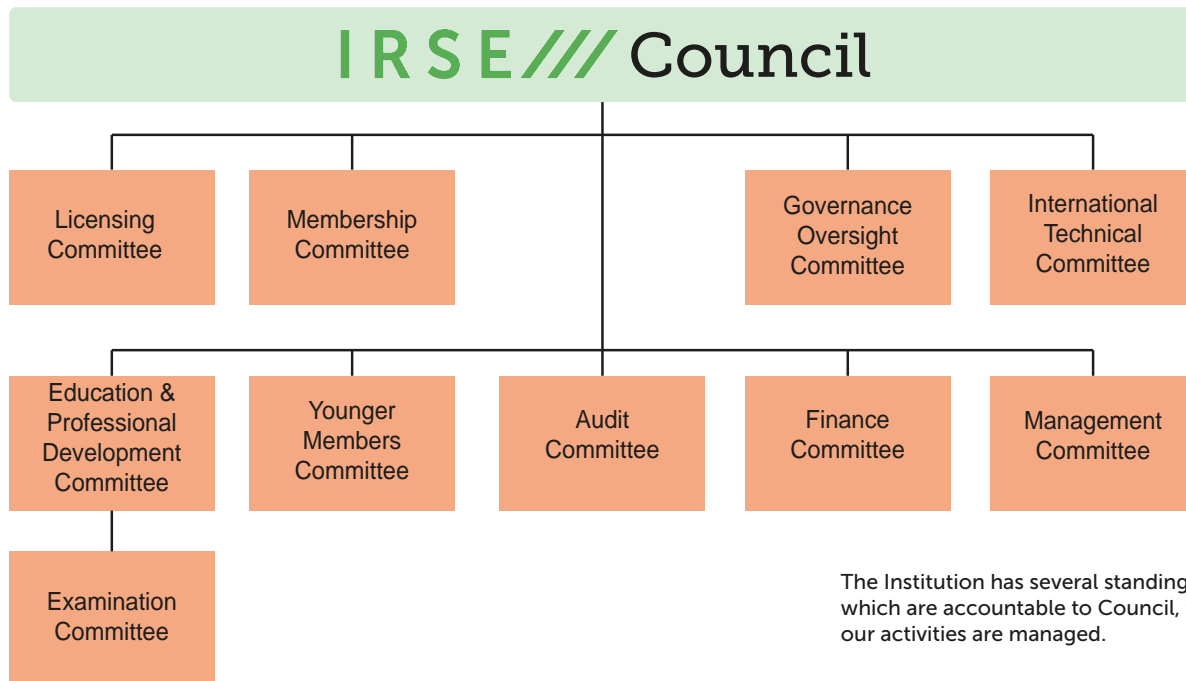
Profits from the company when generated are gift-aided back to the Institution.

Sections

The IRSE sections around the world exist by authority of the IRSE Council, and they operate in accordance with a set of Articles of Association (or Bye-laws) that have been approved by Council. At the end of 2023 there were 23 sections in total, 15 sections outside the UK in various parts of the world (Australasia, China, France, Hong Kong, India, Indonesia, Ireland, Japan, Malaysia, Netherlands, North America, Singapore, Southern Africa, Swiss, Thailand) and six UK-based. The North America Section includes the USA, Canada, and Mexico. The Ireland Section includes both Northern Ireland and the Republic of Ireland.

Two other sections also exist – the Younger Members' Section and the Minor Railways' Section. These are not geographically based, and their activities are predominantly within the UK, although work is being undertaken to extend this internationally where geographical sections also have younger members' groups.

Each section has an organising committee, with elected officers for key roles. Information about the activities of the sections is provided elsewhere in this report.



The Institution has several standing committees which are accountable to Council, through which our activities are managed.

IRSE volunteers

Our volunteers have continued to support the institution throughout 2023, giving their expertise, time and enthusiasm.

Areas of this work include, but are not limited to: local section committees, organisation of ASPECT 2023, annual dinner and ‘CBTC and beyond conference’, the International Technical Committee (ITC), running study groups, being on and contributing to Council,

exam question setting and marking, reviewing applications for professional registration, writing, producing and editing IRSE News and textbooks.

Our volunteers develop useful skills, knowledge, experience and networking contacts through the work which they do for the Institution which they may not get the opportunity to gain within a work environment.

If you are interested in becoming a volunteer for to the IRSE, please contact your local section or contact@irse.org saying how you would like to contribute.

Thank you, to all our IRSE volunteers, you are an essential part of our institution, without whom the Institution would not be able to perform all its duties, supporting the governance, running and reputation of the IRSE locally and internationally.

Equality, Diversity, Inclusivity

Since its creation in 2022, the EDI Group, under the leadership of Harvinder Bhatia FIRSE, has been meeting regularly to formulate an approach to develop the IRSE’s vision, strategy and plan for Equality, Diversity and Inclusivity (EDI). Central to this has been the need to develop an initial EDI culture survey, seeking insights from IRSE section committees around the key issues that they consider from their perspectives for EDI.

The survey was developed, built and sent to section committees using the IRSE’s information technology environment to automate provision of data to the Institution. The section committees were chosen to be ‘focus groups’ for the initial survey. The experience gained through this will benefit the IRSE for any future surveys.

Responses to the culture survey have been received from nearly half of the section committees and, whilst a better response rate would have been more welcome, it is nevertheless thought that the responses have provided valuable insights into EDI perceptions.

In parallel to the culture survey being produced, the EDI Group were made aware of the Royal Academy of Engineering’s Diversity & Inclusivity Progression Framework.

This is made available to Professional Institutions to use for measuring their EDI maturity. This framework was reviewed by the EDI Group and subsequently a proposal was made and accepted by Council to adopt the framework.



The EDI Group is now planning to run through the Framework and use the output of this together with what was learnt from the EDI culture survey to establish our current position on the topic, prior to developing IRSE vision, policies and strategies on EDI.

The EDI Group plan to consult with the entire IRSE membership before finalising these elements and putting them to Council for approval.

Professional development

Supporting the professional development of IRSE members, prospective members and licence holders throughout the world is a key objective of the IRSE. To do this, we have the Education and Professional Development (E&PD) Committee and the Examination Committee working with Judith Ward, our director of operations, and Zachary Smythe, our professional development officer.

Future EPD Workplan

The EPD has over the past year engaged in a major communication exercise with the membership to understand their needs and priorities. The results of this have been distilled into a forward workplan for the committee over the coming years to seek to deliver the membership's needs.

IRSE Professional Examination

The IRSE Professional Examination, now known as the Advanced Diploma in Railway Control Engineering, is a Masters-level academic qualification

which tests knowledge and understanding of railway systems with a particular emphasis on safety. Successful exam candidates must pass all four mandatory modules. Passing the IRSE Advanced Diploma is one route to obtain Corporate membership of the IRSE and it can "top up" engineering or technology qualifications for professional registration with UK's Engineering Council.

The Certificate in Railway Control Engineering Fundamentals covers all aspects of railway control engineering at a foundation level. It is a stand-alone qualification and mandatory module for anyone wishing to pass the Advanced Diploma. It is a valuable qualification for those in the railway control systems industry – for new entrants and those wanting to demonstrate their wider knowledge, as well as for those who are outside our "S&T" industry – those working in other interfacing disciplines, such as rail operations, and/or project management and those who are



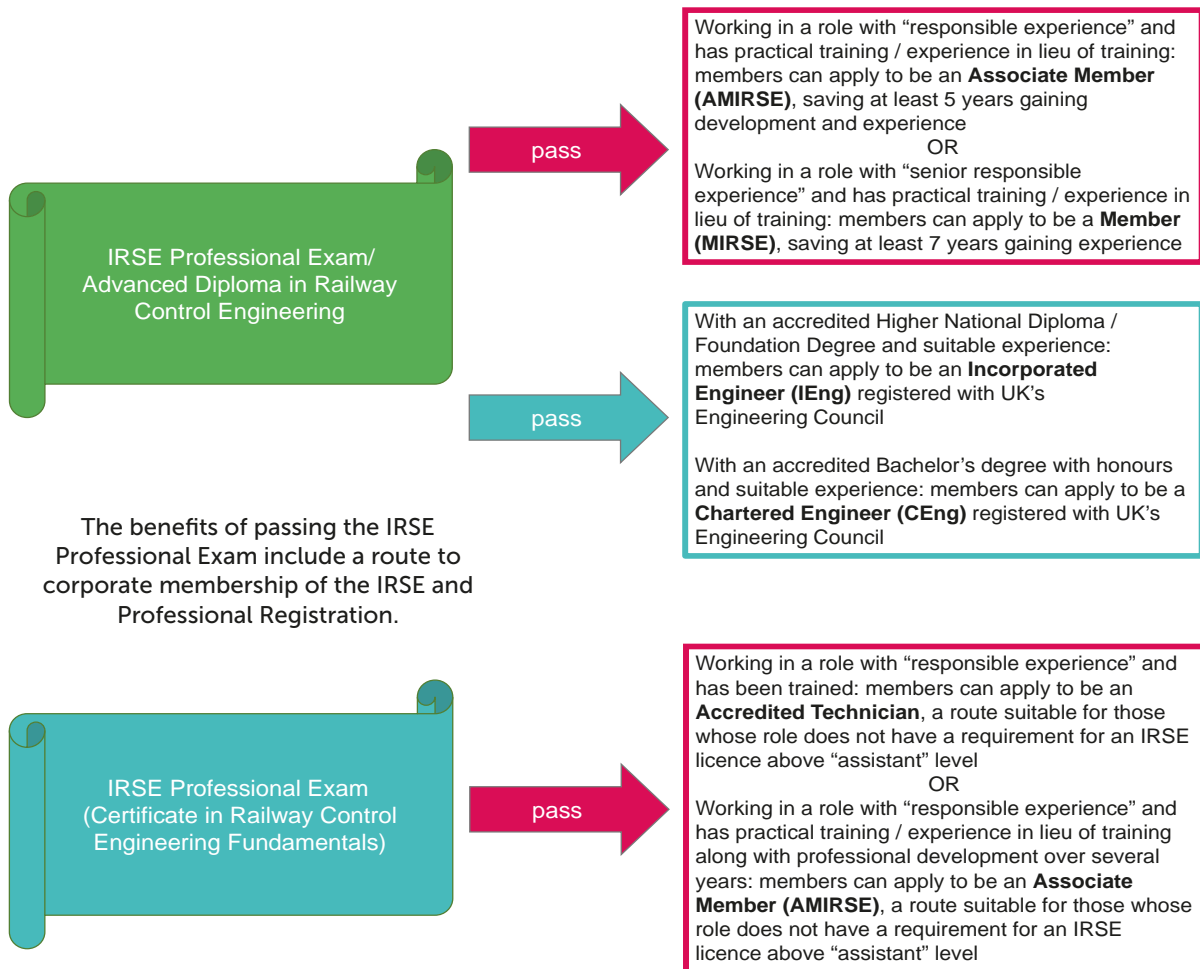
irse.info/irseexam



irse.info/cpd

interested in potentially joining the industry. Candidates for the Certificate do not have to be IRSE members. Passing the IRSE Certificate is also one route to become an Accredited Technician or Associate Member.

Exams were held remotely in 2023, with 485 candidates sitting at least one module (a total of 516 modules sat) on



4 March and/or 5 October, monitored by remote invigilation software and answers checked by anti-plagiarism software.

The exam continues to grow and to have a wider geographic reach due to it being online, extending to countries not covered by local sections, such as Austria, Egypt, Germany and Spain.

The quality of answers from candidates was good. It is significant to note that again for the Certificate, not only were the number of non-UK candidates significantly higher than UK candidates in 2023, but also the number of IRSE non-members who passed was higher than IRSE members. All non-members who sit the Certificate are encouraged to become members, particularly those who have passed the exam.

Many volunteers run exam study groups and the independent exam forum website. They support the Younger Members' exam workshops to provide support for prospective examination candidates. All these continued to be run throughout 2023, some in-person, hybrid, or online. The Education and Professional Development Committee extend their thanks to all those who contributed significant amounts of time and efforts to these various learning opportunities.

Continuing Professional Development (CPD)

The Engineering Council requires that as of 2020, those who are actively working and do not engage in the

CPD monitoring process are removed from their register. Monitoring took place during 2023 of randomly chosen members for their CPD activities in the previous year.

Information about the importance of developing and maintaining members' professional competence through CPD has continued to be provided through IRSE News and the website.

The IRSE recommends the use of the 'Mycareerpath' system for CPD planning, recording, reflecting and reviewing. More information about Mycareerpath is available on the IRSE website.

Certified courses

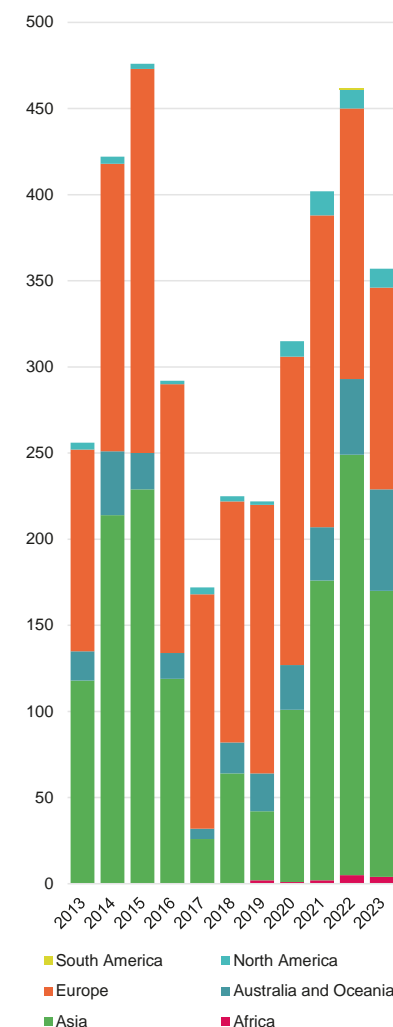
The IRSE offers a process by which training providers can have their courses assessed and certificated by the IRSE. Some training providers are in the process of having their signalling and telecommunications courses assessed and PM Training and Assessing Limited had their signalling installation course re-certified in 2023.

Learning materials

The IRSE publishes a number of textbooks which are useful to IRSE members and non-members for their study and information within railway control and communications systems, including the recently published Metro Train Control Systems book.

A textbook synopsis is published on the website (covering 15 volumes) is to help people find the most suitable textbook(s).

Looking at exam entries by continent 2013 to 2023 shows the growth and breadth of appeal of our qualification.



Licensing

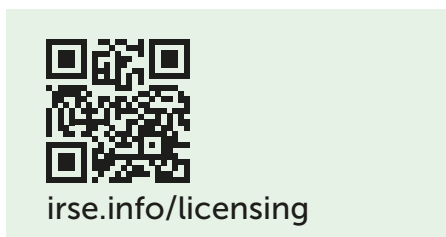
The IRSE Licensing Scheme provides assurance about the competence of individuals to carry out technical safety critical or safety-related work on rail control systems. The licensing team continued to work largely from home, going into the office for a minimum of one day a week. During the year, there was a change to the licensing staff, with Monique Shockness as head of licensing joining in September, replacing Toby Blamey who resigned in April.

In addition, Leonora Hewett started as a licensing administrator in December ready to help prepare for the retirement of Roger Button in February 2024. Roger has processed licence applications with great diligence since he started with the Institution in 2004, and he is now the Institution's longest serving employee.

The licensing team, consisting of the registrar, deputy registrar, one licensing

scheme officer, the administrator and the co-ordinator, works closely with the licensing committee, which is chaired by Colin Porter, and the other sub-committees. During the year, a new design of licence card incorporating additional anti-fraud measures was introduced.

In 2023 a total of 1330 licences were issued which is an increase of 89 on the previous year. As at December 2023 there were 5678 active licence holders which represents a slight decrease in the total no of licences held (5710 at December 2022). The Licensing Scheme holds full accreditation by the United Kingdom Accreditation Service (UKAS) for all its operations and was satisfactorily audited by UKAS in March against the competence standard for bodies involved with the certification of persons: ISO17024:2012.



IRSE assessing agents are approved and appointed for the purposes of performing assessments of candidates for licences, and they are an essential part of the Licensing Scheme. The number of approved assessing agencies now stands at 20 as the Tubelines and London Underground agencies merged during the year, and PRB Consulting and Wabtec closed their assessing agencies during 2023. There is interest in forming a new agency in India, and a UK company, BK3 has also applied to open an agency.

Membership and Registration

Membership & Registration Committee meetings and professional registration interviews continue to be held online using Microsoft Teams. We now have 15 members of the committee with Tom Johnson MIRSE and Neil Horton FIRSE joining during 2023. We currently have 14 active professional registration assessors, some also sit on the committee. The time, commitment and contribution of all involved is invaluable to the membership and registration process and is much appreciated. We always welcome additional volunteers to support the process.

The membership and registration team continues to improve and strengthen processes to ensure that the data we hold for our members is as accurate as possible and that the Institution collects subscription and other payments relating to services provided to members. Due partly to our improvements in the contact data that we hold for members and partly to our better collection processes we have improved the number of subscription payments we have been able to collect in 2023.

We continue to provide applicants for both membership and professional registration the best possible support.

We have processed 426 successful new membership applications processed during 2023, 157 for corporate grades and 269 for non-corporate grades. However, unfortunately 45 of the 426 new members failed to pay their first membership subscription, despite several reminders, resulting in their membership being terminated. 44 of them were non-corporate and one was a corporate grade. The final number of new members joining the IRSE over the year was therefore 381 (156 corporate and 225 non-corporate).

In addition to the new members detailed above there were 84 successful applications from existing members transferring to a higher grade of membership.

At its meeting in March 2023, IRSE Council agreed to waive the subscription fee for the membership grade of Companion and to introduce a fixed term of three years for the award of this now honorary title. Companions will be engaged to support their roles

as advocates of the IRSE and at the end of the three-year term an individual's Companion membership would be reviewed and renewed if appropriate. All existing Companion members were moved to this new arrangement with a review in March 2026. During 2023 IRSE Council approved nominations for a further six Companion members bringing the total number to 19. The Companion members added in 2024 are: Munir Patel, Brandon Ropp, Azman Senin, Andrew Skinner, Noel Travers and Henk Van Oostveen.

In April 2023, 179 memberships were terminated due to non-payment of the 2022/23 membership subscription. However, 18 memberships were then reinstated following late payment of their subscription.

There were 104 membership resignations over the year. We are now tracking reasons for these resignations and report that these are primarily due to retirement from the industry or people changing direction in their careers.

The Institution was sad to report the deaths of 19 members during 2023, these are listed below. Many were strong supporters of the Institution and had held membership for a considerable number of years, six of whom had held membership for more than 50 years. In various ways they had all made significant contributions to the Institution's work and will be missed.

- Charles Bache AMIRSE
- Timothy Edward Bray (Affiliate)
- Lawrence Dicks FIRSE
- Michael Evans MIRSE
- Brian Andrew Hirst HonFIRSE
- David John Allday Hobbs MIRSE
- Martin Jereb AMIRSE
- Gary Morgan Jones (Accredited Technician)
- Herman Lubbert FIRSE
- Stuart Bruce McLuckie (Affiliate)
- Malcolm Meandue HonFIRSE
- Brian Metcalfe (Affiliate)
- William Alan Nicholson MIRSE
- Kevin Michael Scholfield FIRSE
- Hendrik Bernhard Scholten FIRSE
- Arthur John Standing MIRSE
- Michael Thwaite AMIRSE
- Michael Graham Watkins FIRSE
- James William White AMIRSE



irse.info/membership

Membership by grade at 31 December 2023.

Membership grade	Members
Affiliate	1306
Accredited Technician	173
Associate Member	1072
Member	1941
Fellow	569
Honorary Fellow Corporate	57
Honorary Fellow Non-Corporate	2
Companion	19

The total membership of the Institution increased by 98 over last year's reported figure, with 5,139 members as of 31 December 2023.

During 2023 the Institution has supported a further 62 engineers to achieve professional registration with the Engineering Council, the UK regulatory body for the engineering profession – 14 Chartered Engineers (CEng), 11 Incorporated Engineers (IEng) and 37 Engineering Technicians (EngTech). In addition, we have had five members transfer their registration from another institution to the IRSE, all CEng. 12 members lost their registration due to resignation or non-payment of subscriptions – CEng, four IEng and seven EngTech.

As at 31 December 2023 the Institution supports 454 professional registrants – 186 Chartered Engineers (CEng), 98 Incorporated Engineers (IEng) and 170 Engineering Technicians (EngTech) and the Membership and Registration Team were supporting a further 130 applicants who were at various stages of the registration process.

Awards

The IRSE makes several awards each year. The majority of these are to recognise, reward and encourage the professional development of engineers, particularly those in the

earlier stages of their careers. The purpose behind this is not simply to assist their career development, but to promote high standards of engineering excellence, thereby contributing to

the public benefit objectives of the Institution. For the first time in 2023, some of the awards were presented by the presidential team at the annual members lunch.

IRSE President's Award

Philip Wiltshire HonFIRSE

The IRSE President's Award, created in 1999, recognises exceptional individual contributions to the Institution.

The award is occasionally granted by the Council, based on the current president's recommendation and the endorsement of two former presidents. Due to its focus on exceptional service, its award is a rare occurrence.

In 2023 Philip Wiltshire HonFIRSE was presented with this special award. He joined the IRSE in 1964 and is the Institution's longest serving, living past-president. In the 1980s he represented the IRSE at the Engineering Council, and in the 1990s he played a leading role in the formation of the IRSE Licensing Scheme, and has been a member of the Licensing Committee

since its inception. He has led on the evolution of all the key documentation, notably the Licensing Standard and the Licensing Procedures. In addition, he has chaired several appeals panels. Philip is also an auditor of assessing agencies, and this has meant he is kept up to date with the actual workings of the Scheme. He was elected an Honorary Fellow in 2002.

Dell Award

Jerry Carter MIRSE

The Dell award is made annually under a bequest of the late Robert Dell OBE (Past President). It is awarded to a member of the Institution employed by London Underground (or its successor bodies) for achievement of a high standard of skill in the science and application of railway signalling. The award takes the form of a plaque with the winner's name engraved upon it.

This year's Dell Award winner is Jerry Carter MIRSE, principal engineering leader at Transport for London.

In a career spanning over 45 years, he has played a major role in signalling supporting projects which have included the extension of the Northern Line to Battersea, performance improvements under "Working Timetable 58", and the capacity enhancement works at Bank. For the past three years he has been the lead sponsor for signalling design apprentices. He contributed to the 2022 IRSE Metro Train Systems book and supports the review of IRSE questions for their applicability to Metro systems.

IRSE-Signet Award

Istvan Darazsi

The IRSE-Signet Award is the most recent of awards, introduced in 2016 and sponsored by Signet Solutions. This award is given annually to the person who obtains the highest marks in any single module of the IRSE Examination. The award takes the form of the Signet logo 'person' on a small plinth, engraved with the name and year of the winner, and bearing the IRSE's logo. The award also includes funding for the winner to attend the annual IRSE Convention or ASPECT conference.

For the first time in its history, this award was presented for the second year running to Istvan Darazsi signalling engineer with Iarnród Éireann in Ireland. He achieved the highest marks in module C, principles of railway control and communication systems in the 2023 Exam, following on from coming top in module B in 2022.

He has now completed his IRSE Advanced Diploma in Railway Control Engineering.

Frank Hewlett Bequest and Alan Fisher Memorial Fund

Frank Hewlett was an Associate Member of the Institution. He died in September 2008 and left a very generous and substantial bequest to the Institution. In 2009 the IRSE Council launched an appeal to establish a memorial fund for Alan Fisher, who died unexpectedly during his presidency of the Institution. The intention was to use the fund to support the development of young S&T engineers, particularly those outside the UK.

The income from the two funds is used predominantly to provide a number of travelling bursaries for younger members from all over the world to support their attendance at major IRSE events.

In 2023 15 IRSE members in their early careers benefited from the fund, enabling them to attend the IRSE's ASPECT 2023 conference in Melbourne, Australia.

Thorowgood Scholarship

Joseph Conlon and Ashley Murray

The Thorowgood scholarship is awarded under a bequest of the late W J Thorowgood (past-president) to assist the development of a young engineer employed in the signalling and telecommunications field of engineering. The award is made to a candidate who has excelled in the IRSE professional examination and comprises of an engraved medallion and funding for a study tour of railway signalling installations or signalling manufacturing facilities.

This year there were two winners, Joseph Conlon, a graduate engineer with SNC-Lavalin Atkins' rail consulting business in the UK, and Ashley Murray AMIRSE, signalling lead at Queensland Rail in Australia. Joseph sat Certificate (Mod A) of the IRSE exam in March of 2022, and the remaining three modules in October. Ashley gained distinctions in modules B and C and a pass in module D, all in October 2022's exams. He had previously gained a credit in the Certificate (module A) in October 2020.

Merit Awards

John Chaddock and David Stratton

The Merit Award was introduced in 2007 in order to recognise exceptional service to the Institution by a volunteer or staff member anywhere in the world. The award is made by the Council following receipt of a nomination and takes the form of a plaque mounted on a rectangular plinth with an engraved citation.

This year Merit Awards were presented to John Chaddock from Park Signalling and David Stratton MIRSE. John was nominated for his boundless enthusiasm for promoting the values and benefits of the IRSE both within Park Signalling and across the wider industry. He, with others, was instrumental in the rejuvenation of the Younger Members Section.

David was nominated for his outstanding contribution to proof reading IRSE papers and publications, a task that goes unseen by the membership who only see the finished articles. Having joined the Institution as a Member in 1974, David was the editor of the main IRSE Papers, formerly the London papers, from 2002 to 2018. More recently David has edited the Industry News section and proof-read all IRSE News items, regularly spotting and correcting errors others miss. He is now retiring from the role due to his failing eyesight.

David has carried out these tasks with modesty, working to very tight deadlines, and particularly supporting our many authors for whom English is not their first language.

IRSE Companions

IRSE Companions are persons who are, by their association with the profession, or through their occupation of a position of eminence, desirous of furthering the objectives of the Institution and (in the opinion of the Council) are worthy of such admission.

In 2023 the following people were made IRSE Companions. Professor Azam Senin, University of Kuala Lumpur; Noel Travers, XRail Group; Andrew Skinner, Great Western Railway; Munir Patel, XRail; and Brandon Ropp, Ground Transportation Systems Canada.

Biographical details on each of these outstanding individuals can be found on the IRSE website in the awards section.



irse.info/awards

Honorary Fellows

Paul Darlington, Mark Glover, Ian Mitchell and Peter Woodbridge

IRSE Honorary Fellows are persons who, in the opinion of the Council, have rendered outstanding or exceptional services to the Profession, or the Institution, or have furthered the objects of the Institution, and are deemed by the Council worthy of such admission.

Peter Woodbridge, Ian Mitchell, Paul Darlington and Mark Glover were elected as Honorary Fellows in 2023.

Peter Woodbridge is a dedicated volunteer who has significantly contributed to the success of the IRSE. For decades, he has actively promoted learning in the signalling and control industry, assisting individuals at all career stages. His impact extends beyond company, region, or country boundaries.

For his work in supporting younger members preparing for the exam, and running study groups, Peter was awarded the Merit Award in 2008 – and for an unprecedented second time in 2016.

In 2018 Peter initiated an online study group and he regularly leads and contributes to weekend training for young engineers, run in conjunction with Signet.

Ian Mitchell has spent 48 years working in the railway industry. He has had a wide-ranging career, working on diverse projects and in different engineering, assurance and assessment roles.

Ian has supported the IRSE in many ways over the years of his career and since retiring, as a chair and staunch supporter of the Midland & North Western Section and carrying out various organisational roles, including being part of the organising committee for the 2012 and 2015 ASPECT conferences.

Ian has been a contributing editor of IRSE News over many years and he still undertakes professional review interviews on a regular basis. He is a member of the International Technical Committee and is currently leading an initiative to revise the ETCS textbook.

Paul Darlington has also spent 48 years in the industry and is a railway telecoms specialist with extensive signalling and telecoms project delivery, and asset management experience.

A long-term member of and contributor to the IRSE, his involvement includes service on the Midland & North Western Section, Exam and Audit Committees and as an assessor for professional registration since 2013.

Paul has been managing editor of IRSE News since August 2017. During that time the content and quality of the magazine has developed considerably. It is worth highlighting the particular success of the 'Back to basics' series of articles that have been created to support those seeking to enter the IRSE Professional Examination.

Mark Glover is a career-long signalling engineer, joining the IRSE as a student member in 1989. He has served on local and national committees and has created a wide range of IRSE publications.

Mark has been production manager for IRSE News since 2014, laying out the magazine and creating graphics that illustrate the contents.

From 2019 through to its publication in 2022, Mark production managed the creation of the Metro Train Control textbook. This book provides extensive graphical representation as well as formally laid out technical expert contributions from around the world.

Global office and personnel

In January 2023 the Institution's office moved from the 4th to the 5th floor within the Institution of Mechanical Engineers (IMechE) building at One Birdcage Walk, London, UK. There has been no increase in the rent paid to the IMechE but the move has provided the team with more useful, self-contained space from which to manage the centrally organised activities of the IRSE – membership and professional registration, licensing, IRSE exam and events administration as well as financial administration.

They are now operating in a hybrid working environment with staff both in the London office and from home.

Chief Executive

The chief executive and general secretary of the Institution is Blane Judd, a Chartered Engineer and Fellow of the Institution of Engineering and Technology. He is responsible for directing and managing the resources of the Institution to implement the decisions of Council in an efficient manner and in compliance with UK company and charity law. He is accountable to Council and provides the focal point of contact for other

institutions and external organisations, including the UK's Engineering Council, the Royal Academy of Engineering, government agencies, the chief officers of other professional bodies, and the scientific, engineering and technology community. He is also responsible for ensuring compliance with the requirements of the Institution's Articles of Association, Companies House, the Charities Commission and relevant legislation. The Chief Executive is supported by a Senior Leadership Team.

IRSE staff team

The organisation structure as of 31 December 2023 is as shown in the chart below.

There have been the following staff changes during 2023.

Joiners: Toby Blamey in January as head of licensing; Sophie England in May as executive assistant; Monique Shockness in August as head of licensing; Leonora Hewett in December as licensing Administrator.

Leavers: Lisa Marriner in February, previously executive assistant; Toby Blamey in April, previously head of licensing.

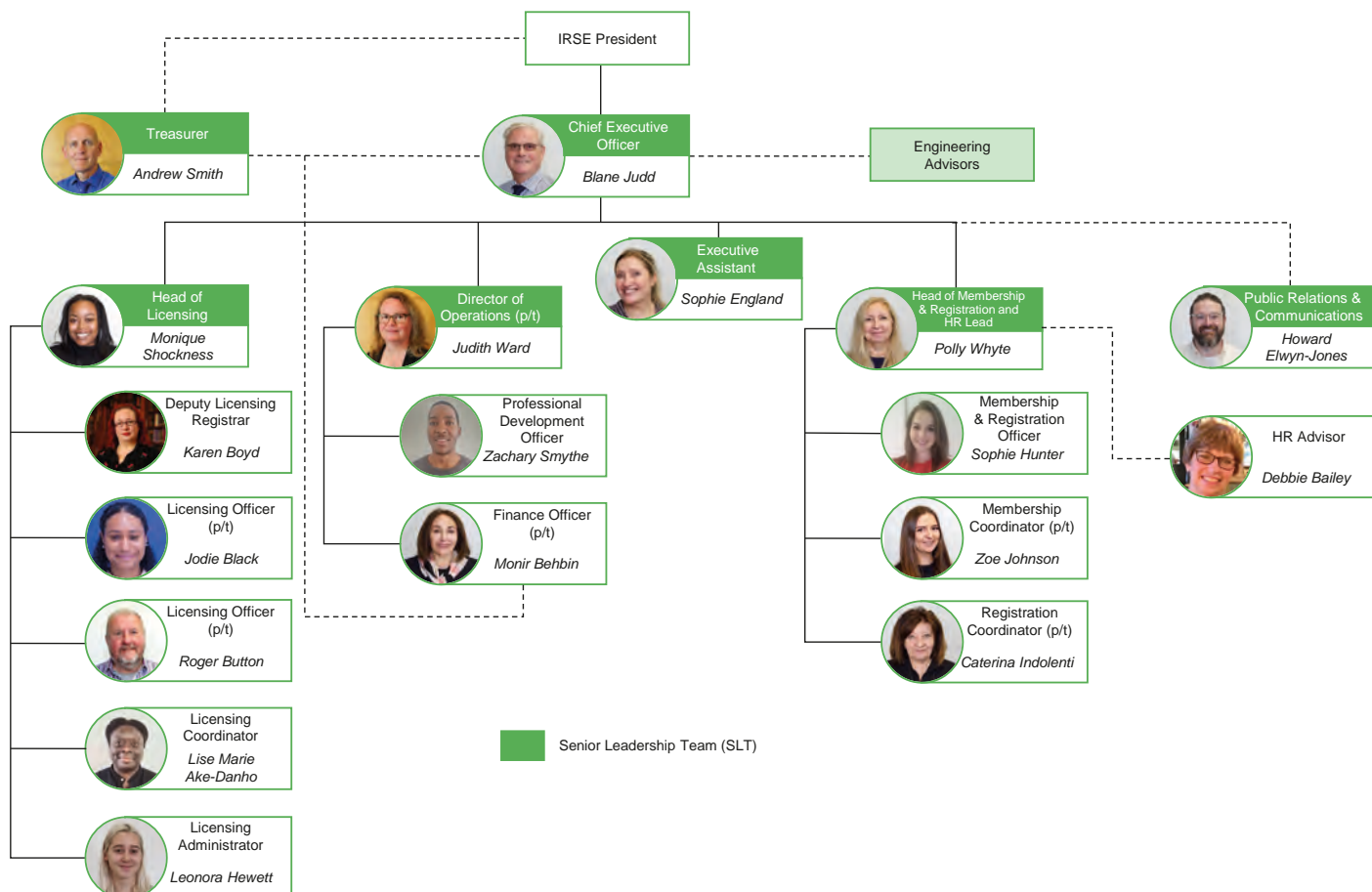
Contract support

The following members of the team work on a part-time contract basis.

Until September, PR and communication activities were supported by Lindsay Jones of LJPR Ltd. Lindsay, a qualified journalist with an MSc in PR, has now retired from this role but is still supporting the IRSE with specific projects. PR and communication activities have now been picked up by Howard Elwyn-Jones and his team at Prettybright. We receive excellent support from the Prettybright team on a wide range of social media activity, which includes the e-bulletin and video livestreaming of events.

Andrew Smith is the Institution's treasurer, with responsibility for the production of the budgets and accounts, and for monitoring the health of the Institution's savings and investments.

Debbie Bailey is a Chartered Member of the Chartered Institute of Personnel and Development and supports Polly Whyte as HR advisor, Polly has the role of HR lead in addition to being head of membership & registration.



Presidential programme

Each year the IRSE president plans a programme of major events, comprising a series of high-profile technical papers, face to face events and visits to IRSE sections across the world.

Our president to April 2023 was Andy Knight FIRSE whose presidential theme was 'Shaping the Future'. The final three papers in Andy's year were 'Autonomous Vehicles and Level Crossings' presented by Hugh Rochford and Virginie Tailindier from SNCF in January, 'Testing and Changes for Digital Signalling Systems' delivered by Robin Lee of Park Signalling, and

'Progress on the route to developing and retaining diversity in signalling engineering' delivered in Adelaide, Australia by Jane Copperthwaite, owner and director of Anutha.

Steve Boshier FRISE, our president for twelve months from April 2023, chose 'Global Integration People Process and Technology' as the theme for his year. His first paper 'Remote monitoring of level crossings' was delivered in May by Thomas McPeake director of Vertex Rail Australia and Nigel Worrall, signalling and systems designer at Quantum Rail, followed by 'Failing Safe,

Mindset Matters on July presented by Jeanette Aitkin, chief executive officer at Competency Australia on July. At ASPECT 2023, Rod Muttram FIRSE, IRSE ITC member and independent consultant at Fourth Insight Ltd delivered a presidential paper on 'Key requirements for the safe, effective and ethical use of AI'.

All presidential papers are published in our monthly journal, IRSE News, and the presentations are available to watch on the IRSE Vimeo channel [irse.info/vimeo](https://vimeo.com/irse) or on the IRSE website.

Section activities

In addition to the presidential programme, every year there is a programme of lectures, seminars and technical visits organised by the Institution's 23 sections across the globe. Our sections are in Australasia, China, France, Hong Kong, India, Indonesia, Ireland, Japan, Malaysia, Netherlands, North America, Singapore, Switzerland, Thailand, and Southern Africa. Within the UK, sections cover London & South East, Midland & North Western, Plymouth, Scottish, Western, York and Minor Railways. We also have a Younger Members Section.

The geographical sections vary considerably in size, from around 20 members up to several hundred, and in levels of activity. Each has its own organising committee, elected officers and programme of events. They report annually to the Council on their work.

2023 has been a year of exploring what a new 'normal' is in terms of local section meetings. Some sections have continued to provide virtual meetings, which do attract a large number of attendees from beyond the sections' geographical boundaries. Others meet face-to-face or hybrid for technical meetings, AGMs and socials.

Highlights in 2023 have included:

Australasian Section: supporting the highly successful ASPECT conference in November, alongside running a number of technical forums.

China Section: hosted the 8th China Railway System Safety Framework Seminar on the theme of 'Exploring the new progress of Autonomous system safety assurance'.

French Section: running a number of technical conferences.

Hong Kong Section: running a number of technical forums and welcoming the President in the autumn.

India Section: organising a convention and exhibition on the digital transformation of railways in December.

Indonesia Section: welcoming the President for his visit in April.

Irish Section: running a number of technical meetings and social activities.

Japan Section: running a number of study meetings.

London & South East Section: running a number of video and hybrid technical meetings.

Malaysia Section: continuing to work with the University of Kuala Lumpur on the syllabus and teaching of railway control engineering courses and welcoming both the president and CEO for visits.

Midland & North Western Section: running technical visits and technical meetings and meeting the president.

Minor Railways Section: two winners of the Minor Railways Section S&T Technician of the year award in 2023 – Nick Wellington (Kent & East Sussex Railway) and the S&T team at Museumstoomtram Hoorn-Medemblik.

Plymouth Section: the long-postponed celebration of their 50th anniversary with a dinner attended by the president.

Netherlands Section: hosting a number of webinars and welcoming the president on his visit in the autumn.



irse.info/nearyou

North American Section: running the 6th sell out 'CBTC and beyond' conference in Toronto in November.

Scottish Section: running another successful annual dinner in November, attended by many across the railway industry.

Singaporean Section: hosting the CEO on his visit in the autumn.

Southern African Section: running a number of technical meetings.

Swiss Section: welcoming the president with a technical visit to Pilatusbahnen in September.

Western Section: running a number of video and hybrid meetings, including a joint meeting with the IMechE.

York Section: jointly organising the North Eastern Railway Engineers' Forum in September and running a number of technical meetings.

Council wishes to extend their sincere thanks to everyone involved in the operation of the local sections, for the excellent work they undertake. Council also very much appreciates the help and support given by many companies to the work of the sections. Charles Page continues his excellent work in the role of local section coordinator, supporting the sections.

Younger Members

The Younger Members Section was established to support engineers under the age of 35 or those new to the industry. We have active younger member sections across the world, all of which are open to other younger members wherever they may reside.

Younger Members – Australia

Australasian members under 35 years of age are automatically members of the section. The group provides networking, career advice, education, training, general presentations, and site visit activities.

To support members undertaking the IRSE Professional Exam Module A, the section started 'Back To basics' webinars.

In July 2023, a training session was held in Sydney, providing hands-on experience in building and assembling signalling equipment.

The session was preceded by a networking event sponsored by Sigtech Solutions Australia. In November 2023, AusRAIL PLUS was held in Sydney, introducing IRSE and IRSE Younger Members to a wider audience.

During the same month, ASPECT 2023 was held in Melbourne, where the section organised a networking breakfast for younger members and welcomed the 10 younger member ASPECT 2023 Conference Australasian bursary winners.

Younger Members – UK

The Younger Members section has had online and in person events over the past year and will continue to do so for the foreseeable future. The events organised by the younger members can be attended by a person of any age and experience but are generally geared towards people who are within the first 10 years of being in the industry. With the online events and online committee meetings we have been able to attract a wider audience from around the globe over the past couple of years.

In 2023 we ran two successful in-person study events. The Module D Signet study weekend took place in June 2023 and offered an extensive hands-on learning experience in railway signalling and telecoms technologies. The event featured sessions on signal sighting, level crossings, solid state interlocking, and signal control logic, along with hands-on activities and expert-led discussions.

We also ran a Module B study event at University of Birmingham in July 2024. It featured four main technical presentations, covering the Dalwhinnie and Clapham railway incidents, challenges of obsolescence in railways, and the importance of human factors in rail safety and operations. Attendees received constructive feedback on their exam performance and had the chance to discuss the technical presentations in depth with the presenters.



irse.info/youngermembers

This successful event provided comprehensive learning, knowledge sharing, and networking opportunities, underscoring the IRSE Younger Members' commitment to promoting excellence in railway signalling.

Continuing from last year, the committee ran a very successful and well attended Back to basics series online. These draw inspiration from the 'Back to basics' articles featured in IRSE News, with presentations delivered by the original authors. This initiative aimed to create a collection of video presentations based on these articles and can be found on the IRSE YM Vimeo page (irse.info/vimeo). The primary objective is to aid individuals preparing for the IRSE exams or those looking to enhance their understanding.

To get involved, please contact us at younger.members@irse.org. We are always looking for members from around the world to get involved. The best way to learn about our events is to follow us on our LinkedIn page where all our events are posted at irse.info/ymlinkedin



ASPECT 2023

The IRSE ASPECT 2023 conference was led by the IRSE president, Steve Boshier FIRSE, and his organising committee.

It was an action-packed week that won't be forgotten, hosted in Melbourne, Australia, which became the centre of excellence for all things rail signalling, systems engineering, assurance, communications, train control, asset management, integration, and AI.

The event attracted delegates from around the world, showcasing an amazing spread of expertise, knowledge, skills, and experience.

Among the attendees were industry experts, specialists, generalists, graduates, and newcomers to the industry, representing diverse backgrounds.

Participants hailed from various sectors including rail operators (both private and public), equipment and technology suppliers, government delivery organisations, regulators, academic institutions, contractors, and consultants, creating an ideal mix of professionals in rail-related areas.

The conference provided an excellent opportunity to renew old industry relationships, share knowledge, and forge new connections. It was remarkable to witness the embrace of face-to-face conferences again following Covid-19.

ASPECT 2023 featured an incredible line-up of high-quality papers presented

over three days, focusing on the global theme of railway signalling, rail systems, and ensuring their safe operation. The packed auditoriums not only reflected the quality of the presentations but also the relevance of the programme, aimed at advancing the industry further.

Steve Boshier opened the ASPECT 2023 conference, highlighting its two-year journey and acknowledging the support from a team of volunteers, comprising various IRSE members. He emphasised how the IRSE has evolved into a global professional organisation, supporting members worldwide and continuing to grow and develop.

Addressing the three key areas of his presidential theme – people, process, and technology – Steve explained how these would be covered during the conference, supporting professional development, broadening technical understanding, and facilitating networking with industry experts. He encouraged both younger and older members to engage and network, emphasising the importance of fostering the younger generation, the future leaders of the industry.

He also highlighted several conference highlights which included:

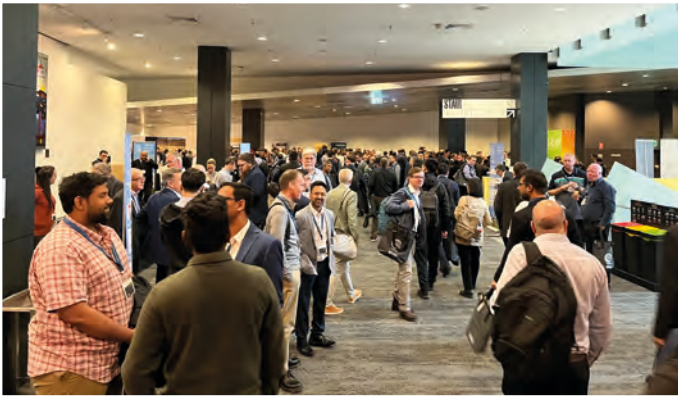
- 400 delegates from 15 different countries representing 80 businesses, setting a higher standard for future IRSE events.
- 52 technical papers delivered through dual presentation streams over three days.

- The IRSE and the IRSE Australasian Section providing bursary awards, enabling 25 younger members from around the world to attend ASPECT 2023, for many, their first overseas trip.
- Introduction of three novel training sessions focused on younger members and an innovation 'Dingo Den' session to generate new industry ideas.
- A two-day site visit programme encompassing various key locations such as the Metro Tunnel, V/Line & MTM train control centres, Level Crossing Removal Project sites, and the Pakenham High-Capacity Train Stabling and CBTC facilities.
- Sponsorship support and a three-day trade show with 25 industry companies showcasing their offerings.
- Three social evening events: the welcome reception at the iconic Polly Woodside tall ship, the conference dinner at the amazing State Library, and the closing event featuring a ride on the Puffing Billy heritage railway and a fabulous dinner.

With 52 high-quality presentations, it is impractical to cover all in detail. ASPECT 2023 delegates have been provided access to all technical papers, and they will be made available to all IRSE members around mid-2024.



IRSE ///



International Technical Committee

The IRSE's International Technical Committee (ITC) has many fully participating and corresponding members from many parts of the world, including Australia, Belgium, Canada, Finland, France, Germany, Japan, the Netherlands, Spain, Switzerland, Singapore and the UK. There is also a younger members' representative.

The ITC's primary purpose is to provide papers on strategic or technical topics relevant to train control and communications systems in the railway environment. Its particular strength lies in its international membership at a senior level, enabling engineering principles and practices from a diverse range of countries to be brought to bear upon the subjects that ITC covers. The ITC tailors some of its papers to coincide with the presidential theme of the year.

During the year, the ITC held four meetings, including hybrid meetings in May in London UK, Utrecht in September and in November in Melbourne Australia to coincide with ASPECT 2023.

Frans Heijnen HonFIRSE and Wim Coenraad HonFIRSE were presented with a memento in September to thank them for their long service, after stepping down from full to corresponding members. Jane Power FIRSE stepped down from being secretary of the ITC to focus on her upcoming presidential year and Joseph Conlon, younger member and Thorrowgood Scholarship prize winner has taken up that role going forward.

The ITC produced a number of papers during 2023, three of which have been published in IRSE News. Two presidential



irse.info/itc

papers were presented by ITC members and new member John Boss FIRSE, a signalling system and cyber security expert, gave a paper at ASPECT 2023.

There are approximately 17 papers either in progress or planned for the future. All completed ITC papers can be found on the IRSE website. ITC members are continuing to provide expertise for the ERTMS textbook that is in production.

Collaboration

The IRSE continues to develop both formal and informal working relationships with engineering and railway organisations in the UK and, either directly or through its sections, with organisations in other parts of the world. Discussions with representatives in Australia, Canada, India, Israel, and Malaysia and the presidential team and the chief executive held meeting with some of these organisations in the year.

There have been exciting opportunities to meet businesses in Singapore, Malaysia, and Australia this year helping to reinforce the international nature of the IRSE.

In the coming year we will continue to focus on our strategic intent to strengthen our engagement with external bodies, including not only rail industry companies, but also other relevant organisations. The Institution enjoys good working relationships with, and support from, many companies, but our ambition is to grow this further for mutual benefit.

We remain active members of the Rail Engineer Forum (theref.org.uk). This

body is made up of representatives from all the professional engineering Institutions who have a rail interest and includes, IMechE, IET, ICE, PWI, CIRO, INCOSE, CILT, RCEA and the Young Railway Professionals. The chair is rotated amongst the members and this year is the turn of the IET chaired by John Easton of Birmingham University.

We maintain a close link with the Rail Industry Association UK (RIA) to ensure that where possible the two bodies are working closer together to link professional employees working in professional businesses. This working relationship is to help the IRSE and RIA to identify where we can together make a difference in the rail sector.

The activities of both the Royal Academy of Engineering and Engineering UK continues to underpin or activities to encourage young people to consider a career in an engineering related discipline. Through these collaborations we can have a greater impact than we would in isolation.

We work closely with the UK's Engineering Council for the regulation of



irse.info/collaboration

engineers and have seen a growth in the number of members coming forward for professional registration. The IRSE is a licensed body of the Engineering Council and is thus licensed to register Chartered Engineers, Incorporated Engineers, and Engineering Technicians. In the last year we have had increased international interest in professional registration, which is to be welcomed.

As part of our drive to address the gender balance in the sector we have engaged with representative groups through the Equality, Diversity and Inclusivity group led by Council member Harvinder Bhatia. This group is looking at how the sector can better attract a wide range of people from differing backgrounds and cultures.

Annual General Meeting

The IRSE’s 109th Annual General Meeting, chaired by the retiring president, Andy Knight FIRSE, was held at the Level Crossing Removal Project offices in Melbourne on 28 April 2023. There was an overall attendance of 259 online and 35 in person.

In accordance with the Memorandum and Articles of Association all ordinary business was concluded at this meeting, and it was resolved to appoint HPH Chartered Accountants for 2023.

Left, last year’s president, Andy Knight hands over to Steve Boshier. Right, Steve giving his presidential address.

After conducting the formal business of the AGM, Andy commented on the Annual Report for 2022 (published on 1 April 2023), and the treasurer, Andrew Smith FIRSE, commented on the Accounts for 2022.

The membership received copies of the Annual Report for 2022 (published on 1st April 2023), and there being no comments or questions received through correspondence this report was adopted.

Andy announced that the ballot for the election of members to Council had resulted in the following being elected:

Fellows: Yousef Kimiagar (RoW-North America), Michael Ewart (UK), Ian J Allison (UK). Peter Allen (UK) will fill a one-year casual vacancy and will step down in April 2024.

Members: Jeetendra Dhelaria (UK), Roy Andrew (Andy) Brammer (UK).

Associate Member. Keith Upton (UK).

Andy welcomed Yousef, Michael, Jeetendra and Andy to Council and expressed grateful thanks to Dr Daniel Woodland FIRSE, Yuji Hirao FIRSE, Rob Burkhart MIRSE and Ryan Gould MIRSE who retired from Council.



IRSE Council

IRSE Council 2023-2024



President Steve Boshier FIRSE	From the class of Fellow Peter Allan FIRSE Ian J Allison FIRSE Harvinder Bhatia FIRSE Michael Ewart FIRSE Pete Gracey FIRSE Yousef Kimiagar FIRSE Gordon Lam FIRSE Clive Roberts FIRSE Andy Stringer FIRSE	From the class of Member Firas Al-Tahan MIRSE Andy (Roy) Brammer MIRSE Rob Cooke, MIRSE Jane Copperthwaite MIRSE Jeet Dhelaria MIRSE Paul McSharry MIRSE	From the class of Associate Member Georgina Hartwell AMIRSE Xialou Rao MIRSE (was AMIRSE when elected) Keith Upton AMIRSE
Vice-presidents Jane Power FIRSE Bogdan Godziejewski FIRSE Rod Muttram FIRSE	Co-opted past-presidents Andy Knight FIRSE Ian Bridges FIRSE Charles Page FIRSE	Chief Executive Blane Judd	Treasurer Andrew Smith FIRSE

Members' Lunch

The 25th Annual IRSE Members' Lunch took place on 20 July 2022 at the Union Jack Club in London.

Organised once again by past-president Clive Kessell HonFIRSE who instigated the lunch as part of his presidency, the event was attended by 77 members including several past presidents.

After a welcome from Clive, IRSE vice-president Jane Power FIRSE gave the vote of thanks.

Blane Judd, CEO of the IRSE gave a 'State of the Nation' update. He focused on the growing international influence of the Institution and in particular the recent engagement with both the Greek and Indian authorities regarding recent incidents.

He reported that IRSE has now grown to have members in 56 countries and that the IRSE Licensing scheme is being considered for adoption in other parts of the world.

The lunch was attended by Jerry Carter of TFL, recipient of the Dell Award for his long and distinguished service and support of new entrants into the Industry. That included Joseph Conlan who was one of the two Thorowgood award winners. They were presented with their awards by Jane Power.

A President's Award was given to Phillip Wiltshire. Ian Mitchell and Peter Woodbridge were presented with Honorary Fellowships and John Chaddock received a Merit Award. Full details of awards are on page 11.



Annual Dinner

The 57th Annual Dinner was held at The Grand Connaught Rooms in London on Thursday 11 May 2023. The dinner was attended by 370 members and guests which was 20 more than the capacity of The Savoy and an increase of 150 from the 56th dinner at The Landmark.

The President's guest of honour was Giles Thomas, integration director, HS2. He spoke about the project, its successes and set backs and its place in modern Britain.

The Institution's association with RedR UK, the disaster relief charity, continued and over £2,300 was raised in a collection. There was no main sponsor for the event as we had enjoyed in previous years. We were grateful for support from both Kilborn Consulting and Brightsea print group for their contributions.

Changes and innovations have continued with the 57th dinner once again being a 'black tie' event and also

being held on a Thursday evening, from its traditional slot on a Friday. These have received positive feedback and are set to continue. The dress code is not enforced but the overwhelming majority were happy to conform. The Grand Connaught Rooms, the venue of IRSE's annual dinner dances in the 1960s, have the capacity for expansion in numbers to over 500 diners, which is what drove the change from The Savoy after 2019.



Publications and communications

The presidential theme of 2023 was 'global integration' and, appropriately, the year saw many opportunities for members around the world to connect both in person and online.

From the highly successful ASPECT conference in Melbourne to an array of webcasts and interactive online presentations delivered by our local sections, our hybrid approach to member engagement and information exchange continues to be a vital component of the IRSE communications strategy. Technology has allowed members to benefit from a wealth of collective knowledge within the Institution across different timezones and locations.

IRSE News

IRSE News celebrated its 300th edition in July 2023. Published monthly in both print and digital formats, its purpose is primarily to inform IRSE members worldwide about industry news, technical developments, and the work and activities of the IRSE and its sections. Papers that comprise the presidential programme are published in IRSE News, together with a wide range of other internationally sourced educational papers and articles. We'd like to extend our thanks to the dedicated and hard-working editorial team led by managing editor Paul Darlington HonFIRSE, and production manager Mark Glover HonFIRSE, for another excellent year.

Proceedings

The Proceedings provide a summary of the Institution's activities and have been produced annually since the very first issue in 1913. A hard copy of the Proceedings is supplied to the British Library and to the library of the Institution of Engineering and Technology. PDF versions of the Proceedings are available for all to read via our website.

Website

The website provides details of Institution events; sections; information about the governance and operation of the IRSE; material for members taking the IRSE professional exam; and how to become a member, as well as a wealth of information relating to professional development. Members (and registered non-members) can update contact details, book events, order publications, and pay their subscriptions online. 2023 saw updates and improvements to UX design, which improved accessibility for devices with a range of screen sizes.

Video

All of the Presidential papers, section lectures and events recorded for online viewing have been added to the IRSE Vimeo channel, which now hosts a collection of 480 videos.

During 2023, the IRSE Vimeo channel received 18,653 views and 4885 individuals across the world watched a total of 263 days' worth of IRSE content.



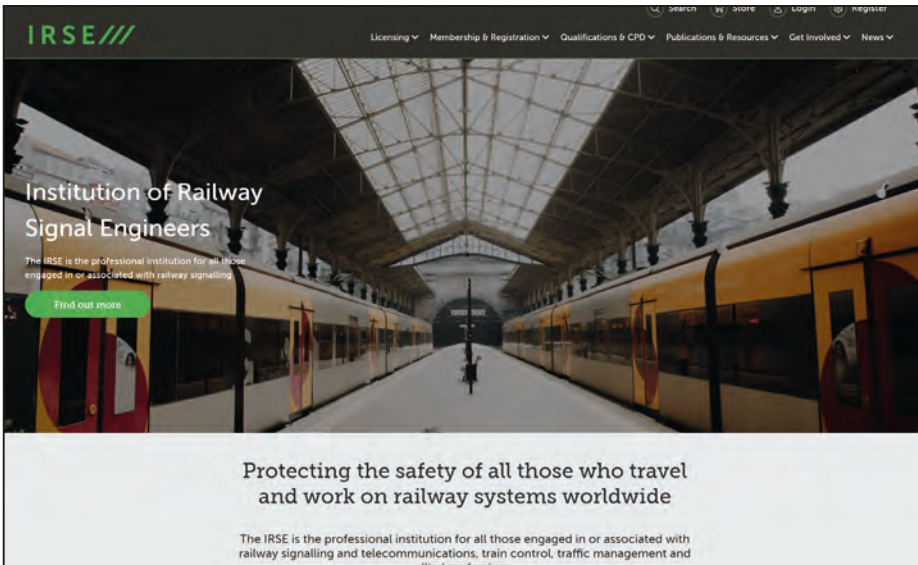
The top five countries by viewership were UK (34%), India (18%), Australia (15%), and Hong Kong (8%).

E-Communications

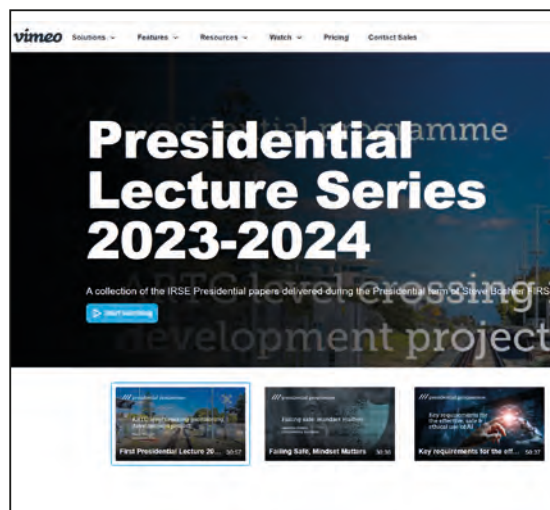
A monthly email bulletin is sent to all members, containing information about upcoming events and other topical information. In addition, we send out ad-hoc electronic communications to members highlighting key presidential events and other important information.



Our monthly publication, IRSE News, reached the milestone of its 300th issue in 2023.



We share our work with our membership, and beyond, through a range of digital and print media.



Social Media

LinkedIn has become the key channel for the Institution online, playing a key role in promoting our activities and signposting our content. As a platform dedicated to professional connections and the exchange of information, there has been great interaction with posts around our key events, presentations and news stories. These are regularly posted on our feeds to help keep members informed, and raise the profile of the Institution amongst the wider railway industry. LinkedIn has become our key social platform, growing by 3.2k new followers in 2023 to a total of over 14k followers. Over the reporting year, engagement was up to 6.9k (likes/comments/shares) of IRSE posts and content. Top posts included the IRSE News February post (8.8k impressions with 335 link clicks) and the October post about president Steve Boshier's world tour (6.5k impressions and 2,205 post clicks).

Our Twitter/X audience grew modestly in 2023 by 50 new followers to a total of 1.3k followers. Top posts included the STEM skills gap post (817 impressions) and a post about the IET's Railway Signalling & Control Systems course (808 impressions). Changes to the X platform (originally Twitter) in its attempt to commercialise and charge for post performance have altered the way in which this audience engages with organisations and we continue to keep changes under review.

Technical difficulties with the Facebook platform, coupled with underwhelming post performance have encouraged us to refocus our efforts on other channels, noting the runaway success of LinkedIn which feels like an appropriate, professional online home for the Institution.

Publications

The IRSE publishes a range of books on railway train control and communications systems which provide

a useful source of educational and reference material for those involved in the profession, as well as providing a valuable record of the development of signalling.

Last year's update to the Metro Train Control Systems publication has proved so popular that a reprint has already been commissioned to keep pace with demand for this comprehensive text. It is a testament to the hard work, expertise and dedication of the team, led by Claire Porter HonFIRSE, who made this updated edition possible.

Library

Members of the Institution are reminded that they have access to the library of the Institution of Engineering and Technology in London. An archive collection of publications is also available at the IRSE Global Office. Visits to either London location may be made by appointment with the relevant Institution.

IT systems

The four major IT components that support the Institution's operations are the membership and licensing customer relationship management system (often referred to as Silverbear CRM), the website, the exam platform, and the office IT systems.

The eagerly awaited upgrade of the Customer Relationship Management (CRM) system which was due to take place at the end of the year, was postponed due to some minor technical difficulties. Due to the potential requirement for the licensing checking tool to be functioning over the festive season in the UK, the decision was to postpone the upgrade until the early part of 2024.

We continue to use the full suite of Microsoft products in the cloud and use Microsoft Teams as both a virtual meeting product and as a Voice over Internet Protocol (VoIP) solution for our phone system.

The membership offering through the website includes the ability to access member only information and allows the checking of membership and licensing validity with real time reports. The library of video content available on the IRSE Vimeo channel increases regularly. We also encourage members to update their personal and employment details online using the web portal.

The increased use of virtual meeting platforms has seen a large increase in membership engagement. We hold meetings at different times of the day to acknowledge members' the international time differences.

The move to an online offering for the IRSE exams, has seen an increase in the numbers of candidates. The software used as the exam platform is enhanced by two additional packages that monitor the candidates. The first monitors the surrounding so that cheating or looking up reference material is captured (known

as proctoring software). The second is an anti-plagiarism checker that makes sure candidates submit their own work and not copy and paste for example. These two packages have been used to good effect and helped support the team of volunteer markers when looking to rule out any cheating. Transgressors have been sanctioned by Council resulting in removal or downgrading of membership, or a ban from taking the exam for a defined period.

The ability of the volunteers, members, and staff to adapt and embrace the ever-changing pace of IT infrastructure is to be commended. Without their support the Institution would not be able to advance to keep up with the changes necessary to be relevant as a professional body for the 21st century.

Finances

The financial results are shown on pps 24-28. They are extracted from the consolidated accounts for the IRSE and its wholly owned trading subsidiary, IRSE Enterprises Limited. The term 'Group' at the top of a set of tables refers to the two companies combined, and 'Charity' to the IRSE alone. As far as possible, these extracted results use the titles and the format of the consolidated accounts.

In his tenth year as treasurer, Andrew Smith reports a significant degree of recovery in our yearly financial position, a reflection of the price rises over the last couple of years. IRSE Enterprises voluntarily donated to the Charity. This donation resulted in the Charity showing a positive net income not entirely reliant on rising investment values.

Looking at the combined results for both businesses, there was an overall improvement. For the whole group

the result appears in the Consolidated Statement of Financial Activities where the deficit has reduced from £64,725 to £12,333. The improvements are better than the budgets for 2022 suggested were to be expected. It had been hoped that the two years of necessary price rises would turn this deficit into a surplus, but the deficit was over £80,000 two years ago, so things are moving in the right direction.

Last year, seed-funding of £10,000 was provided for the organisation of the International Technical Seminar in India. During 2022 this had not been returned to IRSE Enterprises following the event and it was unclear if any money would ever be received. At the end of 2023, while we are still waiting, there is a high likelihood that we will receive at least some of the money early in 2024, although several issues mean we are unlikely to receive the full amount back.

As a result of a very successful ASPECT 2023 conference the IRSE received a large financial contribution from the proceeds, some of which was received too late to be included in this year's figures and will be carried over to 2024.

It should be observed that in Note 5 the National Savings has been reduced to zero. This is a consequence of the very low interest rates being achieved from the government's National Savings & Investments (NS&I) scheme. The funds were transferred to a new account at Rathbones, our investment managers, with a lower-risk approach to how the funds are invested than our other funds to mirror and slightly better the previous NS&I accounts.

Consolidated accounts (extract)

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS CONSOLIDATED BALANCE SHEET AS AT 31st DECEMBER 2023

	Notes	Consolidated 2023 £	Consolidated 2022 £	Charity 2023 £	Charity 2022 £
Fixed assets					
Tangible fixed assets		55,582	46,972	28,750	22,017
Investments	1	1,982,152	1,803,443	1,452,725	1,338,037
Total fixed assets		2,037,734	1,850,415	1,481,505	1,360,054
Current assets					
Stocks	3	65,008	66,701	58,719	55,970
Debtors	4	244,137	190,770	350,701	249,267
Investments	5	-	211,198	-	211,198
Cash at bank and in hand		481,918	272,184	234,415	93,062
Total current assets		791,063	740,853	641,835	609,497
Creditors: amounts falling due within one year	6	(588,019)	(500,686)	355,494	(286,795)
Net current assets		203,044	240,167	286,341	322,702
Total assets less current liabilities		2,240,778	2,090,582	1,767,846	1,682,756
Creditors: amount falling due after more than one year	7	(332,634)	(275,756)	-	-
Total net assets		1,908,144	1,814,826	1,767,846	1,682,756
Funds of the Charity	2				
Unrestricted funds		1,868,094	1,775,906	1,727,796	1,643,836
Restricted funds		40,050	38,920	40,050	38,920
Total charity funds		1,908,144	1,814,826	1,767,846	1,682,756

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS CONSOLIDATED CASH FLOW STATEMENT AS AT 31st DECEMBER 2023

	2023 £	2022 £
Net cash (used in) operating activities	254,365	(66,139)
Cash flow from investing activities:		
Purchase of tangible fixed assets	(15,660)	(47,988)
Purchase of fixed asset investments	(465,653)	(283,555)
Sale of fixed asset investments	392,595	269,093
Interest received	919	3,780
Dividends received	43,168	34,900
Net cash provided by / (used in) investing activities	(44,631)	(23,770)
Change in cash and cash equivalents in the year	209,734	(89,909)
Cash and cash equivalents at start of year	272,184	362,093
Cash and cash equivalents at end of year	481,918	272,184

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS
CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES AND INCOME AND EXPENDITURE
ACCOUNT FOR THE YEAR ENDED 31st DECEMBER 2023

	Notes	Unrestricted £	Restricted £	Total 2023 £	Total 2022 £
Income and Endowments from:					
Charitable activities:					
Donations and legacies	9	6,192	-	6,192	12,512
Other trading activities:					
Non-ancillary trading income	10	517,027	-	517,027	517,598
Other activities	10	682,995	-	682,995	583,214
Investments:					
Investment income	11	43,168	919	44,087	38,680
Total Income		1,249,382	919	1,250,301	1,152,004
Expenditure on:					
Raising funds					
Other activities	12	8,488	-	8,488	7,599
Investment		9,003	-	9,003	8,844
Non-ancillary trading		501,423	-	501,423	541,863
		518,914	-	518,914	558,306
Charitable activities					
Awards	12	42,810	700	43,510	30,117
Promoting best practice		700,210	-	700,210	628,306
		743,020	700	743,720	658,423
Total Expenditure		1,261,934	700	1,262,634	1,216,729
Net Expenditure before (loss) / gain in investments		(12,552)	219	(12,333)	(64,725)
Net (loss) / gain on investments		104,740	911	105,561	(417,628)
Net Income / (Expenditure)		92,188	1,130	93,318	(482,353)
Reconciliation of funds					
Total funds brought forward		1,775,906	38,920	1,814,826	2,297,179
Total funds carried forward		1,868,094	40,050	1,908,144	1,814,826

ANNUAL MEMBERS' REPORT WITH SUPPLEMENTARY MATERIAL

The tables set out on pages 16 to 20 are extracted from the full audited accounts of the Institution for the year ended 31 December 2023. They constitute supplementary material to this Annual Members' Report. Section 426A of the Companies Act 2006 requires the following statements to be made in respect of the supplementary material:

1. This annual report is only part of the company's annual accounts and reports prepared under the Companies Act.
2. A full copy of the company's annual accounts and reports may be obtained upon request from The Institution of Railway Signal Engineers, 1 Birdcage Walk, Westminster, London SW1H 9JJ, UK.
3. The auditor's report on the annual accounts was unqualified.
4. The auditor's statement under section 496 of the Companies Act (whether the Trustees' Report is consistent with the accounts) was unqualified.

A P Smith
Treasurer

Approved by the Trustees on 21 March 2024.

SW Boshier
President
Director and Trustee

JE Power
Vice-President
Director and Trustee

**THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS
NOTES TO THE CONSOLIDATED ACCOUNTS
FOR THE YEAR ENDED 31st DECEMBER 2023**

1 Fixed Asset Investments (Group)

	Equities £	Government Securities £	Total £
Market value			
At 1 January 2023	1,658,705	144,738	1,803,443
Additions	282,719	182,934	465,653
Disposals	(241,222)	(151,373)	(392,595)
Revaluations	98,948	6,703	105,651
At 31 December 2023	1,799,150	183,002	1,982,152

2 Movement in Funds (Group)

	At 1.1.23 £	Net movement in funds £	At 31.12.23 £
<u>Designated funds</u>			
Scholarship Fund	78,318	1,794	80,112
Alan Fisher / Frank Hewlett Fund	433,494	1,508	435,002
General Fund - Unrestricted fund	1,115,516	189,620	1,305,136
IRSE Enterprises - Non-charitable trading fund	148,578	(100,734)	47,844
	1,775,906	92,188	1,868,094
<u>Restricted funds</u>			
Dell Bequest	25,419	281	25,700
Thorrowgood Bequest	13,501	849	14,350
TOTAL FUNDS	38,920	1,130	40,050

The company holds 20% or more of the issued share capital of the following company:

<u>Company</u>	<u>Country of incorporation</u>	<u>Share class</u>	<u>%age owned</u>
IRSE Enterprises Limited	England and Wales	Ordinary	100

	<u>Share capital and reserves</u>	<u>Profit for year</u>
IRSE Enterprises Limited	144,713	8,228

3 Stock	Consolidated 2023 £	Consolidated 2022 £	Charity 2023 £	Charity 2022 £
Stock	65,008	66,701	58,719	55,970

4 Debtors		£		£
Trade debtors	124,987	77,076	-	-
Other debtors	6,726	3,435	6,726	3,333
Pre-payments and accrued income	25,466	15,900	180	-
VAT	86,958	94,359	86,958	81,213
Amounts owed by group undertakings	-	-	256,837	164,721
	244,137	190,770	350,701	249,267

5 Current Asset Investments		£		£
National Savings	-	211,198	-	211,198
	-	211,198	-	211,198

6 Creditors: amounts falling due within one year		£		£
Trade creditors	60,195	39,925	47,973	28,901
Accruals	22,416	26,697	18,704	22,429
Taxation and social security	5,250	-	-	-
Deferred income	475,553	427,036	266,761	230,178
Other creditors	24,605	7,028	22,686	5,287
	588,019	500,686	355,494	286,795

7	Creditors: amounts falling due after one year	Consolidated 2023 £	Consolidated 2022 £	Charity 2023 £	Charity 2022 £
	Other creditors	332,634	275,756	-	-

Representing the proportion of licence fees receive which will be credited to Income after more than one year.

8	Activities of IRSE Enterprises	2023 £	2022 £
	<u>Turnover</u>		
	Donations	53	307
	Proceeds - Conventions and Conferences	57,000	92,340
	Proceeds - Dinners	63,775	46,600
	Proceeds - Technical visits and Seminars	39,477	34,370
	Licensing - Licence fees received	240,062	214,786
	Licensing - Audit fees	3,447	6,068
	Licensing - Assessing agents fees	99,121	107,791
	Licensing - Technical publications	14,092	15,336
		517,027	517,598
	<u>Cost of sales</u>		
	Costs - Conventions and Conferences	7,650	71,371
	Costs - Dinners	47,675	38,926
	Costs - Technical visits and Seminars	31,250	37,053
	Costs - Young members' Seminars and Visits	-	-
	Licensing - Logbooks opening stock	10,732	2,635
	Licensing - Engineer's fees	15,758	14,866
	Licensing - IRSE administration charges	253,257	232,531
	Licensing - Audit engineers	46,014	38,872
	Licensing - Accreditation	6,284	12,712
	Licensing - Logbooks closing stock	(6,289)	(10,732)
		412,331	438,234
	Gross profit	104,696	79,364
	<u>Other income</u>		
	Dividends receivable	7,936	7,153
	Bank interest receivable	265	613
		8,201	7,766
		112,897	87,130
	<u>Expenditure</u>		
	IRSE Admin charges	24,514	21,598
	Telephone	7,722	7,788
	Post and stationery	5,840	6,875
	Officers' expenses	-	-
	Accommodation and refreshments	4,818	688
	Computer costs	12,208	12,113
	Professional indemnity insurance	3,741	3,741
	Licensing - Treasurer's, Chief Executive's and Registrar's Fees	29,610	33,503
	Logbook purchases	-	10,597
	Investment Manager's fees	3,724	3,872
	Auditor's remuneration	2,250	2,080
	Donations	60,000	-
	Exchange rate variance	(7,678)	(3,607)
		146,749	99,248
	<u>Finance costs</u>		
	Licensing - Bank charges	2,343	4,381
	Net figure	(36,155)	(16,499)
	<u>Gain / Loss on revaluation of assets</u>		
	Gain on revaluation of investments	44,423	(124,539)
	Net profit	8,228	(141,038)

9	Donations and Legacies (Group)				2023	2022
					£	£
	Donations				66,192	12,512
10	Other Trading Activities (Group)					
	Subscriptions				547,349	495,058
	Professional reviews				7,095	6,870
	Advertising				33,525	3,900
	Booklets and text books				20,847	22,030
	IRSE ties, badges & cufflinks				-	-
	Examination fees and materials				71,368	53,205
	Proceeds from members' lunch				2,811	2,151
	Consultancy income				-	-
	IRSE Income				682,995	583,214
	Trading income:					
	Turnover of trading subsidiary - Note 8				517,027	517,598
11	Investment Income (Group)					
	Equities and government stocks				34,967	27,747
	Interest receivable				919	3,167
	IRSE Enterprises Ltd				8,201	7,766
					44,087	38,680
12	Analysis of Expenditure	Staff Costs	Depreciation	Other	2023	2022
		£	£	£	£	£
	Raising funds					
	Other activities	2,567	24	5,897	8,488	7,599
	Investment	-	-	9,003	9,003	8,844
	Non-ancillary trading	211,338	4,714	285,371	501,423	541,863
	Total raising funds	213,905	4,738	300,271	518,914	558,306
	Charitable activities					
	Awards	10,266	93	33,151	43,510	30,117
	Promoting best practice	243,818	2,219	454,173	700,210	628,306
	Total charitable activities	254,084	2,312	487,324	743,720	658,423
	Total expenditure	467,989	7,050	787,595	1,262,634	1,216,729
13	IRSE Charitable Expenditure				2023	2022
					£	£
	Raising donations and legacies					
	Fund raising dinners				2,625	2,386
	Consultancy				-	-
	Charitable activities					
	Proceeding: editing and printing				4,684	2,000
	Newsletter: editing and printing				120,340	109,415
	Booklets and textbooks				5,808	10,221
	IRSE ties, cufflinks and badges				105	109
	Prizes				32	26
	Awards				20,058	9,264
	Activities funded by country subscription supplements				11,254	9,277
	Professional review costs				1,000	2,018
	Support costs					
	Staff costs				260,527	235,591
	Office rent and services				18,626	18,524
	Fees and honoraria				87,935	97,473
	Membership database				1,039	-
	Other administrative costs				210,839	163,881
	Investment manager's fees				9,003	8,844
	Fixtures and fittings				2,336	1,676
	Governance costs					
	Auditor's remuneration				5,000	4,160
	Total expenditure				761,211	674,865

Institution of Railway Signal Engineering

England & Wales - Charity number 1046999

Accounts

IRSE

Institution of Railway Signal Engineers

Annual Report

Number 110

1 January to 31 December 2022

Contents

This Annual Report briefly describes the activities undertaken by the Institution of Railway Signal Engineers (IRSE) throughout the world during 2022. Our President from April 2022 has been Andy Knight FIRSE from the United Kingdom.

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For up to date information about the Institution or its activities, or to download a membership application form, log on to the IRSE website www.irse.org.

Follow us on Twitter @IRSEHQ

IRSE, 1 Birdcage Walk, Westminster,
London, SW1H 9JJ, United Kingdom



IRSE

Institution of Railway Signal Engineers

The
Professional Engineering Institution
for all those engaged or interested in
railway signalling, control and
communications
and allied disciplines

Around **5000** members in
locations **across the world**

Providing world-class **presentations, seminars,**
conventions and **conferences**

Industry leading competence assessment and
licensing
scheme

The world's leading
professional examination
for railway signalling, control and communications

11 issues of
IRSE News each year:
our specialist railway signalling, control and
communications magazine

23 Sections
representing the needs of members in their
geographic region or specialism

Accredited by the
Engineering Council to add
Chartered Engineers, Incorporated
Engineers and Engineering Technicians
to the Professional Register

Vibrant
Younger Members
Section

Run by
engineers for engineers

Founded in **1912**

An introduction from our President



I was very fortunate to be a President who, for the first time in two years, was able to plan a full year. This included a technical weekend in Dublin and travel to sections around the globe. I was able to attend the Minor Railways AGM and technical visit on the Romney, Hythe and Dymchurch Railway, the Members Lunch in London, a visit to the Netherlands, the International Convention in Glasgow and the York Section dinner. I travelled to the "CBTC and beyond" conference in Toronto and this visit also allowed both the CEO and I to hold several meetings with Canadian based organisations. The enthusiasm we saw for the opportunities that our membership, licensing and professional registration offer was very encouraging.

During my year I was proud to be part of significant change in our governance to ensure the membership was more widely represented in Council and also the formation of the Equality, Diversity and Inclusivity group, details of which are to be found in this annual report.

The Institution finally came out of the restrictions forced on us by the Covid-19 pandemic which had affected all of our lives. Although we, as an Institution, battled through and continued to provide a service to our membership, I do not think we fully realised the effect the pandemic still had on our personal and professional lives. It certainly eased as we entered 2022, but it had not fully disappeared and surges in infection continued to affect our membership around the globe.

Therefore, we saw ourselves leaving the pandemic but still facing a challenge of a change in attitude and a reluctance to come out of the 'work at home' era.

This was clear in the delivery of my presidential lecture series, the first of which was delivered on line- something we had become so used to during the pandemic. We then tried to make a logical return to face to face, but struggled to see the attendance levels reach the numbers previously enjoyed. I understand other Professional Engineering Institutions (PEIs) are also experiencing this and it is an issue for which we all need to find a workable solution.

My year was also going to be a transitional year, and this was in my mind when choosing my theme "Shaping the Future". In my presidential address I looked at how new technology shapes the industry and how we as an Institution can continue to reflect and meet the challenges ahead.

As the year progressed, we saw the delivery of a diverse series of papers including one on diversity itself delivered by a well respected female engineer.

The rest of my programme sought to identify some of the technical challenges going forward. Although we have a vast amount of technical skill within the industry, we still face the challenge of how to ensure we provide our engineers with the support they need. The body of knowledge and content we deliver on our website and our networks is vital if we are to be seen as valuable and relevant to our membership.

The planning of any event should never be underestimated and as the first International event to be held in over two years, the Convention was no exception. The hours and commitment of the planning committee and the IRSE Scottish Section cannot be underestimated, and I do not have enough space to express my thanks and admiration of the joint members of this group. We delivered a very successful event which saw us see a good mixture of old and young members in attendance with 10 bursaries and excellent weather!

This year also saw the death of Her Majesty Queen Elizabeth II. I wrote to the King on behalf of the Institution to express our condolences.

I have no doubt that my predecessors pondered over what they wanted to achieve from their respective years. I was keen to see something new and was delighted to achieve the launch and release of the IRSE10/// series of videos.

Any presidential year and programme would not be possible without the help of the wider IRSE community. I have been blessed with the support and co-operation of the HQ staff and volunteers which has necessitated many on-line meetings at various times of the day for many people and for that I thank you all.

We continue to come out of our enforced isolation and I am encouraged by the innovation and adaptability of our members and long may this continue.

Thank you for all your support and encouragement.

Andy Knight FIRSE, President 2022-2023

Objectives of the Institution

The Institution's objectives are recorded in its Articles of Association. They can be traced back to the formation of the Institution in 1912 and are:

- a) The advancement for the public benefit of the science and practice of signalling by the promotion of research, the collection and publication of educational material and the holding of conferences, seminars and meetings, and
- b) The maintenance of high standards of practice and professional care amongst those working within the industry and the promotion of improved safety standards for the protection of the general public.

Although it might appear that the IRSE is concerned only with railway signalling, the full text of the objectives makes clear that all forms of train control and traffic management, and communications systems, are all within our scope of interest.

There is a clear emphasis in the objectives on 'public benefit'. This is most obvious in the sense of contributing to safety on the world's railways, where train control systems play a critical role. But we are also interested in ensuring that railways are efficient, cost-effective and sustainable (in the widest sense).

We meet our obligations to the public through the following principal mechanisms:

- The dissemination of knowledge, experience and good practice in the fields of railway signalling, control and communications and allied topics, to help ensure that those working in the profession do so with the best available knowledge for the safe, efficient and cost-effective construction and operation of the world's railways;
- The delivery of examinations at certificate and advanced level which contribute to the assurance of knowledge gained. In addition, through the application of the Engineering Council UK licenses the assessment and entry of Chartered, Incorporated and Engineering Technicians onto the Register of Professional Engineers;
- The provision and management of the IRSE Licensing Scheme to assure the competence of those working in the profession. The Scheme is focussed predominantly, but not exclusively, on ensuring safety in the design, construction, testing and maintenance of signalling and telecommunications systems;

- Our Code of Professional Conduct, with which IRSE members are required to comply in the course of their work. It emphasises topics such as personal responsibility for work undertaken or managed by IRSE members, the importance of safeguarding the public interest (particularly safety), environmental management, the efficient use of resources, handling conflicts of interest etc.
- Undertaking specific initiatives to help ensure the safety and efficiency of railways.

By bringing the IRSE sections around the world together, we will facilitate the sharing of best practice and new initiatives to help engineers and others enhance their knowledge and professionalism. We will continue to reach out and grow our network of professionals around the world to harness the collective knowledge they possess for the benefit of all operators and users of railway transport.

The financial resources of the Institution are applied to achieve the objectives of the Institution, in addition to which members make a significant contribution to delivering the Institution's aims by their volunteer activities. The Institution has only a small number of full and part-time staff and most of the activities are organised by our members acting in a voluntary capacity.



Our Strategy

We are now more than halfway through the delivery of our "Beyond a 2020 vision" details of which are available on the website. The objective of making the IRSE accessible to members 24 hours a day 7 days a week throughout the year, has improved the general access for members and has been well received and used. This report will demonstrate how over the past year we have opened more access to the global membership to the vast wealth of knowledge that exists within the membership. Our engagement with international members has been enhanced through the ability to undertake international travel once again and there are examples of that in this report.

The commitment of staff and volunteers has seen a growth in our operational areas aligned with our key focuses of Engage, Grow, Develop, Network and Assure. A study of the key indicators within this report will show an increase in all these areas.

As a result of the implementation of the recommendations from the Governance Review Working Group, we are now seeking a balanced representation on Council which mirrors the global nature of the membership. Recognising the need to ensure we offer an inclusive

The IRSE vision is to:
Deliver Safe and Sustainable Global Railways

IRSE 

To ENGAGE with and GROW a global NETWORK of railway signal and telecommunications engineers in order to DEVELOP and ASSURE high standards of ethics, knowledge, competence and safety in all aspects of train control.

offering which embraces diversity and equality Council has formed a working group to study that area of our value proposition, the outcomes will be incorporated in our future strategy. The Council met in Glasgow just prior to the Convention to examine in more detail how the strategy will need to develop to keep pace with the changes in the Institution. This half day event was deemed to be so beneficial that Council resolved to hold a full strategy day every year before each ASPECT conference or Convention.

The five key elements of the plan are shown in the infographic at the bottom of the page.

The Convention and the Indian seminar helped to drive forward the important aspect of bring the skills and knowledge of the sector together. In addition the introduction of more high quality video and technical papers helps to support the vision of safe and sustainable global railways.

The five key elements of the IRSE strategic plan are



Engage

Digital platform for a global professional body 24/7/365, early careers support, communicate best practice in ethics, diversity, inclusivity, produce technical documentation, knowledge transfer activities.



Grow

Peer recognition, professional development, practice support and guidance, support in professional obligations, Advance profession.



Network

Global local section development, International Technical Committee support, conferences, seminars and conventions, facilitate collaboration, latest information and news.



Develop

Signpost professional development, awards & bursaries, upskilling and re-skilling, examination, apprenticeships, promote benefits to the public.



Assure

International professional recognition, flexible pathways to professional registration, offer regulation in professional conduct, operate the licensing scheme.

Governance

Council

The IRSE is now governed by an elected Council of twenty-two Corporate Members, who are the Trustees and Directors of the Institution, led by the President. The full list of Council members for 2022 can be found on p16.

Seven meetings of the Council were held during the year in which the business of the Institution was conducted. In addition the Council met for a half day strategy meeting just prior to the start of the International Convention in Glasgow. To assist members of Council in different time zones to attend meetings the start times were adjusted so that not all meetings were held during UK business hours, as had previously been the case.

The Articles of Association permit the current Chairs of all local sections, principal committees and Country Vice-Presidents to attend Council meetings. During the year several Chairs and Country Vice-Presidents attended meetings all of which were conducted via video conferencing. The strategy day was a mixture of face to face and online discussion. This meeting was only for Council members.

In addition to conducting all the normal Council business during the year, Council discussions included the following topics:

- Revision of the AGM process so that members outside the UK could attend.
- Changes to the election process to elect a balanced global representation of Council members
- Establishing working groups for Equality Diversity and Inclusivity, and for volunteer recruitment, led by the Council portfolio holders.
- Monitoring the succession plan for the office of President.

Council also receives and reviews the annual report from each of the international sections of the IRSE.

Committees

The Institution has several standing committees which are accountable to Council, through which our activities are managed. The principal Committees and their relationships to Council are shown in the diagram below. In addition, task and finish working groups are formed from time to time which focus on specific areas of interest.

To assist in driving key areas of the Institution members of Council are allocated portfolios of responsibility.

Audit

External Audit

A number of areas of the Institution's business are audited on a regular basis by various external audit bodies:

- All areas of finance are subject to audit annually by independent external auditors who submit their report to the Annual General Meeting.
- The Licensing Scheme is subject to an annual external audit by the United Kingdom Accreditation Service (UKAS).
- As a registered Charity, the Institution is subject to periodic external review by the Charity Commission.
- As the Institution is licensed by the Engineering Council in the UK to register Chartered and Incorporated Engineers and Engineering Technicians, it is subject to a review every five years by the Engineering Council to ensure compliance with their registration standards.

Internal audit

The IRSE's internal Audit Committee undertakes independent audits to complement the external audits, in order to ensure the Institution is running efficiently and effectively. The audits focus primarily on the role and remit of each of the principal committees of the Institution.

The Audit Committee normally performs two audits per annum. Each audit results in a report, which is presented to the Chair of that committee, the Chief Executive and subsequently the Council, which uses the recommendations to improve the management of the Institution's affairs for public benefit and for the benefit of its members. The Institution maintains a Risk Register, which is reviewed annually by Council, and this is used as the basis for audit.

IRSE Enterprises

IRSE Enterprises Ltd is the trading company wholly owned by the Institution. The trading company handles several activities which are associated with but outside the direct scope of the charity.

Following a review of the governance of Enterprises Board and on the advice of the IRSE firm of Solicitors (Tozer's) an additional member of the board was appointed with specific responsibility for the Licensing scheme. This aspect of Enterprises activity was deemed to be of such significance that it should have its own non-executive director.

The Directors of the company appointed for the year April 2022 to April 2023 were:

- Chair (Immediate Past President): Ian Bridges FIRSE
- President: Andy Knight FIRSE
- Senior Vice President: Steve Boshier FIRSE
- Junior Vice-President: Yuji Hirao FIRSE
- Junior Vice-President: Jane Power FIRSE
- Licensing Committee Representative: Paul McSharry MIRSE
- IRSE Treasurer: Andrew Smith FIRSE
- Company Secretary (CEO): Blane Judd

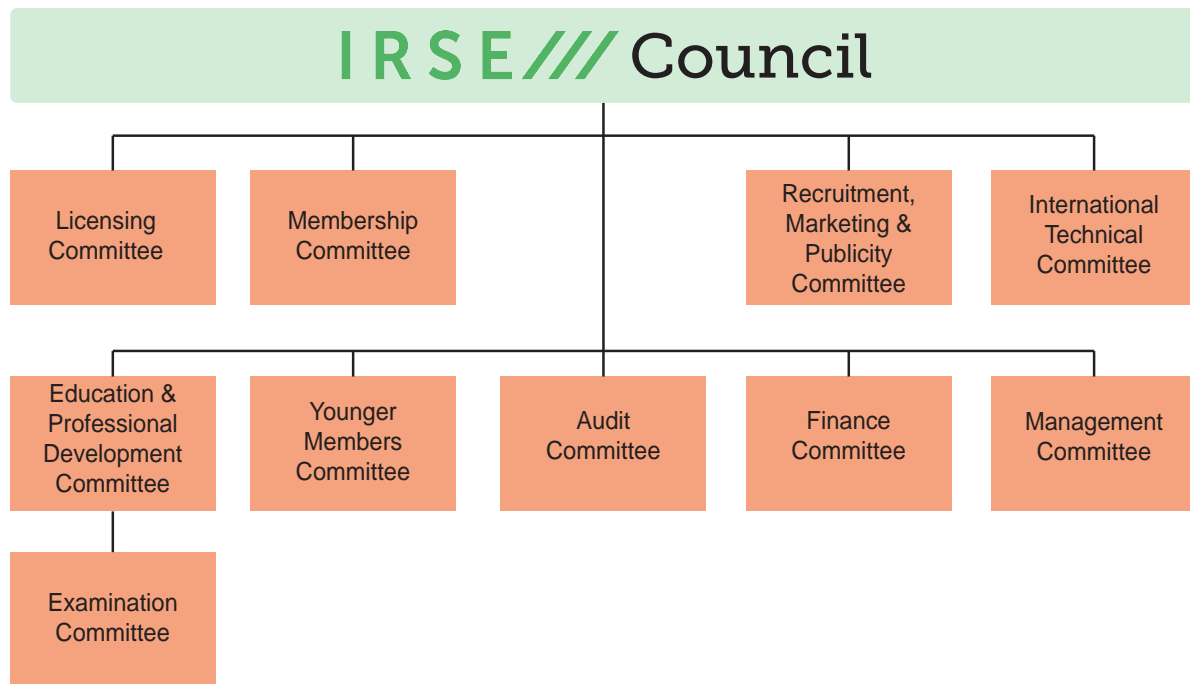
Any profits from the company are, where possible, gift-aided back to the Institution.

Sections

The IRSE sections around the world exist by authority of the IRSE Council, and they operate in accordance with a set of Articles of Association (or Bye-laws) that have been approved by Council. At the end of 2022 there were 23 sections in total, 15 sections outside the UK in various parts of the world (Australasia, China, France, Hong Kong, India, Indonesia, Ireland, Japan, Malaysia, Netherlands, North America, Singapore, Southern Africa, Swiss, Thailand) and six UK-based. The North America Section includes the USA, Canada and Mexico. The Ireland Section includes both Northern Ireland and the Republic of Ireland.

Two other sections also exist – the Younger Members' Section and the Minor Railways' Section. These are not geographically based, and their activities are predominantly within the UK. Some geographical sections also have younger members' groups.

Each section has an organising committee, with elected officers for key roles. Information about the activities of the sections is provided elsewhere in this report.



IRSE volunteers

The Institution is heavily reliant on, and is very grateful to all its volunteers, without whom the Institution would not be able to perform all its duties, supporting the governance, running and reputation of the IRSE locally and internationally.

Our volunteers have continued supporting the institution this year, giving their expertise, time and enthusiasm in areas including, but not limited to: local section committee membership,

event organisation, international committee membership, running study groups, Council membership, exam question setting and marking, reviewing applications for professional registration, writing and editing IRSE News and textbooks.

Our volunteers develop useful skills, knowledge, experience and networking contacts through the work which they do for the Institution which they may

not get the opportunity to gain within a work environment.

If you are interested in becoming a volunteer for to the IRSE, please contact your local section or hq@irse.org saying how you would like to contribute.

Thank you, as an IRSE volunteer you are an essential part of our institution.

Equality, Diversity, Inclusivity

The EDI Group was set up in early 2022 to develop the IRSE's vision, strategy and plan for Equality, Diversity and Inclusivity (EDI). The group is led by Harvinder Bhatia FIRSE as the Portfolio owner and comprises a number of people from the IRSE including the Chief Executive and the President. An external EDI specialist has also joined the group to provide their experience and skills.

Events across the world over the past couple of years have increased the focus on EDI for both employers, employees and prospective employees (or prospective institution members). Organisations that actively engage in

these values will be able to attract and retain individuals from diverse groups both nationally and internationally. This is particularly important for the IRSE as it wants to engage and grow within a global network.

The EDI Group will challenge the organisation in terms of practice, approach and development of equality, diversity and inclusivity; in particular where progress is limited or, in support of underrepresented or disadvantaged individuals/groups.

To develop the EDI vision, strategy and plan, the EDI Group has recognised that it needs data on EDI perceptions and

practices across the regions and areas that it operates within. An initial culture survey is currently being developed which will be sent to sections to complete. The data gathered from this initial survey will then be used to develop a detailed EDI culture survey across the membership at a later date.

Using the information generated from the fuller membership survey, The EDI Group will be able to produce a vision statement outlining what the IRSE needs to achieve, priority and its ambition in the area of EDI within two, five and ten year periods.

Professional development

Supporting professional development of IRSE members and prospective members throughout the world is a key objective of the IRSE.

To do this, we have the Education and Professional Development (E&PD) Committee and the Examination Committee working with Judith Ward FIRSE, our Director of Operations, and Zachary Smythe, our Professional Development Officer.

IRSE Professional Exam

The IRSE Professional Exam, now known as the Advanced Diploma in Railway Control Engineering, is a Masters-level academic qualification which tests knowledge and understanding of railway systems with a particular emphasis on safety. Successful exam candidates must pass four mandatory modules.

The Certificate in Railway Control Engineering Fundamentals was introduced in 2020 and covers all aspects of railway control engineering at a foundation level. It is a stand-alone

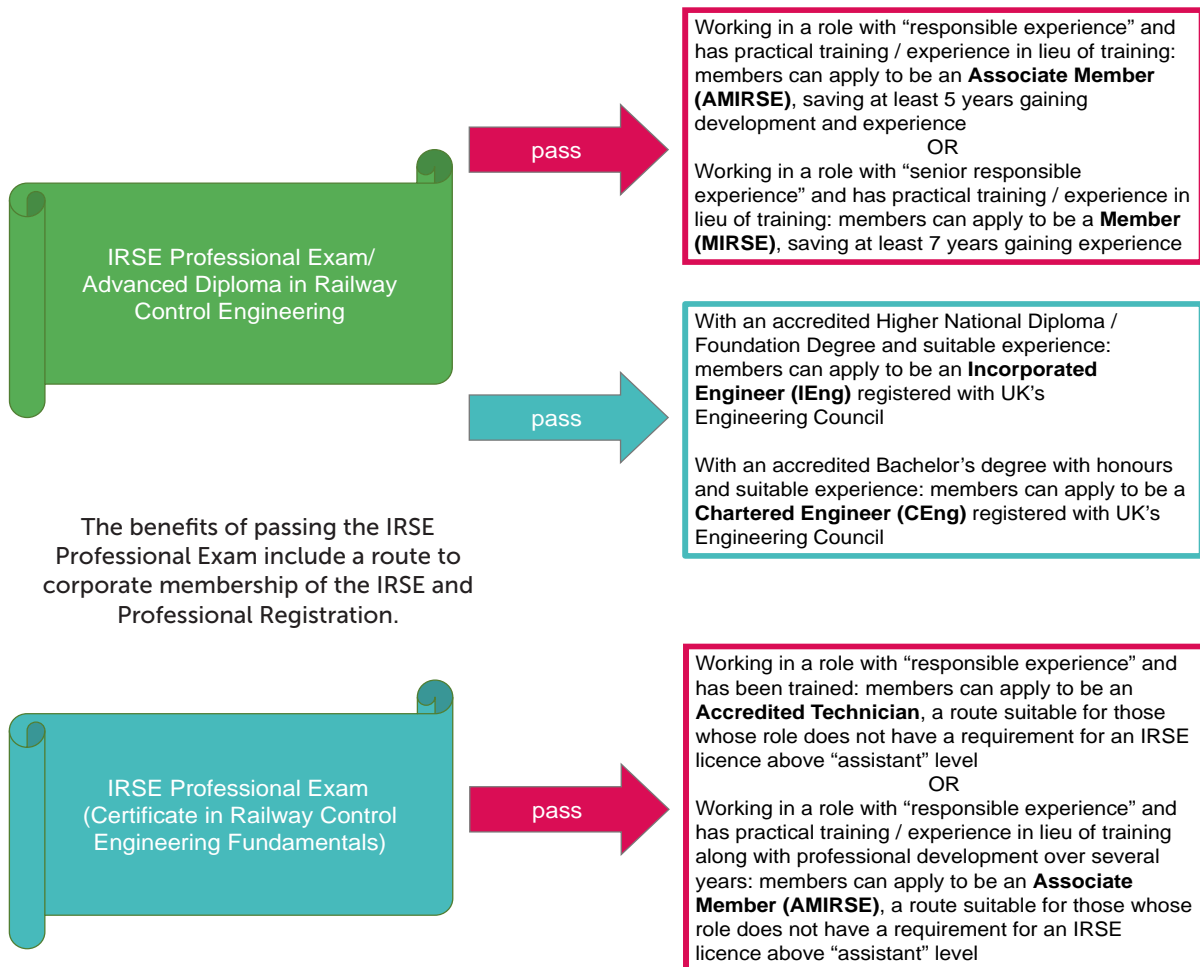
qualification and mandatory module for anyone wishing to pass the Advanced Diploma. It is a valuable qualification for those in the railway control systems industry – for new entrants and those wanting to demonstrate their wider knowledge, as well as for those who are outside our “S&T” industry – those working in other interfacing disciplines, such as rail operations, and/or project management and those who are interested in potentially joining the industry. Candidates for the Certificate do not have to be IRSE members but are encouraged to join and this is hoped to be a ‘gateway’ for many.

Passing the IRSE Advanced Diploma is one route to obtain Corporate membership of the IRSE and it can “top up” engineering or technology qualifications for professional registration with UK’s Engineering Council. Passing the IRSE Certificate is one route to obtain Accredited Technician or Associate Member.

Many volunteers run exam study groups, the independent exam forum website and support the Younger Members’ exam workshops to provide support for prospective examination candidates. All these continued to be run throughout 2022, some in-person or hybrid, most online. Education and Professional Development Committee extend their thanks to all those who contributed their time and efforts to these various learning opportunities.

To enable our exam candidates to sit the exam in 2022, Education and Professional Development Committee agreed to hold the exam remotely again, with 254 candidates sitting at least one module on either 26 March or 1 October, the first year we have held exams twice in one calendar year.

Encouragingly, one of the advantages of the professional exam being online has been the wider geographic reach of the examination. In 2022, candidates sat the exam in 26 countries, many of which are not covered by sections, such



The benefits of passing the IRSE Professional Exam include a route to corporate membership of the IRSE and Professional Registration.

as Brazil, Egypt, Iraq and Spain. The quality of answers from candidates was good, with the overall percentage of those achieving pass grade or higher in the Certificate was 59% and Modules B-D was 50%. It is significant to note that for the Certificate, not only were the number of non-UK candidates significantly higher than UK candidates in October 2022, but also the number of IRSE non-members who passed was higher than IRSE members. All non-members who sit the Certificate are encouraged to become members, particularly those who have passed.

Continuing Professional Development (CPD)

The Engineering Council requires that as of 2020, those who do not engage in the CPD monitoring process are removed from their register.

Information about the importance of developing and maintaining members' professional competence through CPD has continued to be provided through IRSE News and the website.

The IRSE recommends the use of the 'Mycareerpath' system for CPD planning, recording, reflecting and reviewing. More information about Mycareerpath is available on the IRSE website.

Certified courses

The IRSE offers a process by which training providers can have their courses assessed and certificated by the IRSE. Some training providers are in the process of having their signalling and telecommunications courses assessed.

Licensing

The IRSE Licensing Scheme provides assurance about the competence of individuals to carry out technical safety critical or safety-related work on rail control systems.

The Licensing Team continued to work largely from home during the year, going into the office primarily to print licence cards. During the year, there was a change to the licensing staff, with Laura Daly in March replacing Sarah Loutfi who moved to a new organisation. Laura then left in September, and her replacement as Head of Licensing, Toby Blamey, starting in January 2023. In addition, Sarah Gillis, the Co-ordinator, left in September being replaced by Lise Marie Ake-Danho in October. The licensing team, consisting of

Engineering Technician (EngTech)

- Applies proven techniques and procedures to solve practical engineering problems, and
- Applies safe systems of work

Incorporated Engineer (IEng)

- Maintains and manages applications of current and developing technology, and may undertake engineering design, development, manufacture, construction and operation

Chartered Engineer (CEng)

- Develops solutions to engineering problems using new or existing technologies, through innovation, creativity and change
- May be accountable for complex systems with significant levels of risk

The current Engineering Council UK descriptors for each level of Professional Registration.

Mentoring

Unfortunately, during 2022 Education and Professional Development Committee agreed to stop the IRSE licensing scheme mentoring system (not the IRSE licensing scheme mentoring system). However the Education and Professional Development Committee continues to encourage people to support others throughout their careers and seek support from others. This is a key part of keeping industry and corporate knowledge and part of individual's CPD.

Apprenticeships

The IRSE has removed itself from the End Point Assessment Organisation (EPAO) register but continue to support companies and assessment organisations.

Learning materials

Education and Professional Development Committee has updated the textbook synopsis published on the website with a more modern look and feel and to include the very recently published Metro Train Control Systems book. These synopses (now covering 15 volumes) help IRSE members and non-members to find suitable textbooks for their study and information within railway control and communications systems.

the Registrar, Deputy Registrar, two licensing scheme Officers and the Co-ordinator, works closely with the Licensing Committee, which is chaired by Colin Porter HonFIRSE and the other sub-committees and within the processes laid down by the scheme procedures. During the year, improvements to the way assessing agencies submit their documentation to the Institution were introduced, and a new licence card was developed, for introduction during 2023.

In 2022 a total of 1241 licences were issued (covering 1383 licence categories) which is a reduction of 236 on the previous year. As at December 2022 there were 5710 active licence holders which represents a slight

decrease in the total no of licences held (5759 at December 2021). The Licensing Scheme now holds full accreditation by the United Kingdom Accreditation Service (UKAS) for all, not just its UK operations, following its four-yearly full re-assessment carried out satisfactorily in March, against the competence standard for bodies involved with the certification of persons: ISO17024:2012. IRSE Assessing Agents are approved and appointed for the purposes of performing assessments of candidates for licences, and they are an essential part of the Licensing Scheme. The number of approved assessing agencies now stands at 23 as EtoE and XRail closed their assessing agencies during 2022.

Membership and Registration

Membership Committee meetings and professional registration interviews continue to be held online using Microsoft Teams. We have had two new members join the Committee this year, Martin Beeton FIRSE and Peter Sheppard FIRSE. The time and contribution of all involved is invaluable to the membership and registration process and is much appreciated. We always welcome additional volunteers to support the process.

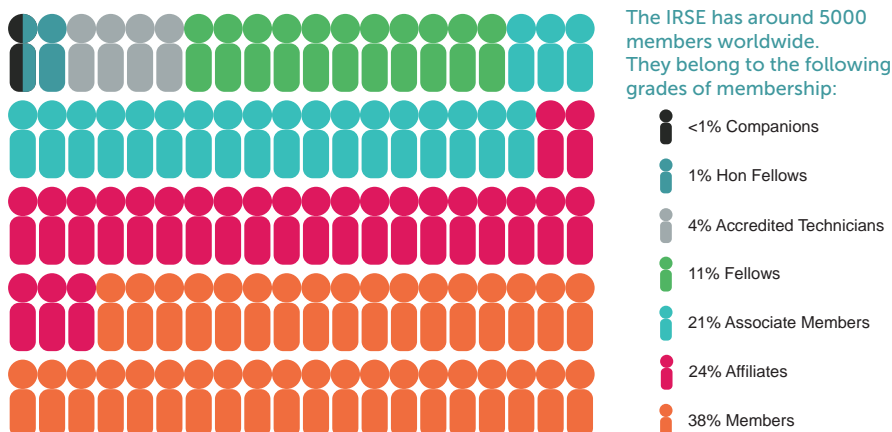
The Membership and Registration Team has continued to improve and strengthen processes to ensure that the data we hold for our members is as up to date as possible and that the Institution collects subscription and other payments relating to services provided to members. Our processing of membership applications and those relating to professional registration has been reviewed and improved to ensure that applications are tracked more efficiently, and applicants receive the best possible support.

We have processed 374 successful new membership applications processed during 2022, 168 for corporate grades and 206 for non-corporate grades. However, 23 of these new members failed to pay their first membership subscription despite several reminders, resulting in their membership being terminated, 22 were non-corporate and one was a corporate grade. The final number of new members joining the IRSE over the year was therefore 351 (167 corporate and 184 non-corporate).

In addition to the new members detailed above there were 69 successful applications from existing members wanting to transfer to a higher grade of membership.

In April 157 memberships were terminated due to non-payment of the 2021/22 membership subscription. However, 50 memberships were then reinstated following late payment of subscription.

There were 111 membership resignations over the year. Although no formal tracking of the reason for someone leaving membership is carried out anecdotally these resignations were due to retirement and people changing direction in their careers.



Membership grade	Members
Affiliate	1246
Accredited Technician	174
Associate Member	1067
Member	1913
Fellow	572
Honorary Fellow Corporate	52
Honorary Fellow Non-Corporate	2
Companion	15

Title	Registered
CEng	169
IEng	91
EngTech	139

Left, number of members by IRSE grade at 31 December 2022.

Above, professional registrations through the IRSE at 31 December 2022.

The Institution was sad to report the deaths of 16 members during 2022, these are listed below.

Many were strong supporters of the Institution and had held membership for a considerable number of years, seven of whom had held membership for more than 50 years. In various ways they had all made significant contributions to the Institution's work and will be missed.

- Leslie Banfield MIRSE
- Roger Bugler (Affiliate)
- Kevin Gould AMIRSE
- Tom Greaves FIRSE
- Clifford Hale HonFIRSE
- David Hamer AMIRSE
- Robert Jahn FIRSE
- Peter Ledger MIRSE
- Alan Leech AMIRSE
- Hans Lindenburg MIRSE
- Brian Mellitt FIRSE
- David Moore (Accredited Technician)
- Anthony Palermo (Affiliate)
- Roger Phelps AMIRSE
- Philip Tuck MIRSE and
- Raymond Westinton MIRSE.

Despite the above deductions the total number of members has still increased by 104 over last year's reported figure, with 5041 members as of 31 December 2022.

During 2022 the Institution has supported a further 52 engineers to achieve professional registration with the Engineering Council, the UK regulatory body for the engineering profession, 9 Chartered Engineers (CEng), 15 Incorporated Engineers (IEng) and 28 Engineering Technicians (EngTech).

As of 31 December the Institution supports 399 professional registrants and the Membership and Registration Team were supporting a further 115 applicants who were at various stages of the registration process.

In 2023 we hope to be able to enhance our support to those who do not hold standard exemplifying qualifications as outlined by the Engineering Council in UK SPEC 4th edition thus providing better opportunity for them to attain professional registration.

Awards

The IRSE makes several awards each year. The majority of these are to recognise, reward and encourage the professional development of engineers, particularly those in the earlier stages of their careers.

The purpose behind this is not simply to assist their career development, but to promote high standards of engineering excellence, thereby contributing to the public benefit objectives of the Institution.

Dell Award

Mike Harvie MIRSE

The Dell award is made annually under a bequest of the late Robert Dell OBE (Past President). It is awarded to a member of the Institution employed by London Underground (or its successor bodies) for achievement of a high standard of skill in the science and application of railway signalling.

The 2022 winner of the Dell award was Mike Harvie MIRSE.

Mike is Head of Signal Engineering at London Underground in the UK. In September 2018, Mike celebrated 40 years working in and around the rail industry, with a specialism in metros

and light rail. Mike's long career started in 1978 when he joined London Underground as a signalling apprentice and went on to gain a degree.

Mike was one of the first to embark on Safety Assuring computer-based signalling systems in the 1980s and focused on what is today the Communication Based Train Control systems on the DLR and parts of the Tube.

He led the acceptance of what was then the most modern CBTC system on DLR and has safely and reliably transported millions of customers for over nearly 30

years, as "Senior Safety Executive", during which time he oversaw the opening of the Lewisham and Beckton extensions.

In 2012, Mike was appointed London Underground's Professional Head of Signals, taking on the Technical Authority with a team of leading Signalling & Control Systems and In 2018, his role was broadened as part of a pan-TfL Engineering organisation. As Professional Head of Road & Rail Traffic Systems, he leads a team of over 200 engineers delivering the engineering solutions to keep London moving.

IRSE-Signet Award

Istvan Darazsi



The IRSE-Signet Award is the most recent of awards, introduced in 2016 and sponsored by Signet Solutions. This Award is given annually to the person who obtains the highest marks in any single module of the IRSE Exam. The Award includes funding for the winner to attend the IRSE Convention.

The 2022 winner was Istvan Darazsi (pictured left receiving the award from Andy Knight FIRSE). István is a Railway Signal Engineer. He graduated as MSc Transportation Engineer in Budapest University of Technology, specialising in Railway Automation.

After working for five years in various domestic signalling and ETCS projects in Hungary as a Project Engineer for Thales, he moved to Ireland in 2019 to work for Iarnród Éireann on the TPS Project to deliver a new train protection system nationwide. Since the project has changed its course towards ETCS Level 1, he has been leading the development of the customer requirement specifications and the concept design.

He applied for an Affiliate Membership of IRSE when he arrived in Ireland, and after receiving the Certificate in Railway Control Engineering Fundamentals, he is now progressing towards the Advanced Diploma in Railway Control Engineering.

Frank Hewlett Bequest and Alan Fisher Memorial Fund

Frank Hewlett AMIRSE died in September 2008 and left a very generous and substantial bequest to the Institution. In 2009 the IRSE Council launched an appeal to establish a memorial fund for Alan Fisher FIRSE, who died unexpectedly during his Presidency of the Institution. The intention was to use the fund to support the development of young S&T engineers, particularly those outside the UK. In normal times the income from the two funds is used predominantly to provide a number of travelling bursaries for younger members from all over the world to support their attendance at major IRSE events. For 2022, the funds paid for free places to be made available to younger members to attend the IRSE International Convention in Glasgow.

Thorrowgood Scholarship

The Thorrowgood scholarship is awarded under a bequest of the late W J Thorrowgood (Past President) to assist the development of a young engineer employed in the signalling and telecommunications field of engineering.

The award is made to a candidate who has excelled in the IRSE Professional Exam and comprises an engraved medallion and funding for an industry-based study tour or alternative professional development activity.

For the 2022 award no candidates achieved the necessary criteria in the 2021 exam.

Presidential programme

Each year the IRSE President plans a programme of major events, comprising a series of high-profile technical papers, the annual Convention and other events as appropriate.

Our President to April 2022 was Ian Bridges FIRSE whose presidential theme was "The age of the Intelligent Railway", and the final three technical papers in his year presented in early 2022 were on the subjects of "Innovating Innovations", "Signalling Systems in Thailand" and "Chinese Metro Train Control".

Andy Knight FIRSE, our President for twelve months from April 2022, chose "Shaping the Future" as the theme for his year and he was delighted that following the pandemic his presidency saw the return of face to face meetings including the 2022 International Convention in Glasgow. Up to December 2022 four papers were presented on the themes of "quality, Diversity and Inclusion – a Female Perspective", "ETCS the Impact on the Signal Engineer", "New Perspectives on Rural Signalling and Train Control" and "Safety Principles of CBTC Systems, Software and Communication"

All the papers are published in our monthly journal, IRSE News, and the presentations are available as webcasts on the IRSE Vimeo channel. Our Presidential presentations are also live streamed where technically possible, available to members and non-members.

London office and personnel

The Institution continued to lease a small suite of offices on the fourth floor of the Institution of Mechanical Engineers (IMechE) building at One Birdcage Walk, London, UK, from where the centrally organised activities of the Institution are managed – membership and professional registration, licensing, IRSE exam and events administration as well as financial administration. However, due some reorganisation by our landlord, the IMechE, some work was undertaken during the year to find alternative central London premises. No suitable, affordable alternative location was found so, after further discussions with the IMechE, agreement reached for the IRSE to move to the fifth floor of the building at One Birdcage Walk. The move took place in time for the office to be ready for January 2023.

For the majority of 2022 staff continued to work from home as they had done during the Covid-19 pandemic. However, from the summer onwards staff have begun to spend some time working in the London office with a view to moving to a hybrid working environment from the beginning of 2023.

Chief Executive

The Chief Executive and General Secretary of the Institution is Blane Judd, a Chartered Engineer and Fellow of the Institution of Engineering and Technology. He is responsible for directing and managing the resources of the Institution to implement the decisions of Council in an efficient manner and in compliance with UK company and charity law. He is accountable to Council and provides

the focal point of contact for other institutions and external organisations, including the UK's Engineering Council, the Royal Academy of Engineering, government agencies, the chief officers of other professional bodies, and the scientific, engineering and technology community. He is also responsible for ensuring compliance with the requirements of the Institution's Articles of Association, Companies House, the Charities Commission and relevant legislation. The Chief Executive is supported by a Senior Leadership Team.

Office team

There have been several staff changes over 2022.

Joiners: Monir Behbin in January as Finance Officer; Lisa Marriner in February as Executive Assistant; Laura Daly in March as Head of Licensing; Zachary Smythe in September as Professional Development Officer and Lise Marie Ake-Danho in October as Licensing Team Co-ordinator.

Leavers: Sarah Loutfi in February, previously Head of Licensing; Deepka Kharaud in June, previously Professional Development Officer; Laura Daly and Sarah Gillis both left in September, previously Head of Licensing and Licensing Co-ordinator respectively.

We would also like to note the sad passing of Hilary Cohen in March 2022. Hilary had worked for the IRSE for 12 years, her last role was as Executive Assistant. Hilary was a central character in the office team and is missed by all her previous colleagues.

Contract support

The following members of the team work on a part-time contract basis.

PR and communication activities have been operated externally by Lindsay Jones of LJPR Ltd. Lindsay is a qualified journalist with an MSc in PR and she is successfully promoting the Institution to a much wider international stakeholder group. We are also receiving support from Howard Elwyn-Jones of Prettybright on a wide range of digital communications activity, which includes video production and filming, webinars, livestreaming of events, the e-bulletin and social media.

Andrew Smith FIRSE is the Institution's Treasurer, with responsibility for the production and monitoring of the budgets and accounts, and for stewarding the health of the Institution's savings and investments, both for the charity and Enterprises accounts.

Debbie Bailey is a Chartered Member of the Chartered Institute of Personnel and Development and was our HR Manager until October 2022 when she handed over the day-to-day HR activity to Polly Whyte. Debbie continues to support us in a reduced capacity as HR Advisor, Polly has picked up the HR Lead role in addition to continuing as Head of Membership & Registration. Sophie Hunter, Membership & Registration Officer has some increased responsibility as a result and Zoe Johnson, Membership Administrator, has increased her working hours to provide additional support.

Section activities

In addition to the Presidential Programme, every year there is a programme of lectures, seminars and technical visits organised by the Institution's 23 sections across the globe. Our sections are in Australasia, China, France, Hong Kong, India, Indonesia, Ireland, Japan, Malaysia, Netherlands, North America, Singapore, Switzerland, Thailand, and Southern Africa. Within the UK, sections cover London & South East, Midland & North Western, Plymouth, Scottish, Western, York and Minor Railways.

The geographical sections vary considerably in size (from around 20 members up to several hundred), and in levels of activity. Each has its own organising committee, elected officers and programme of events. They report annually to the Council on their work. 2022 has been yet another challenging year for our sections. Some have continued to provide virtual meetings, which attract a large number of attendees from beyond the sections' geographical boundaries. Others have begun to meet face-to-face for technical meetings, AGMs and socials. Highlights have included:

Australasian Section: participating in AusRail again and having a face-to-face AGM, technical meeting and social.

French Section: running a technical visit to SNCF-CIM laboratories in Le Mans in June.

China Section: hosting a Presidential lecture in March.

Hong Kong Section: running a number of technical forums online and a face-to-face visit to the MTR light rail depot and high speed rail depot in Tuen Mun.

India Section: organising the successful IRSE International Technical Seminar & Exhibition 2022 in June.

Indonesia Section: roadshows introducing IRSE to stakeholders and inviting them to become members or collaborators.

Irish Section: organising the technical weekend as part of the Presidential programme series in July.

Japan Section: running a number of technical meetings and their AGM.

London & South East Section: running many video technical meetings covering many subjects including Northern Line extension and Gatwick redevelopment projects.

Malaysia Section: working with the University of Kuala Lumpur on the syllabus and teaching of railway control engineering courses.

Midland & North Western Section: running many video technical meetings covering many subjects including Radio-Based Limited Supervision system and trackworker safety.

Minor Railways Section: technical visit and AGM at the Romney, Hythe and Dymchurch Railway in June.

Netherlands Section: hosting the President on his visit in October and International Technical Committee for theirs in June.

North American Section: running the 5th successful CBTC and beyond conference in Toronto in November.

Scottish Section: running another successful annual dinner in March, attended by many across the railway industry and hosting the IRSE International Convention in September.

Southern African Section: running a number of technical meetings covering many subjects including implementation and migration strategy of F-Bane West (Denmark).

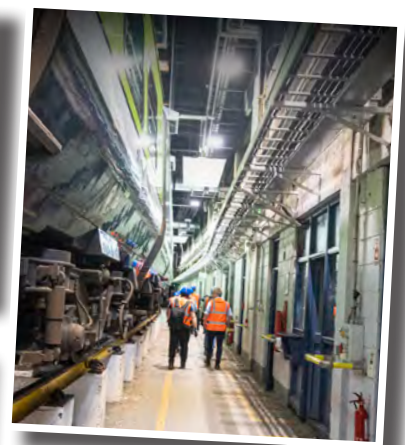
Swiss Section: running a technical visit to Bommersteintunnel and a face-to-face AGM in April.

Thailand Section: hosting a Presidential lecture, a series of short papers, in January.

Western Section: running video and hybrid meetings, including a paper.

York Section: jointly organising the North Eastern Railway Engineers' Forum in September and running another successful annual dinner in October.

Council wishes to extend their sincere thanks to all the Officers, Committee members and all others involved in the operation of the local sections, for the excellent work they undertake in organising technical meetings and other events particularly over the last difficult year. Council also very much appreciates the help and support given by many companies in facilitating and supporting these events. Charles Page FIRSE continues his excellent work in the role of Local Section Coordinator, supporting the sections.



IRSE section activities are varied and well attended. Examples include, clockwise from top left: Scottish Section dinner, Australasian Section committee meeting, Irish Section technical visit, North American Section "CBTC and beyond" conference and York Section dinner.

Younger Members

The IRSE Younger Members Section is open to all IRSE members under 35 years of age, or those who are within the first ten years of being in the industry. The Younger Members section has had online and in person events over the past year, and will continue to do so for the foreseeable future. The events organised by the younger members can be attended by a person of any age and experience but are generally geared towards people who are within the first 10 years of being in the industry. With the online events and online committee meetings we have been able to attract a wider audience from around the globe over the past year and we have even managed to have the first ever non-UK based chair.

In 2022 we ran four successful study days. Three of which took place online and can be found at irse.info/vimeo

The module D Signet study weekend took place in May 2022 and was a great success and the first younger members in person event since March 2020. In total 24 people attended and eight people presented during the weekend. The focus was to look and interact with physical equipment, to take full advantage of the event being in person and to make it stand out from all the online events taking place.

Other events that the younger members hosted over the past year included finishing our series on 'Signalling systems around the world' which was started in August 2021.

We then started a new series 'Back to basics' in September 2022. The back-to-basics series is based on the back to basic articles that have been published in IRSE News and we have, where

possible, arranged for the authors of the articles to present them. The purpose of this series is to assist anyone who is interested in taking the IRSE exams or who would simply like to improve their knowledge on the specific topics. These presentations are approximately 1h long with Q&A session at the end. In total four presentations have already taken place, and seven more presentations are being planned to take place later in 2023.

If anyone would like to get involved, please contact us at younger.members@irse.org. We are always looking for members to get involved from around the world. If anyone would like to be made aware of younger member events in the future the best way is to follow us on our Eventbrite page where all of our events are posted irse.info/ymevents

International Technical Committee

The IRSE's International Technical Committee (ITC) has 20 fully participating and 14 corresponding members from many parts of the world, including Australia, Belgium, Canada, Finland, France, Germany, Ireland, Japan, the Netherlands, Spain, Switzerland, Singapore and the UK. There is also a Younger Member's representative.

The ITC's primary purpose is to provide papers on strategic or technical topics relevant to train control and communications systems in the railway environment. Its particular strength lies in its international membership at a senior level, enabling engineering principles and practices from a diverse range of countries to be brought to bear upon the subjects that ITC covers. The ITC tailors some of its papers to coincide with the presidential theme of the year.

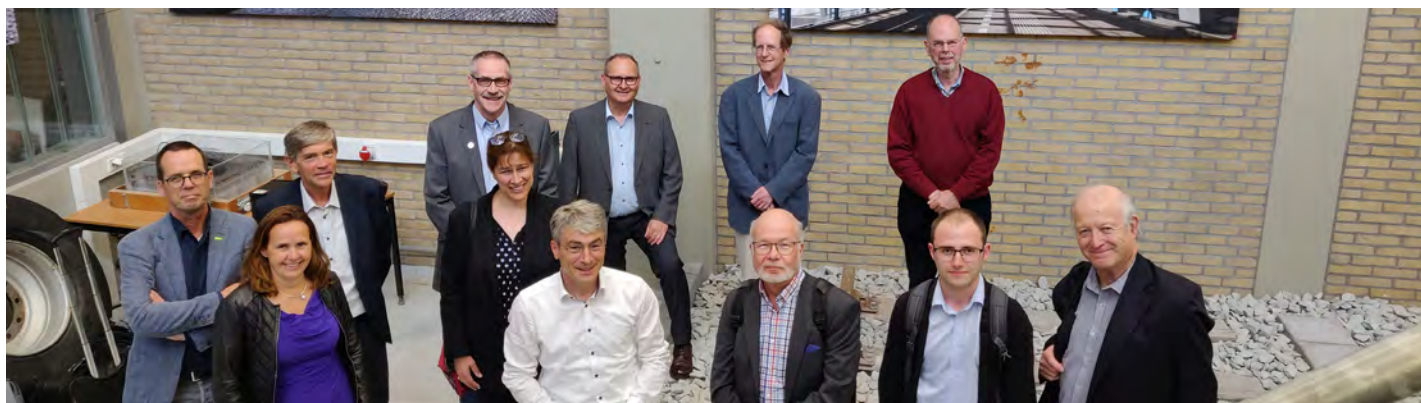
During 2022, the ITC held four meetings. In June we were delighted to meet in person for the first time since the pandemic when we were hosted by the Netherlands Section in Delft.

The meeting was held in Delft University of Technology and members were given a tour of the impressive facilities in the Railway Engineering Department of the Faculty of Civil Engineering and Geosciences (pictured below). The following morning there was a technical visit to PHS Project Rijswijk-Delft at Delft Central Station – where a new tunnel has been constructed to allow additional lines through the area to increase capacity. Some members also took the opportunity to attend the ERTMS Conference "Time to Act", which was held in The Hague that afternoon, and had its introduction by NL State Secretary Vivianne Heijnen.

The activities were much appreciated by the committee and it was great to get together again.

In Glasgow, in September, several members of the committee attended the IRSE International Convention so we took the opportunity to meet in person again before enjoying the week's excellent programme

The ITC completed five papers during 2022, three of which have already been published in IRSE News. Two of the ITC papers are Presidential lectures. There are approximately 17 papers either in progress or planned for the future. All completed ITC papers can be found on the IRSE website within the Knowledge Base (irse.info/kbase). ITC Members also provided expertise for the IRSE Metro Train Control Systems textbook published this year, and the ERTMS textbook that is in progress.



International Convention



The IRSE's 2022 Convention was organised and hosted by IRSE president Andy Knight FIRSE and the Scottish Section in Glasgow, Scotland from 16-20 September. It was the first to be held since 2018. It offered a week of activities for members and guests combining thought provoking presentations with informative and interesting site visits across Scotland.

The IRSE was deeply saddened by the death of Her Majesty Queen Elizabeth II the week before the 2022 International Convention and after careful consideration by the organising committee it was agreed to continue with the Convention based at the Marriot Hotel in Glasgow. There were some respectful changes to the programme and a minute's silence was also held.

Andy welcomed 145 members and guests to Scotland, presenting each delegate with an IRSE branded rucksack containing the Convention tie for the men and a tartan scarf for the women. On Tuesday evening the City of Glasgow hosted a civic reception in honour of the IRSE at the Riverside Museum where delegates enjoyed a finger buffet and a private view of the many fascinating transport exhibits. On Wednesday

evening an optional Ceilidh night was organised.

During the week, visits were made to Highland Spring's new rail freight facility, Network Rail's Larbert Training Centre, Carstairs Junction re-signalling project and the west of Scotland Signalling Centre. Delegates and their guests also enjoyed a visit to the Bo'ness and Kinneil heritage railway and museum which included the hydrogen train project exhibit, followed by a boat trip on the Firth of Forth to see the iconic Forth rail bridge and the two road bridges.

Eight technical papers were presented across two days during the Convention. On Tuesday, Jim McLeary and Carole Markou AMIRSE of Network Rail, and Philip Carachi from Siemens Mobility gave an introduction to the Carstairs site followed by a presentation from Ben Pugh of Siemens Mobility on the Trackguard Westrace Trackside System (WTS) at Carstairs which is the first WTS system to be installed in Scotland. John Richmond from Park Signalling spoke on 'Lower cost signalling solutions' and Robert Gardner from Network Rail updated delegates on the latest Network Rail innovations. On Wednesday, Stephen Wright MIRSE from Siemens Mobility's

presentation covered 'Ways S&T can support the decarbonisation of the railway,' followed by Ian Rae from Brodie Engineering who briefed delegates on the 'Hydrogen Train project' in advance of the visit to the Hydrogen Train planned for the next day. Usman Ali of The Strathclyde Partnership for Transport (SPT) gave a presentation on the 'Rebuild of the Glasgow Subway' and then Lynsey Hunter MIRSE, regional asset manager for signalling in Scotland gave the final Convention paper on 'Signalling in Scotland and in particular the importance and challenges of signalling asset management'.

A guest programme organised by the president's wife Isobel and Johanna Allan, wife of the organising committee's chairman Peter Allan FIRSE included tours of the Falkirk wheel, the Kelpies and a visit to the New Lanark UNESCO World Heritage site.

The Convention ended on Friday evening with a gala dinner. The President thanked the organising committee for all their hard work in organising the week's events and visits, in particular Paul Booth FIRSE and Peter Allan FIRSE, and the sponsors for their generous contributions.

Annual General Meeting

The IRSE’s 108th Annual General Meeting, chaired by the retiring President, Ian Bridges FIRSE, was held at the Derby Conference Centre on 21 April 2022. There was an overall attendance of 154 which was a mixture of online and in person.

In accordance with the Memorandum and Articles of Association all ordinary business was concluded at this meeting, and it was resolved to appoint HPH Chartered Accountants for 2022.

After conducting the formal business of the AGM, Ian commented on the Annual Report for 2021 (published on 1 April 2022), and in the absence of the Treasurer, Andrew Smith FIRSE, Blane Judd CEO and Secretary commented on the Accounts for 2021.

The membership received copies of the Annual Report for 2021 (published on 1st April 2022), and there being no comments or questions received through correspondence this report was adopted.

Ian announced that the ballot for the election of members to Council had resulted in the following being elected:

Fellows: Prof Clive Roberts (UK), Pete Gracey (UK), Harvinder Bhatia (UK) and Gordon Lam (Hong Kong).

Members: Robert Cooke (Singapore), Paul McSharry (UK), and Firas Al-Tahan (North America).

Associate Member. Xiaolu Rao (Switzerland).

Ian welcomed Pete Gracey FIRSE to Council and expressed grateful thanks to George Clark FIRSE who retired from Council.

IRSE Council

IRSE Council 2022-2023	
President	Andy Knight FIRSE
Vice Presidents	Steve Boshier FIRSE, Jane Power FIRSE, Yuji Hirao FIRSE
Members of Council from the class of Fellow	Peter Allan FIRSE, Ian J Allison FIRSE, Harvinder Bhatia FIRSE, Bogdan Godziejewski FIRSE, Peter Gracey FIRSE, Gordon Lam FIRSE, Rod Muttram FIRSE, Clive Roberts FIRSE, Andy Stringer FIRSE
Members of Council from the class of Member	Firas Al-Tahan MIRSE, Rob Burkhardt MIRSE, Rob Cooke MIRSE, Jane Copperthwaite MIRSE, Ryan Gould MIRSE, Paul McSharry MIRSE
Members of Council from the class of Associate Member	Georgina Hartwell AMIRSE, Xiaolu Rao AMIRSE, Keith Upton AMIRSE
Co-opted Past Presidents	Ian Bridges FIRSE, Charles Page FIRSE, Daniel Woodland FIRSE
Chief Executive	Blane Judd
Treasurer	Andrew Smith FIRSE



Members of IRSE Council meeting to discuss the Institution’s strategy during the Glasgow Convention.

Members' Lunch

The 24th Annual IRSE members lunch took place on 20 July 2022 at the Union Jack Club in London.

Organised once again by Past President Clive Kessell HonFIRSE who instigated the lunch as part of his presidency, the event was attended by 47 members including eight past presidents. Due to the rail disruption on the day caused by an unseasonal heatwave, 21 other members were unable to attend.

After a welcome from Clive, IRSE President Andy Knight FIRSE gave a brief overview of his presidential theme of "shaping the future" and underlined the pivotal role the Institution has to play in providing the support to assist in the recruiting and training of engineer of the future. He also updated members on plans for the upcoming Convention and played the trailer for IRSE10///.

Blane Judd, CEO of the IRSE gave a "State of the Nation" update. He reminded the group of how accidents relating to signalling deficiencies in the early days of the IRSE had influenced the much-needed safety improvements that the Institution still continues to support today.

He reflected that in 1912, the Institution membership only embraced eight countries whereas nowadays with 5000 members, half of these are located in 52 countries outside of the UK.

The lunch was also an opportunity for the President and Managing Director of Signet Solutions to present the Signet Award to Istvan Darzsi, who is originally from Hungary but now works with Irish Rail. Regrettably, Mike Harvie MIRSE, the Dell Award winner was not able to attend as he was one of those affected by the travel disruption.

Annual Dinner

After a two year enforced break by the Covid-19 pandemic, the 56th Annual Dinner was held at The Landmark Hotel in Marylebone, London on Friday 13 May. The event was generously sponsored by Alstom and was a sold out event with 300 diners. As no Annual Dinner could be held in 2020 or 2021, president Andy Knight shared host duties with Past Presidents from those years, Ian Bridges and Dr Daniel Woodland.

The President's guest of honour was the Minister of State, Department for Transport Wendy Moreton MP and the keynote speaker was LNER managing director David Horne. Once again, the nominated charity for the event was RedR UK, a disaster

relief charity which matches volunteers with technical skills to assistance tasks in response to disasters across the world. A collection at the dinner raised £2897 for this charity. The IRSE Annual Dinner has been at capacity for several years with potential attendees having to be declined. Exploration and assessment of options was initiated in autumn 2022 and as a consequence the 57th Annual Dinner in 2023 will be held at the DeVere Grand Connaught Rooms in central London on 11 May. This venue has the capacity for us to expand towards its capacity of 500.

Collaboration

The IRSE continues to develop both formal and informal working relationships with engineering and railway organisations in the UK and, either directly or through its sections, with organisations in other parts of the world. At present there are ongoing discussions with representatives in Australia, Canada, India, Israel, and Malaysia.

The networking activity with the sector has started again after the delays imposed by Covid-19, although there are still a few meetings taking place using virtual means. There have been exciting opportunities to meet businesses in India at the conference held in Delhi and in Canada during the CBTC conference.

In the coming year we will continue to focus on our strategic intent to strengthen our engagement with external bodies, including not only rail industry companies, but also other relevant organisations. The Institution enjoys good working relationships with, and support from, many companies,

but our ambition is to grow this further for mutual benefit. We will watch with interest the development of Great British Rail and be ready to support and comment as details emerge.

We remain active members of the Rail Engineer Forum. This body is made up of representatives from all the Professional Engineering Institutions who have a rail interest and includes, IMechE, IET, ICE, PWI, CIRO, INCOSE, CILT, RCEA and the Young Railway Professionals (theref.org.uk). Andrew Skinner of GWR of IMechE is the current chair. We maintain a close link with the Rail Industry Association UK (RIA) to ensure that where possible the two bodies are working closer together to link professional employees working in professional businesses. This working relationship is help IRSE and RIA to identify where we can together make a difference in the rail sector.

The activities of both the Royal Academy of Engineering and Engineering UK continues to underpin or activities to encourage young people to consider

a career in an engineering related discipline. Through these collaborations we can have a greater impact than we would in isolation.

We work closely with the UK's Engineering Council for the regulation of engineers and have seen a growth in the number of members coming forward for professional registration. The IRSE is a licensed body of the Engineering Council and is thus licensed to register Chartered Engineers, Incorporated Engineers and Engineering Technicians. In the last year we have had increased international interest in professional registration, which is to be welcomed.

As part of our drive to address the gender balance in the sector we have engaged with representative groups through the equality, diversity and inclusivity group led by Council member Harvinder Bhatia. This group is looking at how the sector can better attract a wide range of people from differing backgrounds and cultures.

Publications and communications

For most of IRSE members across the world in 2022 the Covid-19 pandemic was over, enabling a welcome return to local sections and Institution face to face events including Convention, the Annual Dinner and Members Lunch. However, thanks to the digital capabilities we developed during the pandemic which gave all members access to on-line Presidential programme events and other content via the IRSE Vimeo channel, we continued to offer online access to major presentations alongside the option to attend in person throughout 2022. Moving forward, this hybrid form of event delivery will remain a key aspect of the IRSE communications strategy.

IRSE News

IRSE News is published monthly in both print and digital formats, its purpose being primarily to inform IRSE members worldwide about industry news, technical developments, and the work and activities of the IRSE and its sections. Papers that comprise the presidential programme are published in IRSE News, together with a wide range of other internationally sourced educational papers and articles.

We'd like to extend our thanks to the dedicated and hard-working editorial production team led by Managing Editor Paul Darlington FIRSE and Production Manager Mark Glover FIRSE for another excellent year.

IRSE10///

President Andy Knight FIRSE launched IRSE10///, a series of expert-led ten minute talks called on aspects of train control and communication aimed at newcomers to the industry and those interested in finding out more about this field of engineering. Six episodes were produced, all of which are available online the IRSE Vimeo channel.

Proceedings

The Proceedings provide a summary of the Institution's activities and have been produced annually since the very first issue in 1913. A hard copy of the Proceedings is supplied to the British Library and to the library of the Institution of Engineering and Technology and PDF versions of the Proceedings are available for all to read via our website.

Website

The website provides details of Institution events, sections, information about the governance and operation of the IRSE, material for members taking the IRSE professional exam, how to



become a member, as well as a wealth of information relating to professional development. Members (and registered non-members) can update contact details, book events, order publications, and pay their subscriptions online.

Video

All of the Presidential papers, section lectures and events recorded for online viewing were added to the IRSE Vimeo channel which now hosts a collection of 245 videos. During 2022, the IRSE Vimeo channel received 19,100 views from across the world, representing a total of 281 days, 18 hours, five minutes and 29 seconds of viewed IRSE content. The top five countries by viewership were UK (33%), India (15%) Australia (10%) and the USA.

E-Communications

A monthly email bulletin is sent to all members, containing information about upcoming events and other topical information. In addition, we send out ad-hoc electronic communications to members highlighting key presidential events and other important information.

Social Media

The Institution has a social media presence on LinkedIn and Twitter which play a key role in promoting our activities and signposting our content. Key events, presentations and topical news stories are posted on all these feeds on a regular basis to help keep members informed and raise the profile of the Institution amongst the wider railway industry. LinkedIn remains our key social media network and this channel has seen a 100% increase in both followers and engagement in the last 12 months.

As of February 2023 the IRSE page has 11,401 followers and during the previous 12 months clicks went up by 10,000. Top posts included the launch of the new Metro Handbook (4,500 impressions with 263 clicks) and the IRSE10/// talk delivered by Disney Schembri from Siemens Mobility (4,191 impressions and 163 link clicks). Our Twitter audience continues to grow acquiring 96 new followers and reporting an increase of engagement of over 100%. Top posts were a post on the Glasgow Convention and posts on IRSE10/// and Presidential Programme papers on demand. Due to technical access issues our Facebook page has been inactive and we are in the process of setting up a new page for the IRSE.

Publications

The IRSE publishes a range of books on railway train control and communications systems, which provide a useful source of educational material for those relatively new to the profession, as well as providing a valuable record of the development of signalling. The long awaited Metro Train Control Systems textbook was published this year and demand for copies has been high. The Institution would like to thank the team led by Claire Porter HonFIRSE for all of their hard work in preparing this book which is available to purchase via the IRSE website.

Library

Members of the Institution are permitted to use the library of the Institution of Engineering & Technology in London by appointment, and there is also an archive collection of publications available on request at the IRSE's London offices.

IT systems

The four major IT components that support the Institution's operations are the Membership and Licensing customer relationship management system (often referred to as Silverbear CRM), the website, the exam platform, and the office IT systems.

We continue to use the full suite of Microsoft products in the cloud and use Microsoft Teams as both a virtual meeting product and as a VoIP for our phone system.

The membership offering through the website includes the ability to access member only information and allows the checking of membership and licensing validity with real time reports. The library of video content available on the IRSE Vimeo channel increases regularly. We

also encourage members to update their personal and employment details online using the web portal.

The increased use of virtual meeting platforms has seen a large increase in membership engagement. We hold meetings at different times of the day to acknowledge members' the international time differences.

The move to an online offering for the IRSE exams, has seen an increase in the numbers of candidates. The software used as the exam platform is enhanced by two additional packages that monitor the candidates. The first monitors the surrounding so that cheating or looking up reference material is captured (known as proctoring software). The second is an anti-plagiarism checker that makes sure

candidates submit their own work and not copy and paste for example. These two packages have been used to good effect and helped support the team of volunteer markers when looking to rule out any cheating. Transgressors have been sanctioned by Council resulting in removal or downgrading of membership, or a ban from taking the exam for a defined period.

The ability of the volunteers, members, and staff to adapt and embrace the ever-changing pace of IT infrastructure is to be commended. Without their support the Institution would not be able to advance to keep up with the changes necessary to be relevant as a professional body for the 21st century.

Finances

The financial results are shown on pages 20 to 24. They are extracted from the consolidated accounts for the IRSE and its wholly owned trading subsidiary, IRSE Enterprises Limited. The term 'Group' at the top of a set of tables refers to the two companies combined, and 'Charity' to the IRSE alone. As far as possible, these extracted results use the titles and the format of the consolidated accounts.

For several years now it has been reported that the increase in Total Charity Funds has hidden the fact that we had made a loss on the activities of both IRSE and IRSE Enterprises, with the increase in value of our investments being larger than the loss. It was also reported that we had been looking at what actions we needed to take to address this position. The conclusion of this work was that the issue was too large to be addressed in one year and there would need to be significantly larger increases in subscription rates

and licensing prices than inflation might suggest. As a result, 2022 was the first step in this process and the progress for IRSE Enterprises can be seen in Note 8 where the net figure before the gain/loss on investments shows a much smaller loss than in 2021. For the whole group appears in the Consolidated Statement of Financial Activities where the loss has reduced from £80,689 to £65,436. The improvements are better than the budgets for 2022 suggested, bolstered by the outstanding effort of the Membership team to get subscriptions in on time. The further planned increases in 2023 are designed to complete this process.

One item that has sadly not helped the IRSE Enterprises results is the £10,000 seed-funding we provided for the organisation of the International Technical Seminar in India during the summer. This was due to be returned to IRSE Enterprises following the event, but we are still waiting for it to arrive. We are actively working to recover this money

and believe it will, eventually, arrive, but the timing is unclear and it was therefore considered prudent to not make any provision in the accounts for this.

The ability to travel has brought with it an increase in IRSE costs. Historically, the President would receive significant funding from their employer to allow them to visit parts of the Institution away from their local area. These days, whilst it is generally possible to raise some sponsorship for this, there is an increasing need for the Institution to cover the cost of the President attending events. This is always included in the budget so that we are aware of the impact on the IRSE finances and the Presidents work hard to combine as many activities into one trip as possible to minimise the costs. However, as anyone who has travelled recently will be painfully aware, costs have increased significantly, and this will have an impact on our budgets in the future.

Consolidated accounts (extract)

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS CONSOLIDATED BALANCE SHEET AS AT 31st DECEMBER 2022

	Notes	Consolidated 2022 £	Consolidated 2021 £	Charity 2022 £	Charity 2021 £
Fixed Assets					
Tangible fixed assets		46,972	4,180	22,017	3,186
Investments	1	1,803,443	2,206,609	1,338,037	1,613,264
Total fixed assets		1,850,415	2,210,789	1,360,054	1,616,450
Current Assets					
Stocks	3	66,701	58,091	55,970	55,456
Debtors	4	190,770	165,442	249,267	295,779
Investments	5	211,198	211,177	211,198	211,177
Cash at bank and in hand		272,184	362,093	93,062	119,347
Total current assets		740,853	796,803	609,497	681,759
Creditors:					
amounts falling due within one year	6	(500,686)	(463,923)	(286,795)	(274,140)
Net current assets		240,167	332,880	322,702	407,619
Total assets less current liabilities		2,090,582	2,543,669	1,682,756	2,024,069
Creditors:					
amount falling due after more than one year	7	(275,756)	(246,490)	-	-
Total net assets		1,814,826	2,297,179	1,682,756	2,024,069
Funds of the Charity					
Unrestricted funds	2	1,775,906	2,260,019	1,643,836	1,986,909
Restricted funds		38,920	37,160	38,920	37,160
Total charity funds		1,814,826	2,297,179	1,682,756	2,024,069

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS CONSOLIDATED CASH FLOW STATEMENT AS AT 31st DECEMBER 2022

	2022 £	2021 £
Net cash (used in) operating activities	(66,139)	(32,284)
Cash flow from investing activities:		
Purchase of tangible fixed assets	(47,988)	(2,220)
Purchase of fixed asset investments	(283,555)	(150,500)
Sale of fixed asset investments	269,093	273,112
Interest received	3,780	4,060
Dividends received	34,900	31,459
Net cash provided by / (used in) investing activities	(23,770)	155,911
Change in cash and cash equivalents in the year	(89,909)	123,627
Cash and cash equivalents at start of year	362,093	238,486
Cash and cash equivalents at end of year	272,184	362,093

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS
CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES AND INCOME AND EXPENDITURE
ACCOUNT FOR THE YEAR ENDED 31st DECEMBER 2022

	Notes	Unrestricted £	Restricted £	Total 2022 £	Total 2021 £
Income and Endowments from:					
Charitable activities:					
Donations and legacies	9	12,512	-	12,512	8,901
Other trading activities:					
Non-ancillary trading income	10	517,598	-	517,598	346,358
Other activities	10	583,214	-	583,214	528,073
Investments:					
Investment income	11	37,969	711	38,680	35,519
Total Income		1,151,293	711	1,152,004	918,851
Expenditure on:					
Raising Funds					
Other activities	12	7,599	-	7,599	6,070
Investment		8,844	-	8,844	9,208
Non-ancillary trading		541,863	-	541,863	403,600
		558,306	-	558,306	418,878
Charitable activities					
Awards	12	30,117	-	30,117	19,026
Promoting best practice		628,306	-	628,306	561,636
		658,423	-	658,423	580,662
Total Expenditure		1,216,729	-	1,216,729	999,540
Net Expenditure before (loss) / gain in investments		(65,436)	711	(64,725)	(80,689)
Net (loss) / gain on investments		(418,677)	1,049	(417,628)	258,106
Net Income / (Expenditure)		(484,113)	1,760	(482,353)	177,417
Reconciliation of funds					
Total funds brought forward		2,260,019	37,160	2,297,179	2,119,762
Total Funds Carried Forward		1,775,906	38,920	1,814,826	2,297,179

ANNUAL MEMBERS' REPORT WITH SUPPLEMENTARY MATERIAL

The tables set out on pages 16 to 20 are extracted from the full audited accounts of the Institution for the year ended 31 December 2022. They constitute supplementary material to this Annual Members' Report. Section 426A of the Companies Act 2006 requires the following statements to be made in respect of the supplementary material:

1. This annual report is only part of the company's annual accounts and reports prepared under the Companies Act.
2. A full copy of the company's annual accounts and reports may be obtained upon request from The Institution of Railway Signal Engineers, 1 Birdcage Walk, Westminster, London SW1H 9JJ, UK.
3. The auditor's report on the annual accounts was unqualified.
4. The auditor's statement under section 496 of the Companies Act (whether the Trustees' Report is consistent with the accounts) was unqualified.

A P Smith
Treasurer

Approved by the Trustees on 23 March 2023.

A Knight
President
Director and Trustee

SW Boshier
Vice-President
Director and Trustee

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS
NOTES TO THE CONSOLIDATED ACCOUNTS
FOR THE YEAR ENDED 31st DECEMBER 2022

1 Fixed Asset Investments (Group)

	Equities £	Government Securities £	Total £
Market value			
At 1 January 2022	2,000,965	205,644	2,206,609
Additions	201,291	82,264	283,555
Disposals	(182,978)	(86,115)	(269,093)
Revaluations	(360,573)	(57,055)	(417,628)
At 31 December 2022	1,658,705	144,738	1,803,443

2 Movement in Funds (Group)

	At 1.1.22 £	Net movement in funds £	At 31.12.22 £
Designated funds			
Scholarship Fund	78,315	3	78,318
Alan Fisher / Frank Hewlett Fund	430,288	3,206	433,494
General Development	307,000	-	307,000
Future ASPECT Conference	10,000	-	10,000
International Convention	27,500	-	27,500
Textbook Preparation	7,500	-	7,500
General Fund - Unrestricted fund	1,109,800	(346,284)	763,516
IRSE Enterprises - Non-charitable trading fund	289,616	(141,038)	148,578
	2,260,019	(484,113)	1,775,906
Restricted funds			
Dell Bequest	24,064	1,355	25,419
Thorowgood Bequest	13,096	405	13,501
TOTAL FUNDS	37,160	1,760	38,920

The company holds 20% or more of the issued share capital of the following company:

<u>Company</u>	<u>Country of incorporation</u>	<u>Share class</u>	<u>%age owned</u>
IRSE Enterprises Limited	England and Wales	Ordinary	100

	<u>Share capital and reserves</u>	<u>Profit for year</u>
IRSE Enterprises Limited	136,803	(140,720)

3 Stock	Consolidated 2022 £	Consolidated 2021 £	Charity 2022 £	Charity 2021 £
Stock	66,701	58,091	55,970	55,456

4 Debtors	£	£	£	£
Trade debtors	77,076	67,078	-	-
Other debtors	3,435	4,964	3,333	4,964
Pre-payments and accrued income	15,900	16,529	-	-
VAT	94,359	76,871	81,213	63,292
Amounts owed by group undertakings	-	-	164,721	227,523
	190,770	165,442	249,267	295,779

5 Current Asset Investments	£	£	£	£
National Savings	211,198	211,177	211,198	211,177
	211,198	211,177	211,198	211,177

6 Creditors: amounts falling due within one year	£	£	£	£
Trade creditors	39,925	53,457	28,901	45,749
Accruals	26,697	21,547	22,429	17,008
Deferred income	427,036	382,197	230,178	206,682
Other creditors	7,028	6,722	5,287	4,701
	500,686	463,923	286,795	274,140

7	Creditors: amounts falling due after one year	Consolidated 2022 £	Consolidated 2021 £	Charity 2022 £	Charity 2021 £
	Other creditors	275,756	246,490	-	-

Representing the proportion of licence fees receive which will be credited to Income after more than one year.

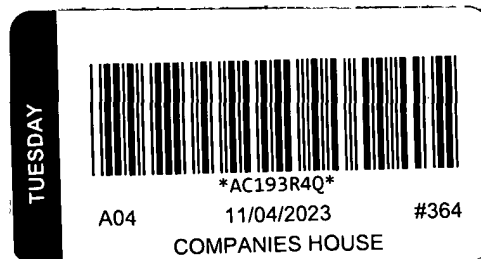
8	Activities of IRSE Enterprises	2022 £	2021 £
	<u>Turnover</u>		
	Donations	307	-
	Proceeds - Conventions and Conferences	92,340	-
	Proceeds - Dinners	46,600	-
	Proceeds - Technical visits and Seminars	34,370	22,332
	Licensing - Licence fees received	214,786	200,048
	Licensing - Audit fees	6,068	5,761
	Licensing - Assessing agents fees	107,791	106,887
	Licensing - Technical publications	15,336	11,330
		517,598	346,358
	<u>Cost of sales</u>		
	Costs - Conventions and Conferences	71,371	(1)
	Costs - Dinners	38,926	-
	Costs - Technical visits and Seminars	37,053	18,556
	Costs - Young members' Seminars and Visits	-	-
	Licensing - Logbooks opening stock	2,635	6,444
	Licensing - Engineer's fees	14,866	14,503
	Licensing - IRSE administration charges	232,531	219,980
	Licensing - Audit engineers	38,872	44,959
	Licensing - Accreditation	12,712	12,014
	Licensing - Logbooks closing stock	(10,732)	(2,635)
		438,234	313,820
	Gross profit	79,364	32,538
	<u>Other income</u>		
	Dividends receivable	7,153	7,266
	Bank interest receivable	613	7
		7,766	7,273
		87,130	39,811
	<u>Expenditure</u>		
	IRSE Admin charges	21,598	22,879
	Telephone	7,788	8,122
	Post and stationery	6,875	2,880
	Officers' expenses	-	-
	Accommodation and refreshments	688	105
	Computer costs	12,113	7,580
	Professional indemnity insurance	3,741	3,099
	Licensing - Treasurer's, Chief Executive's and Registrar's Fees	33,503	36,782
	Logbook purchases	10,597	-
	Investment Manager's fees	3,872	4,042
	Auditor's remuneration	2,080	2,000
	Exchange rate variance	(3,607)	15,271
		99,248	102,760
	<u>Finance costs</u>		
	Licensing - Bank charges	4,381	2,291
	Net figure	(16,499)	(65,240)
	<u>Gain / Loss on revaluation of assets</u>		
	Gain on revaluation of investments	(124,539)	101,087
	Net profit	(141,038)	35,847

9	Donations and Legacies (Group)				2022	2021
					£	£
	Donations				12,512	8,901
10	Other Trading Activities (Group)					£
	Subscriptions				495,058	451,423
	Professional reviews				6,870	7,710
	Advertising				3,900	13,513
	Booklets and text books				22,030	8,943
	IRSE ties, badges & cufflinks				-	64
	Examination fees and materials				53,205	44,920
	Proceeds from members' lunch				2,151	1,500
	Consultancy income				-	-
	IRSE Income				583,214	528,073
	Trading income:					
	Turnover of trading subsidiary - Note 8				517,598	346,358
11	Investment Income (Group)					
	Equities and government stocks				27,747	24,193
	Interest receivable				3,167	4,053
	IRSE Enterprises Ltd				7,766	7,273
					38,680	35,519
12	Analysis of Expenditure	Staff Costs	Depreciation	Other	2022	2021
		£	£	£	£	£
	Raising funds					
	Other activities	2,285	17	5,297	7,599	6,070
	Investment	-	-	8,844	8,844	9,208
	Non-ancillary trading	184,191	3,520	354,152	541,863	403,600
	Total raising funds	186,476	3,537	368,293	558,306	418,878
	Charitable activities					
	Awards	9,141	67	20,909	30,117	19,026
	Promoting best practice	217,109	1,592	409,605	628,306	561,636
	Total charitable activities	226,250	1,659	430,514	658,423	580,662
	Total expenditure	412,726	5,196	798,807	1,216,729	999,540
13	IRSE Charitable Expenditure				2022	2021
					£	£
	Raising donations and legacies					
	Fund raising dinners				2,386	1,388
	Consultancy				-	-
	Charitable activities					
	Proceeding: editing and printing				2,000	4,511
	Newsletter: editing and printing				109,415	101,777
	Booklets and textbooks				10,221	3,766
	IRSE ties, cufflinks and badges				109	-
	Prizes				26	25
	Awards				9,264	300
	Activities funded by country subscription supplements				9,277	7,641
	Professional review costs				2,018	(820)
	Support costs					
	Staff costs				235,591	215,802
	Office rent and services				18,524	18,524
	Fees and honoraria				97,473	89,488
	Membership database				-	-
	Other administrative costs				163,881	130,900
	Investment manager's fees				8,844	9,208
	Fixtures and fittings				1,676	9,429
	Governance costs					
	Auditor's remuneration				4,160	4,000
	Total expenditure				674,865	595,939

Registration number: 0125685

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS
(Charity number: 1046999)

ANNUAL REPORT AND FINANCIAL STATEMENTS
for the year ended
31 December 2022



HPH
Chartered Accountants
54 Bootham
York
YO30 7XZ

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT FOR THE YEAR ENDED 31 DECEMBER 2022

The trustees, who are also directors of the charity for the purposes of the Companies Act 2006, present their report with the financial statements of the charity for the year ended 31 December 2022.

The Charity is a Public Benefit Entity.

The Financial Statements comply with the Charities Act 2011, the Companies Act 2006, the Memorandum and Articles of Association, and Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their Financial Statements in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) (effective 1 January 2019).

STRUCTURE, GOVERNANCE AND MANAGEMENT

The Institution is a Company Limited by Guarantee and governed by its Memorandum and Articles of Association, last amended on 22nd April 2021. Trustees are members of the Institution and elected by the membership following their proposal by members or the governing Council of the Institution.

The Institution is managed by its Council, which is headed by the President, assisted by the Senior and Junior Vice Presidents. Its other members are other suitably elected and co-opted individuals drawn from the various grades of membership. The Council constitutes committees to assist in the operation of the Institution as it sees fit. Currently, for the general management of the Institution there is a Management Committee, consisting of the President, Vice Presidents, one or more past Presidents, a number of ordinary members of Council, along with the Chief Executive and Treasurer, and Finance Committee, consisting of the President and Vice Presidents, the previous President, the Chief Executive and Treasurer and one ordinary member of Council.

There is no formal training of trustees, but they are periodically provided with the current version of the Charity Commission document 'Charities and Investment Matters: A Guide for Trustees'. Formally, all decisions related to the operation of the Institution are made by the Council. Often, these decisions are based on recommendations from subsidiary committees, particularly Finance and Management. Staff involvement is only related to low-value day to day purchases for the efficient operation of the Institution.

Staff salaries are agreed by Finance Committee on the recommendation of the Chief Executive. A small number of the senior management are contracted to the Institution. Their remuneration is likewise agreed by Finance Committee on the Chief Executive's recommendation, with the exception of the Chief Executive, where the remuneration is at the discretion of the trustees on Finance Committee. The benchmark taken for proposals is generally based on the ruling CPI as published by the Government in October.

The Institution's operating subsidiary is IRSE Enterprises. Its managing board has the Treasurer, President, Vice Presidents, immediate past President, and a Council representative as directors.

OBJECTIVES AND ACTIVITIES

Public Benefit

The Institution's objects and principal activities continue to be the advancement of the science and practice of signalling and railway telecommunications for the public benefit by the promotion of research, the collection and publication of educational material and the holding of conferences, seminars and meetings, the maintenance of high standards of practice and professional care amongst those working within the industry and the promotion of improved safety standards for the protection of the general public. The trustees have complied with the duty in section 17 of the Charities Act 2011 to have due regard to public benefit guidance published by the Charity Commission.

Custodian Trustee Disclosures

No assets were held by any trustee or by the Institution on behalf of any other charity.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT **FOR THE YEAR ENDED 31 DECEMBER 2022**

OBJECTIVES AND ACTIVITIES - continued

Regular Activities

The Institution's main fund raises money by way of subscriptions, joining fees and donations. The Institution issues a magazine to its members 11 times a year, containing papers, articles and other information pursuant to the Institution's objects. It also sells technical papers and books it publishes itself or buys for re-sale.

The Institution usually organises a number of technical meetings, conferences, seminars and dinners, for some of which it makes a charge. These provide a forum for discussion and the transfer of knowledge. Following the COVID-19 pandemic experience, most were filmed and made available at the time and subsequently through an on-line video link. Some meetings were also available to attend live, but attendance figures have been very low. In addition, the Annual Dinner returned in April and a Convention was held in Glasgow during September.

The Licensing scheme, run through the subsidiary IRSE Enterprises, provides accreditation to individuals and organisations within the industry after having complied with certain laid-down standards. Fees are charged for these activities. Licences issued are for a 5-year period so one-fifth of the income is credited each year to the Income and Expenditure account, the balance being carried forward as a liability in the Balance Sheet.

Whilst no formal criteria are applied to measure the success or otherwise of all charged events, there is an expectation they will, at least, break even, whilst for free events a visibly full venue or significant on-line viewing is considered a success. It is noted on-line attendance has exceeded expectation and engaged a wider geographical spread, assisting in promoting the charitable objects. Consideration is being given to normally have the free events on-line only. In the case of the Institution's exam, the criterion is a suitably high pass-rate.

The Institution is a fully nominated Body of the Engineering Council licensed to register Chartered Engineers, Incorporated Engineers and Engineering Technicians.

GRANT-MAKING

Bursaries are allocated based on an application form and interview by senior Institution members. In 2022 9 were given linked to the Glasgow Convention. Prizes are based on documented criteria, some depending on suitable success in the Institution's exam.

VOLUNTEERS

Volunteers provide considerable assistance in the operation of the Institution, both in its local sections and technical societies, where the objects mirror those of the Institution itself, and centrally, to provide a source of expert input and background assistance. This applies, particularly, in the operation of the Institution's professional exam and the production of the Institution's magazine, IRSE News.

SOCIAL INVESTMENT

No financial social investment is undertaken, but the high-level objective regarding the maintenance of high standards and the promotion of safety standards is directed towards the protection of the general public whilst on or near railways.

FUNDRAISING

No fundraising activities are undertaken by the Institution.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT FOR THE YEAR ENDED 31 DECEMBER 2022

ACHIEVEMENTS AND PERFORMANCE

With the reduction in Covid-19 infections and relaxation of restrictions, most of the normal calendar events returned in 2022. This, and pre-planned above inflation increases in subscription rates, would appear to have started to have the desired effect of returning the IRSE to operating breakeven. The IRSE Exam will continue on-line. After issues in 2021, the multiple-choice Module A was held twice in 2022. The success means this will be repeated in 2023. The planned programme of lectures (provided through on-line platforms) was supplemented by the Annual Dinner, a Convention, a seminar in Toronto and a Technical Visit to Ireland.

Beyond the events discussed above, there are no specific fundraising activities. No expenditure has been incurred to raise that income, beyond that involved in the organisation of the events themselves.

FINANCIAL REVIEW

The results of the Institution are set out in the Consolidated Statement of Financial Activities and Income and Expenditure Account which may be found on page 12.

The net deficit of the group for the year before fair value adjustments to the carrying value of investments was £64,725 (2021: £80,689) and total funds carried forward are now £1,814,826 (2021: £2,297,179). The closing funds comprised of £38,920 relating to restricted funds (2021: £37,160), £863,812 relating to Designated funds (2021: £860,603) and £912,094 relating to unrestricted funds (2021: £1,399,416).

The annual budgets are normally based on the status quo. However, during the budget planning for 2022 it was known that the membership database required porting to an updated version of the Microsoft Dynamics platform. This was due to happen in 2022, but delays mean it will happen in 2023, although the considerable work undertaken during the year means 50% of the costs were paid during the year. In addition, the IRSE Indian Section organised a 3-day seminar on behalf of the 2021/22 President, although a local Covid-19 outbreak delayed it until after the end of his term of office. To assist in planning, £10,000 was loaned to the organisers, with a written agreement for its return after the event. The agreement also set out how any surplus would be divided between the IRSE and the IRSE Indian Section. By the end of the year final accounts for the event remained unavailable although there were indications there would be a small loss after the return of the loan. However, given the delays, the decision has been made to assume this loan should be written off and it appears in the accounts in this way. If money is eventually received, it will be included in the 2023 accounts.

During 2022 4 people left the Institution's employment and 5 joined. At year's end 13 people were employed. Of the 5 starting, one returned to their previous employer. Four are part-time employees, one is full time.

As in previous years, the accounts of each of the individual funds of the Institution, which are listed below, have been prepared and approved by the trustees.

The Trustees' Report and Accounts set out in the following pages include the following:

Unrestricted funds:

General

IRSE Main fund

Designated

Scholarship fund

General development fund

International conferences fund

Unrealised investments revaluation reserves.

Fisher / Hewlett fund

Future Conventions fund

Textbook preparation fund

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT **FOR THE YEAR ENDED 31 DECEMBER 2022**

FINANCIAL REVIEW - continued

Restricted funds:

Robert Dell bequest

Thorrowgood Scholarship bequest

INVESTMENTS

Investment policy and objectives

Under the Memorandum and Articles of Association the charity trustees have the power to invest the assets of the Institution in such a manner, as may from time to time be considered desirable. The trustees take advice from their investment managers, Rathbones. Dividends received are immediately reinvested.

KEY RISKS AND UNCERTAINTIES DISCLOSURE

A Risk Register is held by the Chief Executive and regularly reviewed by Management Committee. Significant risks for the long-term health of the Institution may be summarised as:

- Loss of membership and membership income;
- Loss of key staff including contractors; given the size of the organisation;
- Loss of support for the Licensing Scheme;
- Claims against the Licensing Scheme following an incident on a railway;
- Long-term loss of IT systems;
- Members' personal data loss;
- Financial failure of a major event.

PLANS FOR FUTURE PERIODS

The 2020 Convention to Toronto is now planned for 2024. Work is underway for ASPECT Conferences in Melbourne, Australia in 2023 and Yokohama in 2025. There are also plans for an Annual Dinner and Members' Lunch during 2023. A major update of the membership database will take place in 2023.

The review of the Institution's finances and the impact on subscriptions concluded that the necessary increase should be spread across 2022 and 2023. This will seek to remove the expectation that a surplus from IRSE Enterprises will support a shortfall in the charity's income each year.

PENSION LIABILITIES

The Institution's pension scheme is a defined contribution scheme through an external provider and there are no liabilities arising to the Institution.

RESERVES

The Institution has a Reserves Policy in accordance with the Charity Commission's requirements. This is reviewed annually by Council. The current values of the reserves are detailed in these accounts. The value of the Hewlett / Fisher fund has increased to reflect the income received from the fund's investments. The planned return to a modest surplus will help to replenish this, along with movements in the stock market.

Funds in Deficit and Going Concern

No funds are currently in deficit. There is no current reason to believe that the Institution is unable to continue as a going concern.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT
FOR THE YEAR ENDED 31 DECEMBER 2022

REFERENCE AND ADMINISTRATIVE DETAILS

Registered name of the Charity

The Institution of Railway Signal Engineers

Registered Company number

0125685 (England and Wales)

Registered Charity numbers

1046999

Principle address and registered office

1 Birdcage Walk
Westminster
London
SW1H 9JJ

Trustees and Directors

The Trustees and Directors who served during the year were:

P A Allan

I J Allison

F Al-Tahan

H S Bhatia

S W Boshier

I R Bridges (Co-opted 26 May 2022)

R E Burkhardt

R L Cooke

J Copperthwaite

B Godziejewski

R C Gould

P Gracey (Appointed 21 April 2022)

G Hartwell

Y Hirao

A Knight

G B S Lam

P H J McSharry

R Muttram

C R Page (Co-opted 26 May 2022)

J E Power

X Rao

C Roberts

A D Stringer

K Upton

D N Woodland (Co-opted 26 May 2022)

Resigned from the Board:

G E Clark (Resigned 21 April 2022)

Company Secretary

B Judd

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT
FOR THE YEAR ENDED 31 DECEMBER 2022

REFERENCE AND ADMINISTRATIVE DETAILS - continued

Chief Executive Officer

B Judd

Names and addresses of advisers:

Auditor

HPH Chartered Accountants
54 Bootham
York
YO30 7XZ

Bankers

National Westminster Bank Plc
Clapham Common Branch
145 Clapham High Street
London
SW4 7SZ

Solicitors

Tozers LLP
10 St. Pauls Road
Newton Abbot
Devon
TQ12 4PR

Investment managers

Rathbone Investment Management
8 Finsbury Circus
London
EC2M 7AZ

Key Management Personnel

B Judd – Chief Executive Officer
A Smith – Treasurer

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT
FOR THE YEAR ENDED 31 DECEMBER 2022

STATEMENT OF TRUSTEES RESPONSIBILITIES

The trustees (who are also the Directors of The Institution of Railway Signal Engineers for the purposes of Company Law) are responsible for preparing the Report of the Trustees and the Financial Statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice), including Financial Reporting Standard 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland".

Company Law requires the trustees to prepare Financial Statements for each financial period which give a true and fair view of the state of affairs of the Charitable Company and of the incoming resources and application of resources, including the income and expenditure, of the Charitable Company for that period. In preparing those Financial Statements, the trustees are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in the Charity SORP;
- make judgements and estimates that are reasonable and prudent;
- prepare the Financial Statements on the going concern basis unless it is inappropriate to presume that the Charitable Company will continue in business.

The trustees are responsible for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the Charitable Company and to enable them to ensure that the Financial Statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the Charitable Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

In so far as the trustees are aware:

- there is no relevant audit information of which the Charitable Company's auditors are unaware; and
- the trustees have taken all steps that they ought to have taken to make themselves aware of any relevant audit information and to establish that the Auditors are aware of that information.

AUDITOR

The auditor, HPH is appointed under section 487(1) of the Companies Act 2006.

Approved by order of the board of trustees on 23 March 2023 and signed on its behalf by:

A Knight
President and Trustee

HPH

Chartered Accountants

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF
THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**

OPINION

We have audited the financial statements of The Institution of Railway Signal Engineers (the 'parent charitable company') and its subsidiaries (the 'group') for the year ended 31 December 2022, which comprise the Consolidated Statement of Financial Activities and Income and Expenditure Account, the Consolidated Balance Sheet, the Consolidated Cash Flow Statement and the related notes, including significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including Financial Reporting Standard 102 'The Financial Reporting Standard applicable in the UK and Republic of Ireland' (United Kingdom Generally Accepted Accounting Practice).

In our opinion the financial statements:

- give a true and fair view of the state of the group's and the parent charitable company's affairs as at 31 December 2022 and of the group's incoming resources and application of resources for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Companies Act 2006.

BASIS OF OPINION

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the group in accordance with the ethical requirements that are relevant to our audit of the financial statements in the United Kingdom, including the Financial Reporting Council'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'/director's 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 charitable company'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 directors with respect to going concern are described in the relevant sections of this report.

HPH

Chartered Accountants

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

OTHER INFORMATION

The trustees/directors are responsible for the other information contained within the annual report. The other information comprises the information included in the Annual Report, other than the financial statements and our Auditor's report thereon. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether 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.

OPINION ON OTHER MATTERS PRESCRIBED BY THE COMPANIES ACT 2006

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the Trustees' report, which includes the directors' report prepared for the purposes of company law, for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the directors' report included within the Trustees' report has been prepared in accordance with applicable legal requirements.

MATTERS ON WHICH WE ARE REQUIRED TO REPORT BY EXCEPTION

In the light of the knowledge and understanding of the charitable company and its environment obtained in the course of the audit, we have not identified material misstatements in the Trustees' report.

We have nothing to report in respect of the following matters in relation to which the Companies Act 2006 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept, or returns adequate for our audit have not been received from branches not visited by us; or
- the financial statements are not in agreement with the accounting records and returns; or
- certain disclosures of directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

RESPONSIBILITIES OF DIRECTORS

As explained more fully in the Trustees' responsibilities statement on page 7, 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 charitable company'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 charitable company or to cease operations, or have no realistic alternative but to do so.

HPH

Chartered Accountants

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF
THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**

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.

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

We obtained an understanding of the legal and regulatory frameworks within which the company operates, focusing on those laws and regulations that have a direct effect on the determination of material amounts and disclosures in the financial statements. The laws and regulations we considered in this context were the Companies Act 2006 together with the Charities SORP (FRS102) 2019. We assessed the required compliance with these laws and regulations as part of our audit procedures on the related financial statement items.

In addition, we considered provisions of other laws and regulations that do not have a direct effect on the financial statements but compliance with which might be fundamental to the charitable company's ability to operate or to avoid a material penalty. We also considered the opportunities and incentives that may exist within the charitable company for fraud. The laws and regulations we considered in this context for the UK operations were Employment legislation, Charity Commission regulations and General Data Protection Regulation (GDPR).

Auditing standards limit the required audit procedures to identify non-compliance with these laws and regulations to enquiry of the Trustees and other management and inspection of regulatory and legal correspondence, if any.

We identified the greatest risk of material impact on the financial statements from irregularities, including fraud, to be the override of controls by management and income recognition. Our audit procedures to respond to these risks included enquiries of management about their own identification and assessment of the risks of irregularities, sample testing on the posting of journals, detailed substantive testing on the completeness of income, reviewing regulatory correspondence and reading minutes of meetings of those charged with governance.

Owing to the inherent limitations of an audit, there is an unavoidable risk that we may not have detected some material misstatements in the financial statements, even though we have properly planned and performed our audit in accordance with auditing standards. We are not responsible for preventing non-compliance and cannot be expected to detect non-compliance with all laws and regulations.

These inherent limitations are particularly significant in the case of misstatement resulting from fraud as this may involve sophisticated schemes designed to avoid detection, including deliberate failure to record transactions, collusion or the provision of intentional misrepresentations.

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

HPH

Chartered Accountants

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF
THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**

USE OF OUR REPORT

This report is made solely to the charitable company's members in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the charitable company's members 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 charitable company and the charitable company's members for our audit work, for this report, or for the opinions we have formed.

.....
Sarah Wearing (Senior Statutory Auditor)

For and on behalf of HPH, Statutory Auditor

54 Bootham
York
YO30 7XZ

23 March 2023

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES
AND INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED 31 DECEMBER 2022**

	Note	Unrestricted Funds £	Restricted Funds £	Total 2022 £	Total 2021 £
Income and endowments from:					
Charitable activities					
Donations and legacies	4	12,512	-	12,512	8,901
Other trading activities					
Non-ancillary trading income	5	517,598	-	517,598	346,358
Other activities	5	583,214	-	583,214	528,073
Investments					
Investment income	6	37,969	711	38,680	35,519
Total income		£ 1,151,293	£ 711	£ 1,152,004	£ 918,851
Expenditure on:					
Raising funds					
Other activities	7	7,599	-	7,599	6,070
Investment		8,844	-	8,844	9,208
Non-ancillary trading		541,863	-	541,863	403,600
		558,306	-	558,306	418,878
Charitable activities					
Awards	7	30,117	-	30,117	19,026
Promoting best practice		628,306	-	628,306	561,636
		658,423	-	658,423	580,662
Total expenditure		£ 1,216,729	£ -	£ 1,216,729	£ 999,540
Net (expenditure) / income before (loss) / gain on investments					
		(65,436)	711	(64,725)	(80,689)
Net (loss) / gain on investments	13	(418,677)	1,049	(417,628)	258,106
Net (expenditure) / income for the year		(484,113)	1,760	(482,353)	177,417
Reconciliation of funds:					
Total funds brought forward		2,260,019	37,160	2,297,179	2,119,762
Total funds carried forward		£ 1,775,906	£ 38,920	£ 1,814,826	£ 2,297,179

The notes on pages 15 to 26 form part of these financial statements.

Income and net movement in funds derive wholly from continuing operations.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**CONSOLIDATED BALANCE SHEET****AS AT 31 DECEMBER 2022**

Registration number: 0125685

	Note	Consolidated		Charity only	
		2022	2021	2022	2021
		£	£	£	£
Fixed assets:					
Tangible fixed assets	12	46,972	4,180	22,017	3,186
Investments	13	1,803,443	2,206,609	1,338,037	1,613,264
<i>Total fixed assets</i>		1,850,415	2,210,789	1,360,054	1,616,450
Current assets:					
Stocks	14	66,701	58,091	55,970	55,456
Debtors	15	190,770	165,442	249,267	295,779
Investments	16	211,198	211,177	211,198	211,177
Cash at bank and in hand	26	272,184	362,093	93,062	119,347
<i>Total current assets</i>		740,853	796,803	609,497	681,759
Liabilities:					
Creditors: amounts falling due within one year	17	500,686	463,923	286,795	274,140
<i>Net current assets</i>		240,167	332,880	322,702	407,619
<i>Total assets less current liabilities</i>		2,090,582	2,543,669	1,682,756	2,024,069
Creditors: amounts falling due after more than one year	18	275,756	246,490	-	-
Total net assets		£ 1,814,826	£ 2,297,179	£ 1,682,756	£ 2,024,069
The funds of the charity:					
Unrestricted funds	20	1,775,906	2,260,019	1,643,836	1,986,909
Restricted funds	21	38,920	37,160	38,920	37,160
Total charity funds		£ 1,814,826	£ 2,297,179	£ 1,682,756	£ 2,024,069

The financial statements were approved by the Board of Trustees on 23 March 2023 and were signed on its behalf

Andy Knight

A Knight
President and Trustee

Steve Boshier

S W Boshier
Vice President and Trustee

The notes on pages 15 to 26 form part of these financial statements.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**CONSOLIDATED CASH FLOW STATEMENT**
FOR THE YEAR ENDED 31 DECEMBER 2022

	Note	2022		2021	
		£	£	£	£
Net cash used in operating activities	25		(66,139)		(32,284)
Cash flow from investing activities:					
Purchase of tangible fixed assets		(47,988)		(2,220)	
Purchase of fixed asset investments		(283,555)		(150,500)	
Sale of fixed asset investments		269,093		273,112	
Interest received		3,780		4,060	
Dividends received		34,900		31,459	
Net cash (used in) / provided by investing activities			(23,770)		155,911
Change in cash and cash equivalents in the year	27		(89,909)		123,627
Cash and cash equivalents at beginning of the year			362,093		238,466
Cash and cash equivalents at end of the year	26		£272,184		£362,093

The notes on pages 15 to 26 form part of these financial statements.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2022

1 ACCOUNTING POLICIES

Legal entity

The Institution of Railway Signal Engineers is regulated by the Charities Commission (1046999), limited by guarantee and is registered in England and Wales. The address of the registered office and principal place of business is 1 Birdcage Walk, Westminster, London, SW1H 9JJ.

In the event of the charity being wound up, the liability in respect of the guarantee is limited to £1 per member of the charity.

The charity constitutes a public benefit entity as defined by FRS 102.

Basis of preparation

The financial statements have been prepared in accordance with the relevant version of the 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), the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS102), the Charities Act 2011 and the Companies Act 2006.

The Institution of Railway Signal Engineers meets the definition of a public benefit entity under FRS102. Assets and liabilities are initially recognised at historical cost or transaction value unless otherwise stated in the relevant accounting policy note(s).

The consolidated accounts include the results of Institution of Railway Signal Engineers and IRSE Enterprises Limited, which are consolidated on a line by line basis. In accordance with section 408 of the Companies Act 2006, no separate Statement of Financial Activities (SOFA) or Cash Flow has been presented for the Charity alone.

Going concern

The Trustees/Directors have prepared financial projections, taking into consideration the current economic climate and its potential impact on the sources of income and planned expenditure. They have a reasonable expectation that adequate financial resources are available to enable the Charitable Company to continue in operational existence for the foreseeable future, and have adequate contingency plans in the event that income streams are reduced. Consequently the financial statements have been prepared on the basis that the Charitable Company is a going concern.

Income

All income is recognised in the Statement of Financial Activities once the charity has entitlement to the funds, it is probable that the income will be received and the amount can be measured reliably. Subscription income relating to future periods is deferred and recognised in the period to which it relates.

For donations to be recognised, if not received before the year end, the charity will have been notified of the amounts and settlement date in writing.

Fixed asset gifts in kind are recognised when receivable and are included at fair value. They are not deferred over the life of the asset.

Investment income is earned through holding assets for investment purposes such as shares and property. It includes dividends, interest and rent, included on a receivable basis.

Revenue in the trading subsidiary is recognised to the extent that it is probable that the economic benefits will flow to the company and the revenue can be reliably measured. Revenue is measured as the fair value of the consideration receivable, excluding discounts, rebates, value added tax and other sales taxes. The company has no long term contracts or on-going projects. Licences issued are for a 5-year period and so any such income relating to future periods is deferred and recognised in the period to which it relates.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS**
FOR THE YEAR ENDED 31 DECEMBER 2022**1 ACCOUNTING POLICIES (continued)****Expenditure and irrecoverable VAT**

Expenditure is accrued as soon as a liability is considered probable, discounted to present value for longer-term liabilities. Expenditure attributable to more than one cost category is apportioned to them on the basis of the estimated amount attributable to each activity in the year, either by reference to staff time or the use made of the underlying assets, as appropriate. Expenses are shown net of VAT with the irrecoverable element included within direct costs.

Raising funds includes all expenditure incurred by the charity to raise funds for its charitable purposes and includes costs of fundraising activities, events and non-charitable trading.

Governance costs represent those costs attributable to the management of the charity's assets, organisational administration and compliance with constitutional and statutory requirements.

Support costs are those costs that assist the work of the charity but do not directly represent charitable activities and include office costs and governance costs, including payroll costs. They are incurred directly in support of expenditure on the objectives of the charity. Where support costs cannot be directly attributed to particular headings they have been allocated to costs of raising funds and expenditure on charitable activities on a basis consistent with use of the resources.

Tangible fixed assets

Tangible fixed assets are included in the financial statements at their historical cost. Depreciation is calculated to write off the cost of fixed assets over their expected useful lives on a straight line basis. The rates used are as follows:

Fixtures and fittings	20% per annum straight line
IT and software	33% per annum straight line

Stocks

Stocks are stated at the lower of cost and net realisable value, after making due allowance for obsolete and slow moving stock.

Fund accounting

General funds - These are funds which can be used in accordance with the charity's charitable objectives at the discretion of the board.

Designated funds - these comprise unrestricted funds that have been set aside by the trustees for particular purposes. The aim and use of each designated fund is set out in the notes to the financial statements.

Restricted funds - These are subject to specific restrictive conditions imposed by the donors of funds received for specific purposes and projects.

Financial instruments

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

Cash at bank and in hand

Cash at bank and cash in hand includes cash and any short term deposit accounts with a maturity of three months or less from the date of opening.

Other financial assets

Other financial assets are initially measured at fair value, which is normally the transaction price. Such assets are subsequently carried at fair value and the changes in fair value are recognised in the Statement of Financial Activities, except investments that are not publicly traded and whose fair values cannot be measured reliably are measured at cost less impairment.

Debtors

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

Investments

The investment portfolios have been valued at market value at 31 December 2022. The Statement of Financial Activities includes the net gains and losses on investments arising on revaluation at the year end and on disposals throughout the year. Realised gains and losses on sales of investments are calculated as the difference between the sale proceeds and opening market value. Unrealised gains and losses represent the movement between market values.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS**
FOR THE YEAR ENDED 31 DECEMBER 2022**1 ACCOUNTING POLICIES (continued)****Other financial instruments**

All other financial instruments are initially recognised at fair value, which is normally the transaction price. Other financial instruments are subsequently measured at fair value with any changes in the fair value recorded in the Statement of Financial Activities.

Creditors and provisions

Creditors and provisions are recognised where the charity has a present obligation resulting from a past event that will probably result in the transfer of funds to a third party and the amount due to settle the obligation can be measured or estimated reliably. Creditors and provisions are normally recognised at their settlement amount after allowing for any trade discounts due.

Operating leases

Rentals payable under operating leases are charged in the Statement of Financial Activities on a straight line basis over the lease term.

Foreign currencies

Assets and liabilities in foreign currencies are translated into sterling at the rates of exchange ruling at the balance sheet date. Transactions in foreign currencies are translated into sterling at the rate of exchange ruling at the date of transaction. Exchange differences are taken into account in arriving at the operating result.

Pension costs and other post-retirement benefits

The charitable company operates a defined contribution pension scheme. Contributions payable to the charitable company's pension scheme are charged to the Statement of Financial Activities in the period to which they relate.

Significant judgements and estimates

In the application of the group's accounting policies, the directors are required to make judgements, estimates and assumptions in areas where this information is not readily available from other sources. In particular the directors use judgment in assessing the carrying amount of assets and liabilities. The estimates and assumptions are based on the historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised where the revision affects only that period, or in the period of the revision and future periods where the revision affects both current and future periods.

Investments

Investments are included on the Balance Sheet and are stated at market value as at the balance sheet date. Gains and losses on disposal and revaluations of investments are charged or credited to the Statement of Financial Activities.

2 TAXATION

As a registered charity, The Institute of Railway Signal Engineers is exempt from the tax on income falling within sections 466 to 493 of the Corporation Tax Act 2010 to the extent that this is applied to its charitable objects. No tax charges have arisen in the Company.

3 OPERATING SURPLUS

The surplus for the year is stated after charging:

	2022	2021
	£	£
Depreciation	5,196	17,598
Auditor's remuneration	6,160	6,000
	<u>6,160</u>	<u>6,000</u>

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2022**

4 CHARITABLE ACTIVITIES - DONATIONS AND LEGACIES	2022	2021
	£	£
Donations	£ 12,512	£ 8,901

All donations related to unrestricted funds.

5 OTHER TRADING ACTIVITIES	2022	2021
	£	£
Other activities		
Subscriptions	495,058	451,423
Professional reviews	6,870	7,710
Advertising	3,900	13,513
Booklets & textbooks	22,030	8,943
IRSE ties, cufflinks and badges	-	64
Examination fees and materials	53,205	44,920
Proceeds from members' lunch	2,151	1,500
	<u>583,214</u>	<u>528,073</u>

All other activities relate to unrestricted funds.

Trading income

IRSE Enterprises Limited	517,598	346,358
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6 INVESTMENT INCOME	2022	2021
	£	£
Equities & Government stocks	27,747	24,193
Interest receivable	3,167	4,053
IRSE Enterprises Limited	7,766	7,273
	<u>£ 38,680</u>	<u>£ 35,519</u>

£764 of investment income relates to restricted funds (2021: £736).

7 ANALYSIS OF EXPENDITURE

	Staff costs	Other	Depreciation	2022	2021
	£	£	£	£	£
Raising funds					
Other activities	2,285	5,297	17	7,599	6,070
Investment	-	8,844	-	8,844	9,208
Non-ancillary trading	184,191	354,152	3,520	541,863	403,600
Total raising funds	<u>186,476</u>	<u>368,293</u>	<u>3,537</u>	<u>558,306</u>	<u>418,878</u>
Charitable activities					
Awards	9,141	20,909	67	30,117	19,026
Promoting best practice	217,109	409,605	1,592	628,306	561,636
Total charitable activities	<u>226,250</u>	<u>430,514</u>	<u>1,659</u>	<u>658,423</u>	<u>580,662</u>
Total Expenditure	<u>£ 412,726</u>	<u>£ 798,807</u>	<u>£ 5,196</u>	<u>£ 1,216,729</u>	<u>£ 999,540</u>

All raising funds expenditure relates to unrestricted funds.

£nil of charitable activities expenditure relates to restricted funds (2021: £300).

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS**
FOR THE YEAR ENDED 31 DECEMBER 2022**8 GOVERNANCE COSTS**

	2022	2021
	£	£
Auditors' remuneration	£ 6,160	£ 6,000

All governance costs relate to unrestricted expenditure.

9 AUDITOR'S REMUNERATION

Amounts payable to the auditor for statutory audit services of the group are £6,000 (2021 - £6,000) and of the charity are £4,000 (2021 - £4,000).

10 TRUSTEE REMUNERATION AND BENEFITS

Travel and training expenses totalling £12,541 were reimbursed to three Trustees during the year. In 2021 no Trustees' expenses were reimbursed during the year.

11 STAFF COSTS

	2022	2021
	£	£
Wages and salaries	357,175	344,664
Social security costs	29,774	32,727
Defined contribution pension costs	25,777	24,747
	<u>£ 412,726</u>	<u>£ 402,138</u>

The average number of employees during the year was as follows:

	2022	2021
Administration	<u>12</u>	<u>12</u>

There are no employees who received total employee benefits (excluding employer pension costs) of more than £60,000 (2021 - None).

The key management personnel of the charitable company, comprise the Trustees, Chief Executive Officer and Treasurer (2021 - Trustees, Chief Executive Officer, Treasurer and HR Advisor) as disclosed on page 6. The total amount of employee benefits (including employer pension contributions) received by key management personnel for their services to the charitable company was nil (2021: nil). The total amount paid to the key management personnel in respect of their services totalled £55,789 (2021: £86,952).

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS**
FOR THE YEAR ENDED 31 DECEMBER 2022**12 TANGIBLE FIXED ASSETS - GROUP**

	Fixtures and fittings
	£
Cost:	
At 1 January 2022	330,900
Additions	47,988
At 31 December 2022	<u>378,888</u>
Depreciation:	
At 1 January 2022	326,720
Charge for the year	5,196
At 31 December 2022	<u>331,916</u>
Net book values:	
31 December 2022	<u>£ 46,972</u>
31 December 2021	<u>£ 4,180</u>

All of the tangible fixed assets relate to unrestricted funds.

TANGIBLE FIXED ASSETS - CHARITY

	Fixtures and fittings
	£
Cost:	
At 1 January 2022	300,935
Additions	20,507
At 31 December 2022	<u>321,442</u>
Depreciation:	
At 1 January 2022	297,749
Charge for the year	1,676
At 31 December 2022	<u>299,425</u>
Net book values:	
31 December 2022	<u>£ 22,017</u>
31 December 2021	<u>£ 3,186</u>

All of the tangible fixed assets relate to unrestricted funds.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2022****13 FIXED ASSET INVESTMENTS - GROUP**

	Equities £	Government securities £	Total £
Market value			
At 1 January 2022	2,000,965	205,644	2,206,609
Additions	201,291	82,264	283,555
Disposals	(182,978)	(86,115)	(269,093)
Revaluation	(360,573)	(57,055)	(417,628)
At 31 December 2022	<u>£ 1,658,705</u>	<u>£ 144,738</u>	<u>£ 1,803,443</u>

£37,648 of investments relates to restricted funds (2021: £36,599).

£1,049 of gains on investments relates to restricted funds (2021: £933).

FIXED ASSET INVESTMENTS - CHARITY

	Subsidiary company £	Equities £	Government securities £	Total £
Market value				
At 1 January 2022	4,415	1,452,351	156,498	1,613,264
Additions	-	144,938	65,113	210,051
Disposals	-	(137,473)	(54,716)	(192,189)
Revaluation	-	(239,249)	(53,840)	(293,089)
At 31 December 2022	<u>£ 4,415</u>	<u>£ 1,220,567</u>	<u>£ 113,055</u>	<u>£ 1,338,037</u>

£37,648 of investments relates to restricted funds (2021: £36,599).

£1,049 of gains on investments relates to restricted funds (2021: £933).

The charitable company's investments at the balance sheet date in the share capital of companies include the following:

IRSE Enterprises Limited

Registered office: 4th Floor, 1 Birdcage Walk, Westminster, London, SW1H 9JJ

Nature of business: Administration & finance support for parent

	%
Class of share:	holding
Ordinary	100

	2022 £	2021 £
Aggregate capital and reserves	136,803	277,523
(Loss) / profit for the year	<u>(140,720)</u>	<u>35,847</u>

No donation (2021: £nil) was made from the company to the charity in the year due to the fact that the company did not make a taxable profit.

14 STOCKS - GROUP

	2022 £	2021 £
Stocks	<u>£ 66,701</u>	<u>£ 58,091</u>

STOCKS - CHARITY

	2022 £	2021 £
Stocks	<u>£ 55,970</u>	<u>£ 55,456</u>

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2022**

15 DEBTORS	Consolidated		Charity	
	2022	2021	2022	2021
	£	£	£	£
Trade debtors	77,076	67,078	-	-
Other debtors	3,435	4,964	3,333	4,964
Prepayments and accrued income	15,900	16,529	-	-
VAT	94,359	76,871	81,213	63,292
Amounts owed by group undertakings	-	-	164,721	227,523
	<u>£ 190,770</u>	<u>£ 165,442</u>	<u>£ 249,267</u>	<u>£ 295,779</u>

All debtors relate to unrestricted funds.

16 CURRENT ASSET INVESTMENTS - GROUP	2022	2021
	£	£
National Savings	<u>£ 211,198</u>	<u>£ 211,177</u>

All debtors relate to unrestricted funds.

17 CREDITORS: amounts falling due within one year	Consolidated		Charity	
	2022	2021	2022	2021
	£	£	£	£
Trade creditors	39,925	53,457	28,901	45,749
Accruals	26,697	21,547	22,429	17,008
Deferred income	427,036	382,197	230,178	206,682
Other creditors	7,028	6,722	5,287	4,701
	<u>£ 500,686</u>	<u>£ 463,923</u>	<u>£ 286,795</u>	<u>£ 274,140</u>

All creditors relate to unrestricted funds.

18 CREDITORS: amounts falling due after more than one year - GROUP	2022	2021
	£	£
Other creditors	<u>£ 275,756</u>	<u>£ 246,490</u>

Representing the proportion of licence fees received in advance, which will be credited to income after more than one year.

19 ANALYSIS OF NET ASSETS BETWEEN FUNDS	Tangible fixed assets	Investments	Net current (liabilities)/ assets	Long term liabilities	Total 2022
	£	£	£	£	£
Unrestricted funds	22,018	1,295,974	321,429	-	1,639,421
Restricted funds	-	37,648	1,272	-	38,920
Total Charity Funds	<u>22,018</u>	<u>1,333,622</u>	<u>322,701</u>	<u>-</u>	<u>1,678,341</u>
IRSE Enterprises Limited	24,954	469,821	(82,534)	(275,756)	136,485
Total for the group	<u>£ 46,972</u>	<u>£ 1,803,443</u>	<u>£ 240,167</u>	<u>£ (275,756)</u>	<u>£ 1,814,826</u>

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2022****19 ANALYSIS OF NET ASSETS BETWEEN FUNDS - continued***2021 comparatives*

	Tangible fixed assets £	Investments £	Net current (liabilities)/ assets £	Long term liabilities £	Total 2021 £
Unrestricted funds	3,187	1,572,250	407,059	-	1,982,496
Restricted funds	-	36,599	561	-	37,160
Total Charity Funds	3,187	1,608,849	407,620	-	2,019,656
IRSE Enterprises Limited	993	597,760	(74,740)	(246,490)	277,523
Total for the group	£ 4,180	£ 2,206,609	£ 332,880	£ (246,490)	£ 2,297,179

20 UNRESTRICTED FUNDS

	Balance at 01/01/2022 £	Income £	Expenditure £	Losses on investments £	Transfers £	Balance at 31/12/2022 £
Designated funds						
Scholarship	78,315	3	-	-	-	78,318
Alan Fisher memorial /						-
Frank Hewlett Bequest	430,288	3,206	-	-	-	433,494
General Development	307,000	-	-	-	-	307,000
Future ASPECT Conference	10,000	-	-	-	-	10,000
International conventions	27,500	-	-	-	-	27,500
Textbook Preparation	7,500	-	-	-	-	7,500
	860,603	3,209	-	-	-	863,812
Unrestricted funds						
General Fund	1,109,800	622,720	(674,866)	(294,138)	-	763,516
Charity	1,970,403	625,929	(674,866)	(294,138)	-	1,627,328
Non charitable trading funds	289,616	525,364	(541,863)	(124,539)	-	148,578
Total for the group	£ 2,260,019	£ 1,151,293	£ (1,216,729)	£ (418,677)	£ -	£ 1,775,906
<i>2021 comparatives</i>						
	Balance at 01/01/2021 £	Income £	Expenditure £	Gains on investments £	Transfers £	Balance at 31/12/2021 £
Designated funds						
Scholarship	78,068	247	-	-	-	78,315
Alan Fisher memorial /						
Frank Hewlett Bequest	425,321	4,967	-	-	-	430,288
General Development	307,000	-	-	-	-	307,000
Future ASPECT Conference	10,000	-	-	-	-	10,000
International conventions	27,500	-	-	-	-	27,500
Textbook Preparation	7,500	-	-	-	-	7,500
	855,389	5,214	-	-	-	860,603
Unrestricted funds						
General Fund	974,813	559,270	(595,640)	171,357	-	1,109,800
Charity	1,830,202	564,484	(595,640)	171,357	-	1,970,403
Non charitable trading funds	253,769	353,631	(403,600)	85,816	-	289,616
Total for the group	£ 2,083,971	£ 918,115	£ (999,240)	£ 257,173	£ -	£ 2,260,019

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS**
FOR THE YEAR ENDED 31 DECEMBER 2022

21 RESTRICTED FUNDS	Balance at 01/01/2022	Income	Expenditure	Gains on investments	Balance at 31/12/2022
	£	£	£	£	£
Restricted funds					
Dell Bequest	24,064	547	-	808	25,419
Thorrowgood Bequest	13,096	164	-	241	13,501
	<u>£ 37,160</u>	<u>£ 711</u>	<u>£ -</u>	<u>£ 1,049</u>	<u>£ 38,920</u>
<i>2021 comparatives</i>	Balance at 01/01/2021	Income	Expenditure	Gains on investments	Balance at 31/12/2021
	£	£	£	£	£
Restricted funds					
Dell Bequest	23,127	519	(300)	718	24,064
Thorrowgood Bequest	12,664	217	-	215	13,096
	<u>£ 35,791</u>	<u>£ 736</u>	<u>£ (300)</u>	<u>£ 933</u>	<u>£ 37,160</u>

Dell Bequest

The Dell Award is made annually under a bequest of the late Robert Dell OBE (Past President). It is awarded to a member of the Institution employed by London Underground Ltd (or its successor bodies) for achievement of a high standard in the science and application of railway signalling. The award consists of a plaque with a uniquely designed shield, engraved with the recipient's name together with a cheque.

Thorrowgood Bequest

The Thorrowgood Scholarship is awarded annually if a candidate has excelled in the IRSE's Professional Examination. The award, which is presented at the Institution's AGM in the April following the examination, comprises the Thorrowgood Scholarship Medallion and a cheque.

22 OPERATING LEASE COMMITMENTS

As at 31 December 2022 the charitable company had future minimum lease payments under non-cancellable operating leases as follows:

	2022	2021
	£	£
Within one year	10,291	10,291
Between one and five years	20,582	30,873
	<u>£ 30,873</u>	<u>£ 41,164</u>

23 RELATED PARTIES

Other than those detailed in notes 10 and 11, there were no other related parties in the year.

24 ULTIMATE CONTROLLING PARTY

There is no ultimate controlling party. The charity is managed by its board of trustees. The liability of each of the charity's trustees is limited to £1.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS**
FOR THE YEAR ENDED 31 DECEMBER 2022

25 RECONCILIATION OF NET (EXPENDITURE) / INCOME TO NET CASH FLOW FROM OPERATING ACTIVITIES	2022	2021	
	£	£	
Net (expenditure) / income for the reporting period	(482,353)	177,417	
Depreciation of tangible Fixed Assets	5,196	17,598	
Losses / (gains) on Investments	417,628	(273,377)	
Interest received	(3,780)	(4,060)	
Dividends received	(34,900)	(31,459)	
Increase in Stocks	(8,610)	(9,229)	
(Decrease) / increase in Debtors	(25,328)	42,088	
Increase in Current Asset Investments	(21)	(1,509)	
Increase in Creditors	66,029	50,247	
Net cash used in operating activities	£ (66,139)	£ (32,284)	
26 ANALYSIS OF CASH AND CASH EQUIVALENTS - GROUP	2022	2021	
	£	£	
Cash at bank and in hand	272,184	362,093	
Total cash and cash equivalents	£ 272,184	£ 362,093	
ANALYSIS OF CASH AND CASH EQUIVALENTS - CHARITY	2022	2021	
	£	£	
Cash at bank and in hand	93,062	119,347	
Total cash and cash equivalents	£ 93,062	£ 119,347	
27 ANALYSIS OF CHANGES IN NET DEBT	At	Cash-flows	At
	01/01/2022	£	31/12/2022
	£	£	£
Cash	362,093	(89,909)	272,184
		(89,909)	
	362,093	(89,909)	272,184

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS**
FOR THE YEAR ENDED 31 DECEMBER 2022**28 COMPARATIVE CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES AND INCOME AND EXPENDITURE ACCOUNT**

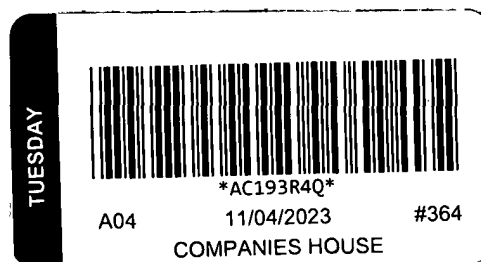
	Unrestricted Funds 2021 £	Restricted Funds 2021 £	Total 2021 £
Income and endowments from:			
Charitable activities			
Donations and legacies	8,901	-	8,901
Other trading activities			
Non-ancillary trading income	346,358	-	346,358
Other activities	528,073	-	528,073
Investments			
Investment income	34,783	736	35,519
Total income	<u>£ 918,115</u>	<u>£ 736</u>	<u>£ 918,851</u>
Expenditure on:			
Raising funds			
Other activities	6,070	-	6,070
Investment	9,208	-	9,208
Non-ancillary trading	403,600	-	403,600
	<u>418,878</u>	<u>-</u>	<u>418,878</u>
Charitable activities			
Awards	18,726	300	19,026
Promoting best practice	561,636	-	561,636
	<u>580,362</u>	<u>300</u>	<u>580,662</u>
Total expenditure	<u>£ 999,240</u>	<u>£ 300</u>	<u>£ 999,540</u>
Net (expenditure) / income before gain on investments	(81,125)	436	(80,689)
Net gain on investments	257,173	933	258,106
Net income / (expenditure) for the year	176,048	1,369	177,417
Reconciliation of funds:			
Total funds brought forward	2,083,971	35,791	2,119,762
Total funds carried forward	<u>£ 2,260,019</u>	<u>£ 37,160</u>	<u>£ 2,297,179</u>

This is the comparative statement of financial activities, please refer to page 12 for the current year statement.

Registration number: 0125685

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS
(Charity number: 1046999)

ANNUAL REPORT AND FINANCIAL STATEMENTS
for the year ended
31 December 2022



HPH
Chartered Accountants
54 Bootham
York
YO30 7XZ

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT FOR THE YEAR ENDED 31 DECEMBER 2022

The trustees, who are also directors of the charity for the purposes of the Companies Act 2006, present their report with the financial statements of the charity for the year ended 31 December 2022.

The Charity is a Public Benefit Entity.

The Financial Statements comply with the Charities Act 2011, the Companies Act 2006, the Memorandum and Articles of Association, and Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their Financial Statements in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) (effective 1 January 2019).

STRUCTURE, GOVERNANCE AND MANAGEMENT

The Institution is a Company Limited by Guarantee and governed by its Memorandum and Articles of Association, last amended on 22nd April 2021. Trustees are members of the Institution and elected by the membership following their proposal by members or the governing Council of the Institution.

The Institution is managed by its Council, which is headed by the President, assisted by the Senior and Junior Vice Presidents. Its other members are other suitably elected and co-opted individuals drawn from the various grades of membership. The Council constitutes committees to assist in the operation of the Institution as it sees fit. Currently, for the general management of the Institution there is a Management Committee, consisting of the President, Vice Presidents, one or more past Presidents, a number of ordinary members of Council, along with the Chief Executive and Treasurer, and Finance Committee, consisting of the President and Vice Presidents, the previous President, the Chief Executive and Treasurer and one ordinary member of Council.

There is no formal training of trustees, but they are periodically provided with the current version of the Charity Commission document 'Charities and Investment Matters: A Guide for Trustees'. Formally, all decisions related to the operation of the Institution are made by the Council. Often, these decisions are based on recommendations from subsidiary committees, particularly Finance and Management. Staff involvement is only related to low-value day to day purchases for the efficient operation of the Institution.

Staff salaries are agreed by Finance Committee on the recommendation of the Chief Executive. A small number of the senior management are contracted to the Institution. Their remuneration is likewise agreed by Finance Committee on the Chief Executive's recommendation, with the exception of the Chief Executive, where the remuneration is at the discretion of the trustees on Finance Committee. The benchmark taken for proposals is generally based on the ruling CPI as published by the Government in October.

The Institution's operating subsidiary is IRSE Enterprises. Its managing board has the Treasurer, President, Vice Presidents, immediate past President, and a Council representative as directors.

OBJECTIVES AND ACTIVITIES

Public Benefit

The Institution's objects and principal activities continue to be the advancement of the science and practice of signalling and railway telecommunications for the public benefit by the promotion of research, the collection and publication of educational material and the holding of conferences, seminars and meetings, the maintenance of high standards of practice and professional care amongst those working within the industry and the promotion of improved safety standards for the protection of the general public. The trustees have complied with the duty in section 17 of the Charities Act 2011 to have due regard to public benefit guidance published by the Charity Commission.

Custodian Trustee Disclosures

No assets were held by any trustee or by the Institution on behalf of any other charity.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT **FOR THE YEAR ENDED 31 DECEMBER 2022**

OBJECTIVES AND ACTIVITIES - continued

Regular Activities

The Institution's main fund raises money by way of subscriptions, joining fees and donations. The Institution issues a magazine to its members 11 times a year, containing papers, articles and other information pursuant to the Institution's objects. It also sells technical papers and books it publishes itself or buys for re-sale.

The Institution usually organises a number of technical meetings, conferences, seminars and dinners, for some of which it makes a charge. These provide a forum for discussion and the transfer of knowledge. Following the COVID-19 pandemic experience, most were filmed and made available at the time and subsequently through an on-line video link. Some meetings were also available to attend live, but attendance figures have been very low. In addition, the Annual Dinner returned in April and a Convention was held in Glasgow during September.

The Licensing scheme, run through the subsidiary IRSE Enterprises, provides accreditation to individuals and organisations within the industry after having complied with certain laid-down standards. Fees are charged for these activities. Licences issued are for a 5-year period so one-fifth of the income is credited each year to the Income and Expenditure account, the balance being carried forward as a liability in the Balance Sheet.

Whilst no formal criteria are applied to measure the success or otherwise of all charged events, there is an expectation they will, at least, break even, whilst for free events a visibly full venue or significant on-line viewing is considered a success. It is noted on-line attendance has exceeded expectation and engaged a wider geographical spread, assisting in promoting the charitable objects. Consideration is being given to normally have the free events on-line only. In the case of the Institution's exam, the criterion is a suitably high pass-rate.

The Institution is a fully nominated Body of the Engineering Council licensed to register Chartered Engineers, Incorporated Engineers and Engineering Technicians.

GRANT-MAKING

Bursaries are allocated based on an application form and interview by senior Institution members. In 2022 9 were given linked to the Glasgow Convention. Prizes are based on documented criteria, some depending on suitable success in the Institution's exam.

VOLUNTEERS

Volunteers provide considerable assistance in the operation of the Institution, both in its local sections and technical societies, where the objects mirror those of the Institution itself, and centrally, to provide a source of expert input and background assistance. This applies, particularly, in the operation of the Institution's professional exam and the production of the Institution's magazine, IRSE News.

SOCIAL INVESTMENT

No financial social investment is undertaken, but the high-level objective regarding the maintenance of high standards and the promotion of safety standards is directed towards the protection of the general public whilst on or near railways.

FUNDRAISING

No fundraising activities are undertaken by the Institution.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT FOR THE YEAR ENDED 31 DECEMBER 2022

ACHIEVEMENTS AND PERFORMANCE

With the reduction in Covid-19 infections and relaxation of restrictions, most of the normal calendar events returned in 2022. This, and pre-planned above inflation increases in subscription rates, would appear to have started to have the desired effect of returning the IRSE to operating breakeven. The IRSE Exam will continue on-line. After issues in 2021, the multiple-choice Module A was held twice in 2022. The success means this will be repeated in 2023. The planned programme of lectures (provided through on-line platforms) was supplemented by the Annual Dinner, a Convention, a seminar in Toronto and a Technical Visit to Ireland.

Beyond the events discussed above, there are no specific fundraising activities. No expenditure has been incurred to raise that income, beyond that involved in the organisation of the events themselves.

FINANCIAL REVIEW

The results of the Institution are set out in the Consolidated Statement of Financial Activities and Income and Expenditure Account which may be found on page 12.

The net deficit of the group for the year before fair value adjustments to the carrying value of investments was £64,725 (2021: £80,689) and total funds carried forward are now £1,814,826 (2021: £2,297,179). The closing funds comprised of £38,920 relating to restricted funds (2021: £37,160), £863,812 relating to Designated funds (2021: £860,603) and £912,094 relating to unrestricted funds (2021: £1,399,416).

The annual budgets are normally based on the status quo. However, during the budget planning for 2022 it was known that the membership database required porting to an updated version of the Microsoft Dynamics platform. This was due to happen in 2022, but delays mean it will happen in 2023, although the considerable work undertaken during the year means 50% of the costs were paid during the year. In addition, the IRSE Indian Section organised a 3-day seminar on behalf of the 2021/22 President, although a local Covid-19 outbreak delayed it until after the end of his term of office. To assist in planning, £10,000 was loaned to the organisers, with a written agreement for its return after the event. The agreement also set out how any surplus would be divided between the IRSE and the IRSE Indian Section. By the end of the year final accounts for the event remained unavailable although there were indications there would be a small loss after the return of the loan. However, given the delays, the decision has been made to assume this loan should be written off and it appears in the accounts in this way. If money is eventually received, it will be included in the 2023 accounts.

During 2022 4 people left the Institution's employment and 5 joined. At year's end 13 people were employed. Of the 5 starting, one returned to their previous employer. Four are part-time employees, one is full time.

As in previous years, the accounts of each of the individual funds of the Institution, which are listed below, have been prepared and approved by the trustees.

The Trustees' Report and Accounts set out in the following pages include the following:

Unrestricted funds:

General

IRSE Main fund

Designated

Scholarship fund

General development fund

International conferences fund

Unrealised investments revaluation reserves.

Fisher / Hewlett fund

Future Conventions fund

Textbook preparation fund

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT **FOR THE YEAR ENDED 31 DECEMBER 2022**

FINANCIAL REVIEW - continued

Restricted funds:

Robert Dell bequest

Thorrowgood Scholarship bequest

INVESTMENTS

Investment policy and objectives

Under the Memorandum and Articles of Association the charity trustees have the power to invest the assets of the Institution in such a manner, as may from time to time be considered desirable. The trustees take advice from their investment managers, Rathbones. Dividends received are immediately reinvested.

KEY RISKS AND UNCERTAINTIES DISCLOSURE

A Risk Register is held by the Chief Executive and regularly reviewed by Management Committee. Significant risks for the long-term health of the Institution may be summarised as:

- Loss of membership and membership income;
- Loss of key staff including contractors; given the size of the organisation;
- Loss of support for the Licensing Scheme;
- Claims against the Licensing Scheme following an incident on a railway;
- Long-term loss of IT systems;
- Members' personal data loss;
- Financial failure of a major event.

PLANS FOR FUTURE PERIODS

The 2020 Convention to Toronto is now planned for 2024. Work is underway for ASPECT Conferences in Melbourne, Australia in 2023 and Yokohama in 2025. There are also plans for an Annual Dinner and Members' Lunch during 2023. A major update of the membership database will take place in 2023.

The review of the Institution's finances and the impact on subscriptions concluded that the necessary increase should be spread across 2022 and 2023. This will seek to remove the expectation that a surplus from IRSE Enterprises will support a shortfall in the charity's income each year.

PENSION LIABILITIES

The Institution's pension scheme is a defined contribution scheme through an external provider and there are no liabilities arising to the Institution.

RESERVES

The Institution has a Reserves Policy in accordance with the Charity Commission's requirements. This is reviewed annually by Council. The current values of the reserves are detailed in these accounts. The value of the Hewlett / Fisher fund has increased to reflect the income received from the fund's investments. The planned return to a modest surplus will help to replenish this, along with movements in the stock market.

Funds in Deficit and Going Concern

No funds are currently in deficit. There is no current reason to believe that the Institution is unable to continue as a going concern.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT
FOR THE YEAR ENDED 31 DECEMBER 2022

REFERENCE AND ADMINISTRATIVE DETAILS

Registered name of the Charity

The Institution of Railway Signal Engineers

Registered Company number

0125685 (England and Wales)

Registered Charity numbers

1046999

Principle address and registered office

1 Birdcage Walk
Westminster
London
SW1H 9JJ

Trustees and Directors

The Trustees and Directors who served during the year were:

P A Allan
I J Allison
F Al-Tahan
H S Bhatia
S W Boshier
I R Bridges (Co-opted 26 May 2022)
R E Burkhardt
R L Cooke
J Copperthwaite
B Godziejewski
R C Gould
P Gracey (Appointed 21 April 2022)
G Hartwell
Y Hirao
A Knight
G B S Lam
P H J McSharry
R Muttram
C R Page (Co-opted 26 May 2022)
J E Power
X Rao
C Roberts
A D Stringer
K Upton
D N Woodland (Co-opted 26 May 2022)

Resigned from the Board:

G E Clark (Resigned 21 April 2022)

Company Secretary

B Judd

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT
FOR THE YEAR ENDED 31 DECEMBER 2022

REFERENCE AND ADMINISTRATIVE DETAILS - continued

Chief Executive Officer

B Judd

Names and addresses of advisers:

Auditor

HPH Chartered Accountants
54 Bootham
York
YO30 7XZ

Bankers

National Westminster Bank Plc
Clapham Common Branch
145 Clapham High Street
London
SW4 7SZ

Solicitors

Tozers LLP
10 St. Pauls Road
Newton Abbot
Devon
TQ12 4PR

Investment managers

Rathbone Investment Management
8 Finsbury Circus
London
EC2M 7AZ

Key Management Personnel

B Judd – Chief Executive Officer
A Smith – Treasurer

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT
FOR THE YEAR ENDED 31 DECEMBER 2022

STATEMENT OF TRUSTEES RESPONSIBILITIES

The trustees (who are also the Directors of The Institution of Railway Signal Engineers for the purposes of Company Law) are responsible for preparing the Report of the Trustees and the Financial Statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice), including Financial Reporting Standard 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland".

Company Law requires the trustees to prepare Financial Statements for each financial period which give a true and fair view of the state of affairs of the Charitable Company and of the incoming resources and application of resources, including the income and expenditure, of the Charitable Company for that period. In preparing those Financial Statements, the trustees are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in the Charity SORP;
- make judgements and estimates that are reasonable and prudent;
- prepare the Financial Statements on the going concern basis unless it is inappropriate to presume that the Charitable Company will continue in business.

The trustees are responsible for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the Charitable Company and to enable them to ensure that the Financial Statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the Charitable Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

In so far as the trustees are aware:

- there is no relevant audit information of which the Charitable Company's auditors are unaware; and
- the trustees have taken all steps that they ought to have taken to make themselves aware of any relevant audit information and to establish that the Auditors are aware of that information.

AUDITOR

The auditor, HPH is appointed under section 487(1) of the Companies Act 2006.

Approved by order of the board of trustees on 23 March 2023 and signed on its behalf by:

A Knight
President and Trustee

HPH

Chartered Accountants

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF
THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**

OPINION

We have audited the financial statements of The Institution of Railway Signal Engineers (the 'parent charitable company') and its subsidiaries (the 'group') for the year ended 31 December 2022, which comprise the Consolidated Statement of Financial Activities and Income and Expenditure Account, the Consolidated Balance Sheet, the Consolidated Cash Flow Statement and the related notes, including significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including Financial Reporting Standard 102 'The Financial Reporting Standard applicable in the UK and Republic of Ireland' (United Kingdom Generally Accepted Accounting Practice).

In our opinion the financial statements:

- give a true and fair view of the state of the group's and the parent charitable company's affairs as at 31 December 2022 and of the group's incoming resources and application of resources for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Companies Act 2006.

BASIS OF OPINION

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the group in accordance with the ethical requirements that are relevant to our audit of the financial statements in the United Kingdom, including the Financial Reporting Council'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'/director's 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 charitable company'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 directors with respect to going concern are described in the relevant sections of this report.

HPH

Chartered Accountants

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

OTHER INFORMATION

The trustees/directors are responsible for the other information contained within the annual report. The other information comprises the information included in the Annual Report, other than the financial statements and our Auditor's report thereon. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether 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.

OPINION ON OTHER MATTERS PRESCRIBED BY THE COMPANIES ACT 2006

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the Trustees' report, which includes the directors' report prepared for the purposes of company law, for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the directors' report included within the Trustees' report has been prepared in accordance with applicable legal requirements.

MATTERS ON WHICH WE ARE REQUIRED TO REPORT BY EXCEPTION

In the light of the knowledge and understanding of the charitable company and its environment obtained in the course of the audit, we have not identified material misstatements in the Trustees' report.

We have nothing to report in respect of the following matters in relation to which the Companies Act 2006 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept, or returns adequate for our audit have not been received from branches not visited by us; or
- the financial statements are not in agreement with the accounting records and returns; or
- certain disclosures of directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

RESPONSIBILITIES OF DIRECTORS

As explained more fully in the Trustees' responsibilities statement on page 7, 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 charitable company'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 charitable company or to cease operations, or have no realistic alternative but to do so.

HPH

Chartered Accountants

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF
THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**

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.

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

We obtained an understanding of the legal and regulatory frameworks within which the company operates, focusing on those laws and regulations that have a direct effect on the determination of material amounts and disclosures in the financial statements. The laws and regulations we considered in this context were the Companies Act 2006 together with the Charities SORP (FRS102) 2019. We assessed the required compliance with these laws and regulations as part of our audit procedures on the related financial statement items.

In addition, we considered provisions of other laws and regulations that do not have a direct effect on the financial statements but compliance with which might be fundamental to the charitable company's ability to operate or to avoid a material penalty. We also considered the opportunities and incentives that may exist within the charitable company for fraud. The laws and regulations we considered in this context for the UK operations were Employment legislation, Charity Commission regulations and General Data Protection Regulation (GDPR).

Auditing standards limit the required audit procedures to identify non-compliance with these laws and regulations to enquiry of the Trustees and other management and inspection of regulatory and legal correspondence, if any.

We identified the greatest risk of material impact on the financial statements from irregularities, including fraud, to be the override of controls by management and income recognition. Our audit procedures to respond to these risks included enquiries of management about their own identification and assessment of the risks of irregularities, sample testing on the posting of journals, detailed substantive testing on the completeness of income, reviewing regulatory correspondence and reading minutes of meetings of those charged with governance.

Owing to the inherent limitations of an audit, there is an unavoidable risk that we may not have detected some material misstatements in the financial statements, even though we have properly planned and performed our audit in accordance with auditing standards. We are not responsible for preventing non-compliance and cannot be expected to detect non-compliance with all laws and regulations.

These inherent limitations are particularly significant in the case of misstatement resulting from fraud as this may involve sophisticated schemes designed to avoid detection, including deliberate failure to record transactions, collusion or the provision of intentional misrepresentations.

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

HPH

Chartered Accountants

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF
THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**

USE OF OUR REPORT

This report is made solely to the charitable company's members in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the charitable company's members 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 charitable company and the charitable company's members for our audit work, for this report, or for the opinions we have formed.

.....
Sarah Wearing (Senior Statutory Auditor)

For and on behalf of HPH, Statutory Auditor

54 Bootham
York
YO30 7XZ

23 March 2023

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES
AND INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED 31 DECEMBER 2022**

	Note	Unrestricted Funds £	Restricted Funds £	Total 2022 £	Total 2021 £
Income and endowments from:					
Charitable activities					
Donations and legacies	4	12,512	-	12,512	8,901
Other trading activities					
Non-ancillary trading income	5	517,598	-	517,598	346,358
Other activities	5	583,214	-	583,214	528,073
Investments					
Investment income	6	37,969	711	38,680	35,519
Total income		£ 1,151,293	£ 711	£ 1,152,004	£ 918,851
Expenditure on:					
Raising funds					
Other activities	7	7,599	-	7,599	6,070
Investment		8,844	-	8,844	9,208
Non-ancillary trading		541,863	-	541,863	403,600
		558,306	-	558,306	418,878
Charitable activities					
Awards	7	30,117	-	30,117	19,026
Promoting best practice		628,306	-	628,306	561,636
		658,423	-	658,423	580,662
Total expenditure		£ 1,216,729	£ -	£ 1,216,729	£ 999,540
Net (expenditure) / income before (loss) / gain on investments					
		(65,436)	711	(64,725)	(80,689)
Net (loss) / gain on investments	13	(418,677)	1,049	(417,628)	258,106
Net (expenditure) / income for the year		(484,113)	1,760	(482,353)	177,417
Reconciliation of funds:					
Total funds brought forward		2,260,019	37,160	2,297,179	2,119,762
Total funds carried forward		£ 1,775,906	£ 38,920	£ 1,814,826	£ 2,297,179

The notes on pages 15 to 26 form part of these financial statements.

Income and net movement in funds derive wholly from continuing operations.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**CONSOLIDATED BALANCE SHEET****AS AT 31 DECEMBER 2022**

Registration number: 0125685

	Note	Consolidated		Charity only	
		2022	2021	2022	2021
		£	£	£	£
Fixed assets:					
Tangible fixed assets	12	46,972	4,180	22,017	3,186
Investments	13	1,803,443	2,206,609	1,338,037	1,613,264
<i>Total fixed assets</i>		1,850,415	2,210,789	1,360,054	1,616,450
Current assets:					
Stocks	14	66,701	58,091	55,970	55,456
Debtors	15	190,770	165,442	249,267	295,779
Investments	16	211,198	211,177	211,198	211,177
Cash at bank and in hand	26	272,184	362,093	93,062	119,347
<i>Total current assets</i>		740,853	796,803	609,497	681,759
Liabilities:					
Creditors: amounts falling due within one year	17	500,686	463,923	286,795	274,140
<i>Net current assets</i>		240,167	332,880	322,702	407,619
<i>Total assets less current liabilities</i>		2,090,582	2,543,669	1,682,756	2,024,069
Creditors: amounts falling due after more than one year	18	275,756	246,490	-	-
Total net assets		£ 1,814,826	£ 2,297,179	£ 1,682,756	£ 2,024,069
The funds of the charity:					
Unrestricted funds	20	1,775,906	2,260,019	1,643,836	1,986,909
Restricted funds	21	38,920	37,160	38,920	37,160
Total charity funds		£ 1,814,826	£ 2,297,179	£ 1,682,756	£ 2,024,069

The financial statements were approved by the Board of Trustees on 23 March 2023 and were signed on its behalf

Andy Knight

A Knight
President and Trustee

Steve Boshier

S W Boshier
Vice President and Trustee

The notes on pages 15 to 26 form part of these financial statements.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**CONSOLIDATED CASH FLOW STATEMENT**
FOR THE YEAR ENDED 31 DECEMBER 2022

	Note	2022		2021	
		£	£	£	£
Net cash used in operating activities	25		(66,139)		(32,284)
Cash flow from investing activities:					
Purchase of tangible fixed assets		(47,988)		(2,220)	
Purchase of fixed asset investments		(283,555)		(150,500)	
Sale of fixed asset investments		269,093		273,112	
Interest received		3,780		4,060	
Dividends received		34,900		31,459	
Net cash (used in) / provided by investing activities			(23,770)		155,911
Change in cash and cash equivalents in the year	27		(89,909)		123,627
Cash and cash equivalents at beginning of the year			362,093		238,466
Cash and cash equivalents at end of the year	26		£272,184		£362,093

The notes on pages 15 to 26 form part of these financial statements.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2022

1 ACCOUNTING POLICIES

Legal entity

The Institution of Railway Signal Engineers is regulated by the Charities Commission (1046999), limited by guarantee and is registered in England and Wales. The address of the registered office and principal place of business is 1 Birdcage Walk, Westminster, London, SW1H 9JJ.

In the event of the charity being wound up, the liability in respect of the guarantee is limited to £1 per member of the charity.

The charity constitutes a public benefit entity as defined by FRS 102.

Basis of preparation

The financial statements have been prepared in accordance with the relevant version of the 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), the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS102), the Charities Act 2011 and the Companies Act 2006.

The Institution of Railway Signal Engineers meets the definition of a public benefit entity under FRS102. Assets and liabilities are initially recognised at historical cost or transaction value unless otherwise stated in the relevant accounting policy note(s).

The consolidated accounts include the results of Institution of Railway Signal Engineers and IRSE Enterprises Limited, which are consolidated on a line by line basis. In accordance with section 408 of the Companies Act 2006, no separate Statement of Financial Activities (SOFA) or Cash Flow has been presented for the Charity alone.

Going concern

The Trustees/Directors have prepared financial projections, taking into consideration the current economic climate and its potential impact on the sources of income and planned expenditure. They have a reasonable expectation that adequate financial resources are available to enable the Charitable Company to continue in operational existence for the foreseeable future, and have adequate contingency plans in the event that income streams are reduced. Consequently the financial statements have been prepared on the basis that the Charitable Company is a going concern.

Income

All income is recognised in the Statement of Financial Activities once the charity has entitlement to the funds, it is probable that the income will be received and the amount can be measured reliably. Subscription income relating to future periods is deferred and recognised in the period to which it relates.

For donations to be recognised, if not received before the year end, the charity will have been notified of the amounts and settlement date in writing.

Fixed asset gifts in kind are recognised when receivable and are included at fair value. They are not deferred over the life of the asset.

Investment income is earned through holding assets for investment purposes such as shares and property. It includes dividends, interest and rent, included on a receivable basis.

Revenue in the trading subsidiary is recognised to the extent that it is probable that the economic benefits will flow to the company and the revenue can be reliably measured. Revenue is measured as the fair value of the consideration receivable, excluding discounts, rebates, value added tax and other sales taxes. The company has no long term contracts or on-going projects. Licences issued are for a 5-year period and so any such income relating to future periods is deferred and recognised in the period to which it relates.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS**
FOR THE YEAR ENDED 31 DECEMBER 2022**1 ACCOUNTING POLICIES (continued)****Expenditure and irrecoverable VAT**

Expenditure is accrued as soon as a liability is considered probable, discounted to present value for longer-term liabilities. Expenditure attributable to more than one cost category is apportioned to them on the basis of the estimated amount attributable to each activity in the year, either by reference to staff time or the use made of the underlying assets, as appropriate. Expenses are shown net of VAT with the irrecoverable element included within direct costs.

Raising funds includes all expenditure incurred by the charity to raise funds for its charitable purposes and includes costs of fundraising activities, events and non-charitable trading.

Governance costs represent those costs attributable to the management of the charity's assets, organisational administration and compliance with constitutional and statutory requirements.

Support costs are those costs that assist the work of the charity but do not directly represent charitable activities and include office costs and governance costs, including payroll costs. They are incurred directly in support of expenditure on the objectives of the charity. Where support costs cannot be directly attributed to particular headings they have been allocated to costs of raising funds and expenditure on charitable activities on a basis consistent with use of the resources.

Tangible fixed assets

Tangible fixed assets are included in the financial statements at their historical cost. Depreciation is calculated to write off the cost of fixed assets over their expected useful lives on a straight line basis. The rates used are as follows:

Fixtures and fittings	20% per annum straight line
IT and software	33% per annum straight line

Stocks

Stocks are stated at the lower of cost and net realisable value, after making due allowance for obsolete and slow moving stock.

Fund accounting

General funds - These are funds which can be used in accordance with the charity's charitable objectives at the discretion of the board.

Designated funds - these comprise unrestricted funds that have been set aside by the trustees for particular purposes. The aim and use of each designated fund is set out in the notes to the financial statements.

Restricted funds - These are subject to specific restrictive conditions imposed by the donors of funds received for specific purposes and projects.

Financial instruments

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

Cash at bank and in hand

Cash at bank and cash in hand includes cash and any short term deposit accounts with a maturity of three months or less from the date of opening.

Other financial assets

Other financial assets are initially measured at fair value, which is normally the transaction price. Such assets are subsequently carried at fair value and the changes in fair value are recognised in the Statement of Financial Activities, except investments that are not publicly traded and whose fair values cannot be measured reliably are measured at cost less impairment.

Debtors

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

Investments

The investment portfolios have been valued at market value at 31 December 2022. The Statement of Financial Activities includes the net gains and losses on investments arising on revaluation at the year end and on disposals throughout the year. Realised gains and losses on sales of investments are calculated as the difference between the sale proceeds and opening market value. Unrealised gains and losses represent the movement between market values.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS**
FOR THE YEAR ENDED 31 DECEMBER 2022**1 ACCOUNTING POLICIES (continued)****Other financial instruments**

All other financial instruments are initially recognised at fair value, which is normally the transaction price. Other financial instruments are subsequently measured at fair value with any changes in the fair value recorded in the Statement of Financial Activities.

Creditors and provisions

Creditors and provisions are recognised where the charity has a present obligation resulting from a past event that will probably result in the transfer of funds to a third party and the amount due to settle the obligation can be measured or estimated reliably. Creditors and provisions are normally recognised at their settlement amount after allowing for any trade discounts due.

Operating leases

Rentals payable under operating leases are charged in the Statement of Financial Activities on a straight line basis over the lease term.

Foreign currencies

Assets and liabilities in foreign currencies are translated into sterling at the rates of exchange ruling at the balance sheet date. Transactions in foreign currencies are translated into sterling at the rate of exchange ruling at the date of transaction. Exchange differences are taken into account in arriving at the operating result.

Pension costs and other post-retirement benefits

The charitable company operates a defined contribution pension scheme. Contributions payable to the charitable company's pension scheme are charged to the Statement of Financial Activities in the period to which they relate.

Significant judgements and estimates

In the application of the group's accounting policies, the directors are required to make judgements, estimates and assumptions in areas where this information is not readily available from other sources. In particular the directors use judgment in assessing the carrying amount of assets and liabilities. The estimates and assumptions are based on the historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised where the revision affects only that period, or in the period of the revision and future periods where the revision affects both current and future periods.

Investments

Investments are included on the Balance Sheet and are stated at market value as at the balance sheet date. Gains and losses on disposal and revaluations of investments are charged or credited to the Statement of Financial Activities.

2 TAXATION

As a registered charity, The Institute of Railway Signal Engineers is exempt from the tax on income falling within sections 466 to 493 of the Corporation Tax Act 2010 to the extent that this is applied to its charitable objects. No tax charges have arisen in the Company.

3 OPERATING SURPLUS

The surplus for the year is stated after charging:

	2022	2021
	£	£
Depreciation	5,196	17,598
Auditor's remuneration	6,160	6,000
	<u>6,160</u>	<u>6,000</u>

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2022**

4 CHARITABLE ACTIVITIES - DONATIONS AND LEGACIES	2022	2021
	£	£
Donations	£ 12,512	£ 8,901

All donations related to unrestricted funds.

5 OTHER TRADING ACTIVITIES	2022	2021
	£	£
Other activities		
Subscriptions	495,058	451,423
Professional reviews	6,870	7,710
Advertising	3,900	13,513
Booklets & textbooks	22,030	8,943
IRSE ties, cufflinks and badges	-	64
Examination fees and materials	53,205	44,920
Proceeds from members' lunch	2,151	1,500
	<u>583,214</u>	<u>528,073</u>

All other activities relate to unrestricted funds.

Trading income

IRSE Enterprises Limited	517,598	346,358
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6 INVESTMENT INCOME	2022	2021
	£	£
Equities & Government stocks	27,747	24,193
Interest receivable	3,167	4,053
IRSE Enterprises Limited	7,766	7,273
	<u>£ 38,680</u>	<u>£ 35,519</u>

£764 of investment income relates to restricted funds (2021: £736).

7 ANALYSIS OF EXPENDITURE

	Staff costs	Other	Depreciation	2022	2021
	£	£	£	£	£
Raising funds					
Other activities	2,285	5,297	17	7,599	6,070
Investment	-	8,844	-	8,844	9,208
Non-ancillary trading	184,191	354,152	3,520	541,863	403,600
Total raising funds	<u>186,476</u>	<u>368,293</u>	<u>3,537</u>	<u>558,306</u>	<u>418,878</u>
Charitable activities					
Awards	9,141	20,909	67	30,117	19,026
Promoting best practice	217,109	409,605	1,592	628,306	561,636
Total charitable activities	<u>226,250</u>	<u>430,514</u>	<u>1,659</u>	<u>658,423</u>	<u>580,662</u>
Total Expenditure	<u>£ 412,726</u>	<u>£ 798,807</u>	<u>£ 5,196</u>	<u>£ 1,216,729</u>	<u>£ 999,540</u>

All raising funds expenditure relates to unrestricted funds.

£nil of charitable activities expenditure relates to restricted funds (2021: £300).

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2022**

8 GOVERNANCE COSTS	2022	2021
	£	£
Auditors' remuneration	£ 6,160	£ 6,000

All governance costs relate to unrestricted expenditure.

9 AUDITOR'S REMUNERATION

Amounts payable to the auditor for statutory audit services of the group are £6,000 (2021 - £6,000) and of the charity are £4,000 (2021 - £4,000).

10 TRUSTEE REMUNERATION AND BENEFITS

Travel and training expenses totalling £12,541 were reimbursed to three Trustees during the year. In 2021 no Trustees' expenses were reimbursed during the year.

11 STAFF COSTS	2022	2021
	£	£
Wages and salaries	357,175	344,664
Social security costs	29,774	32,727
Defined contribution pension costs	25,777	24,747
	<u>£ 412,726</u>	<u>£ 402,138</u>

The average number of employees during the year was as follows:

	2022	2021
Administration	<u>12</u>	<u>12</u>

There are no employees who received total employee benefits (excluding employer pension costs) of more than £60,000 (2021 - None).

The key management personnel of the charitable company, comprise the Trustees, Chief Executive Officer and Treasurer (2021 - Trustees, Chief Executive Officer, Treasurer and HR Advisor) as disclosed on page 6. The total amount of employee benefits (including employer pension contributions) received by key management personnel for their services to the charitable company was nil (2021: nil). The total amount paid to the key management personnel in respect of their services totalled £55,789 (2021: £86,952).

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS**
FOR THE YEAR ENDED 31 DECEMBER 2022**12 TANGIBLE FIXED ASSETS - GROUP**

	Fixtures and fittings £
Cost:	
At 1 January 2022	330,900
Additions	47,988
At 31 December 2022	<u>378,888</u>
Depreciation:	
At 1 January 2022	326,720
Charge for the year	5,196
At 31 December 2022	<u>331,916</u>
Net book values:	
31 December 2022	<u>£ 46,972</u>
31 December 2021	<u>£ 4,180</u>

All of the tangible fixed assets relate to unrestricted funds.

TANGIBLE FIXED ASSETS - CHARITY

	Fixtures and fittings £
Cost:	
At 1 January 2022	300,935
Additions	20,507
At 31 December 2022	<u>321,442</u>
Depreciation:	
At 1 January 2022	297,749
Charge for the year	1,676
At 31 December 2022	<u>299,425</u>
Net book values:	
31 December 2022	<u>£ 22,017</u>
31 December 2021	<u>£ 3,186</u>

All of the tangible fixed assets relate to unrestricted funds.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2022****13 FIXED ASSET INVESTMENTS - GROUP**

	Equities £	Government securities £	Total £
Market value			
At 1 January 2022	2,000,965	205,644	2,206,609
Additions	201,291	82,264	283,555
Disposals	(182,978)	(86,115)	(269,093)
Revaluation	(360,573)	(57,055)	(417,628)
At 31 December 2022	<u>£ 1,658,705</u>	<u>£ 144,738</u>	<u>£ 1,803,443</u>

£37,648 of investments relates to restricted funds (2021: £36,599).

£1,049 of gains on investments relates to restricted funds (2021: £933).

FIXED ASSET INVESTMENTS - CHARITY

	Subsidiary company £	Equities £	Government securities £	Total £
Market value				
At 1 January 2022	4,415	1,452,351	156,498	1,613,264
Additions	-	144,938	65,113	210,051
Disposals	-	(137,473)	(54,716)	(192,189)
Revaluation	-	(239,249)	(53,840)	(293,089)
At 31 December 2022	<u>£ 4,415</u>	<u>£ 1,220,567</u>	<u>£ 113,055</u>	<u>£ 1,338,037</u>

£37,648 of investments relates to restricted funds (2021: £36,599).

£1,049 of gains on investments relates to restricted funds (2021: £933).

The charitable company's investments at the balance sheet date in the share capital of companies include the following:

IRSE Enterprises Limited

Registered office: 4th Floor, 1 Birdcage Walk, Westminster, London, SW1H 9JJ

Nature of business: Administration & finance support for parent

	%
Class of share:	holding
Ordinary	100

	2022 £	2021 £
Aggregate capital and reserves	136,803	277,523
(Loss) / profit for the year	<u>(140,720)</u>	<u>35,847</u>

No donation (2021: £nil) was made from the company to the charity in the year due to the fact that the company did not make a taxable profit.

14 STOCKS - GROUP

	2022 £	2021 £
Stocks	<u>£ 66,701</u>	<u>£ 58,091</u>

STOCKS - CHARITY

	2022 £	2021 £
Stocks	<u>£ 55,970</u>	<u>£ 55,456</u>

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2022**

15 DEBTORS	Consolidated		Charity	
	2022	2021	2022	2021
	£	£	£	£
Trade debtors	77,076	67,078	-	-
Other debtors	3,435	4,964	3,333	4,964
Prepayments and accrued income	15,900	16,529	-	-
VAT	94,359	76,871	81,213	63,292
Amounts owed by group undertakings	-	-	164,721	227,523
	<u>£ 190,770</u>	<u>£ 165,442</u>	<u>£ 249,267</u>	<u>£ 295,779</u>

All debtors relate to unrestricted funds.

16 CURRENT ASSET INVESTMENTS - GROUP	2022	2021
	£	£
National Savings	<u>£ 211,198</u>	<u>£ 211,177</u>

All debtors relate to unrestricted funds.

17 CREDITORS: amounts falling due within one year	Consolidated		Charity	
	2022	2021	2022	2021
	£	£	£	£
Trade creditors	39,925	53,457	28,901	45,749
Accruals	26,697	21,547	22,429	17,008
Deferred income	427,036	382,197	230,178	206,682
Other creditors	7,028	6,722	5,287	4,701
	<u>£ 500,686</u>	<u>£ 463,923</u>	<u>£ 286,795</u>	<u>£ 274,140</u>

All creditors relate to unrestricted funds.

18 CREDITORS: amounts falling due after more than one year - GROUP	2022	2021
	£	£
Other creditors	<u>£ 275,756</u>	<u>£ 246,490</u>

Representing the proportion of licence fees received in advance, which will be credited to income after more than one year.

19 ANALYSIS OF NET ASSETS BETWEEN FUNDS	Tangible fixed assets	Investments	Net current (liabilities)/ assets	Long term liabilities	Total 2022
	£	£	£	£	£
Unrestricted funds	22,018	1,295,974	321,429	-	1,639,421
Restricted funds	-	37,648	1,272	-	38,920
Total Charity Funds	<u>22,018</u>	<u>1,333,622</u>	<u>322,701</u>	<u>-</u>	<u>1,678,341</u>
IRSE Enterprises Limited	24,954	469,821	(82,534)	(275,756)	136,485
Total for the group	<u>£ 46,972</u>	<u>£ 1,803,443</u>	<u>£ 240,167</u>	<u>£ (275,756)</u>	<u>£ 1,814,826</u>

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2022****19 ANALYSIS OF NET ASSETS BETWEEN FUNDS - continued***2021 comparatives*

	Tangible fixed assets £	Investments £	Net current (liabilities)/ assets £	Long term liabilities £	Total 2021 £
Unrestricted funds	3,187	1,572,250	407,059	-	1,982,496
Restricted funds	-	36,599	561	-	37,160
Total Charity Funds	3,187	1,608,849	407,620	-	2,019,656
IRSE Enterprises Limited	993	597,760	(74,740)	(246,490)	277,523
Total for the group	£ 4,180	£ 2,206,609	£ 332,880	£ (246,490)	£ 2,297,179

20 UNRESTRICTED FUNDS

	Balance at 01/01/2022 £	Income £	Expenditure £	Losses on investments £	Transfers £	Balance at 31/12/2022 £
Designated funds						
Scholarship	78,315	3	-	-	-	78,318
Alan Fisher memorial /						-
Frank Hewlett Bequest	430,288	3,206	-	-	-	433,494
General Development	307,000	-	-	-	-	307,000
Future ASPECT Conference	10,000	-	-	-	-	10,000
International conventions	27,500	-	-	-	-	27,500
Textbook Preparation	7,500	-	-	-	-	7,500
	860,603	3,209	-	-	-	863,812
Unrestricted funds						
General Fund	1,109,800	622,720	(674,866)	(294,138)	-	763,516
Charity	1,970,403	625,929	(674,866)	(294,138)	-	1,627,328
Non charitable trading funds	289,616	525,364	(541,863)	(124,539)	-	148,578
Total for the group	£ 2,260,019	£ 1,151,293	£ (1,216,729)	£ (418,677)	£ -	£ 1,775,906
<i>2021 comparatives</i>						
	Balance at 01/01/2021 £	Income £	Expenditure £	Gains on investments £	Transfers £	Balance at 31/12/2021 £
Designated funds						
Scholarship	78,068	247	-	-	-	78,315
Alan Fisher memorial /						
Frank Hewlett Bequest	425,321	4,967	-	-	-	430,288
General Development	307,000	-	-	-	-	307,000
Future ASPECT Conference	10,000	-	-	-	-	10,000
International conventions	27,500	-	-	-	-	27,500
Textbook Preparation	7,500	-	-	-	-	7,500
	855,389	5,214	-	-	-	860,603
Unrestricted funds						
General Fund	974,813	559,270	(595,640)	171,357	-	1,109,800
Charity	1,830,202	564,484	(595,640)	171,357	-	1,970,403
Non charitable trading funds	253,769	353,631	(403,600)	85,816	-	289,616
Total for the group	£ 2,083,971	£ 918,115	£ (999,240)	£ 257,173	£ -	£ 2,260,019

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS**
FOR THE YEAR ENDED 31 DECEMBER 2022

21 RESTRICTED FUNDS	Balance at 01/01/2022	Income	Expenditure	Gains on investments	Balance at 31/12/2022
	£	£	£	£	£
Restricted funds					
Dell Bequest	24,064	547	-	808	25,419
Thorrowgood Bequest	13,096	164	-	241	13,501
	<u>£ 37,160</u>	<u>£ 711</u>	<u>£ -</u>	<u>£ 1,049</u>	<u>£ 38,920</u>
<i>2021 comparatives</i>	Balance at 01/01/2021	Income	Expenditure	Gains on investments	Balance at 31/12/2021
	£	£	£	£	£
Restricted funds					
Dell Bequest	23,127	519	(300)	718	24,064
Thorrowgood Bequest	12,664	217	-	215	13,096
	<u>£ 35,791</u>	<u>£ 736</u>	<u>£ (300)</u>	<u>£ 933</u>	<u>£ 37,160</u>

Dell Bequest

The Dell Award is made annually under a bequest of the late Robert Dell OBE (Past President). It is awarded to a member of the Institution employed by London Underground Ltd (or its successor bodies) for achievement of a high standard in the science and application of railway signalling. The award consists of a plaque with a uniquely designed shield, engraved with the recipient's name together with a cheque.

Thorrowgood Bequest

The Thorrowgood Scholarship is awarded annually if a candidate has excelled in the IRSE's Professional Examination. The award, which is presented at the Institution's AGM in the April following the examination, comprises the Thorrowgood Scholarship Medallion and a cheque.

22 OPERATING LEASE COMMITMENTS

As at 31 December 2022 the charitable company had future minimum lease payments under non-cancellable operating leases as follows:

	2022	2021
	£	£
Within one year	10,291	10,291
Between one and five years	20,582	30,873
	<u>£ 30,873</u>	<u>£ 41,164</u>

23 RELATED PARTIES

Other than those detailed in notes 10 and 11, there were no other related parties in the year.

24 ULTIMATE CONTROLLING PARTY

There is no ultimate controlling party. The charity is managed by its board of trustees. The liability of each of the charity's trustees is limited to £1.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2022**

25 RECONCILIATION OF NET (EXPENDITURE) / INCOME TO NET CASH FLOW FROM OPERATING ACTIVITIES	2022	2021	
	£	£	
Net (expenditure) / income for the reporting period	(482,353)	177,417	
Depreciation of tangible Fixed Assets	5,196	17,598	
Losses / (gains) on Investments	417,628	(273,377)	
Interest received	(3,780)	(4,060)	
Dividends received	(34,900)	(31,459)	
Increase in Stocks	(8,610)	(9,229)	
(Decrease) / increase in Debtors	(25,328)	42,088	
Increase in Current Asset Investments	(21)	(1,509)	
Increase in Creditors	66,029	50,247	
Net cash used in operating activities	£ (66,139)	£ (32,284)	
26 ANALYSIS OF CASH AND CASH EQUIVALENTS - GROUP	2022	2021	
	£	£	
Cash at bank and in hand	272,184	362,093	
Total cash and cash equivalents	£ 272,184	£ 362,093	
ANALYSIS OF CASH AND CASH EQUIVALENTS - CHARITY	2022	2021	
	£	£	
Cash at bank and in hand	93,062	119,347	
Total cash and cash equivalents	£ 93,062	£ 119,347	
27 ANALYSIS OF CHANGES IN NET DEBT			
	At		At
	01/01/2022	Cash-flows	31/12/2022
	£	£	£
Cash	362,093	(89,909)	272,184
		(89,909)	
	362,093	(89,909)	272,184

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**NOTES TO THE FINANCIAL STATEMENTS**
FOR THE YEAR ENDED 31 DECEMBER 2022**28 COMPARATIVE CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES AND INCOME AND EXPENDITURE ACCOUNT**

	Unrestricted Funds 2021 £	Restricted Funds 2021 £	Total 2021 £
Income and endowments from:			
Charitable activities			
Donations and legacies	8,901	-	8,901
Other trading activities			
Non-ancillary trading income	346,358	-	346,358
Other activities	528,073	-	528,073
Investments			
Investment income	34,783	736	35,519
Total income	£ 918,115	£ 736	£ 918,851
Expenditure on:			
Raising funds			
Other activities	6,070	-	6,070
Investment	9,208	-	9,208
Non-ancillary trading	403,600	-	403,600
	418,878	-	418,878
Charitable activities			
Awards	18,726	300	19,026
Promoting best practice	561,636	-	561,636
	580,362	300	580,662
Total expenditure	£ 999,240	£ 300	£ 999,540
Net (expenditure) / income before gain on investments			
	(81,125)	436	(80,689)
Net gain on investments	257,173	933	258,106
Net income / (expenditure) for the year	176,048	1,369	177,417
Reconciliation of funds:			
Total funds brought forward	2,083,971	35,791	2,119,762
Total funds carried forward	£ 2,260,019	£ 37,160	£ 2,297,179

This is the comparative statement of financial activities, please refer to page 12 for the current year statement.

Institution of Railway Signal Engineering

England & Wales - Charity number 1046999

Accounts

IRSE ///

Institution of Railway Signal Engineers

Annual Report

Number 109

1 January to 31 December 2021

Contents

This Annual Report briefly describes the activities undertaken by the Institution of Railway Signal Engineers (IRSE) throughout the world during 2021. Our President from April 2021 has been Ian Bridges from the United Kingdom.

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For up to date information about the Institution or its activities, or to download a membership application form, log on to the IRSE website www.irse.org.



Follow us on Twitter @IRSEHQ

IRSE, 4th Floor, 1 Birdcage Walk,
Westminster, London,
SW1H 9JJ, United Kingdom



Institution of Railway Signal Engineers

The
Professional Engineering Institution
for all those engaged or interested in
railway signalling, control and
communications
and allied disciplines

Around **5000** members in
locations **across the world**

Providing world-class **presentations, seminars,**
conventions and **conferences**

Industry leading competence assessment and
licensing
scheme

The world's leading
professional examination
for railway signalling, control and communications

11 issues of
IRSE News
each year: our specialist railway signalling, control
and communications magazine

23 Sections
representing the needs of members in their
geographic region or specialism

Accredited by the
Engineering Council to add
Chartered Engineers, Incorporated
Engineers and Engineering Technicians
to the Professional Register

Vibrant
Younger Members
Section

Run by
engineers for engineers

Founded in **1912**

An introduction from our President

Referring back to Daniel Woodland's introduction for the Annual Report last year, he stated "From March onwards, the 2020 year proved to be a difficult and most unusual one for many of our members, both in their personal and professional lives". Unfortunately, that theme continued through the remainder of 2020, into 2021 .

This, of course has impacted the way the Institution has been required to operate and caused many alterations to my plans as President. Travel within the UK and beyond has been almost impossible to plan, with frequent changes to red, amber, and green lists, so regrettably I have not been able to visit any of our non-UK sections during my tenure, something I was really looking forward to. It is not all been bad news though. Through the wonders of modern technology my programme of presidential lectures has been delivered through webinars from countries far and wide, including the USA, the Netherlands, Thailand, China and the UK. I offer my thanks to all those who have contributed to "The Age of The Intelligent Railway", often making themselves available for presentations or Q&A sessions at unsociable hours in their own country. I was also able to deliver another successful joint institution event, enhancing our relationship with other Professional Engineering Institutions (PEIs) and with the Railway Industry Association (RIA) and providing a lot of information on High Performing Flexible Railway Systems for the Future.

The Governance Review Working Group has taken several topics forward throughout the year, evolving the way in which better representation is provided for those based outside the UK, making us more representative of our worldwide membership.

During a brief lull in the UK Covid-19 restrictions during 2021, we managed to hold a Member's Lunch in London, the first function I was able to attend in person along with just under 50 others. There was a feeling of euphoria on the day following the long period of restrictions on our mobility, not something railway people accepted easily. This was followed by the York Section dinner, the Minor Railways bi-annual seminar at Kidderminster and some UK section visits.

Returning to my theme for the year, it has provided a fascinating insight into how the industry can make the best of data that is available to us within the railway system. Modern electronic equipment can produce vast amounts of data, which can be collected and stored, but the advancements that are being made are in how to process that data and provide meaningful output. Sometimes the data is already being collected and it just needs to be analysed, sometimes other small amounts of supplementary data can build a much-improved picture for the railway maintainers. This improved knowledge of how the infrastructure is performing allows for less maintenance visits, thereby reducing 'boot on the ballast', our carbon footprint and provides greater knowledge of when a component is likely to fail. We have also seen how this technology can be extended to vehicle fleets, and even replacing current complex assets with much simpler components, using data to build the big picture.



It would not have been possible to deliver my programme and that of the wider institution, had it not been for the great support of the staff and volunteers. Like other businesses, the team has had to work from home, creating logistical issues at the outset. However, through regular on-line team meetings, it has been possible to overcome these problems and a normal service has been provided to our members and other stakeholders in all respects. Members too, have continued to support the Institution throughout by providing lectures and attending events, often in very large numbers, so thank you to you also. The enforced use of webinar technology has had a positive side effect, which is that there are now many hours of recorded material available for members to watch at their leisure from anywhere on the globe, without needing to leave their lounge.

Thank you for your support in what has been a difficult time for us all.

Ian Bridges, President 2021-22

Objectives of the Institution

The Institution’s objectives are recorded in its Articles of Association. They can be traced back to the formation of the Institution in 1912 and are:

- a) The advancement for the public benefit of the science and practice of signalling by the promotion of research, the collection and publication of educational material and the holding of conferences, seminars and meetings, and
- b) The maintenance of high standards of practice and professional care amongst those working within the industry and the promotion of improved safety standards for the protection of the general public.

Although it might appear that the IRSE is concerned only with railway signalling, the full text of the objectives makes clear that all forms of train control and traffic management, and communications systems, are all within our scope of interest.

There is a clear emphasis in the objectives on ‘public benefit’. This is most obvious in the sense of contributing to safety on the world’s railways, where train control systems play a critical role. But we are also interested in ensuring that railways are efficient, cost-effective and sustainable (in the widest sense).

We meet our obligations to the public through the following principal mechanisms:

- The dissemination of knowledge, experience and good practice in the fields of railway signalling, control and communications and allied topics, to help ensure that those working in the profession do so with the best available knowledge for the safe, efficient and cost-effective construction and operation of the world’s railways;
- The delivery of examinations at certificate and advanced level which contribute to the assurance of knowledge gained. In addition, through the application of the Engineering Council UK licenses the assessment and entry of Chartered, Incorporated and Engineering Technicians onto the Register of Professional Engineers;
- The provision and management of the IRSE Licensing Scheme to assure the competence of those working in the profession. The Scheme is focussed predominantly, but not exclusively, on ensuring safety in the design, construction, testing and maintenance of signalling and telecommunications systems;

- Our Code of Professional Conduct, with which IRSE members are required to comply in the course of their work. It emphasises topics such as personal responsibility for work undertaken or managed by IRSE members, the importance of safeguarding the public interest (particularly safety), environmental management, the efficient use of resources, handling conflicts of interest etc.
- Undertaking specific initiatives to help ensure the safety and efficiency of railways.

By bringing the IRSE Sections around the world together, we will facilitate the sharing of best practice and new initiatives to help engineers and others enhance their knowledge and professionalism. We will continue to reach out and grow our network of professionals around the world to harness the collective knowledge they possess for the benefit of all operators and users of railway transport.

The financial resources of the Institution are applied to achieve the objectives of the Institution, in addition to which members make a significant contribution to delivering the Institution’s aims by their volunteer activities. The Institution has only a small number of full and part-time staff and most of the activities are organised by our members acting in a voluntary capacity.



Our Strategy

We are well into the delivery of our "Beyond a 2020 vision". Details are available on the website at irse.info/strategy.

The objective of making the IRSE accessible to members 24 hours a day seven days a week throughout the year, as long as you have an internet connection, has continued to serve the Institution well during the global pandemic. This report will build on how over the past year we have adapted to meet the challenges of a locked down world, whilst at the same time increasing the benefits to members using alternatives to face-to-face meetings and engaging with a larger number of international members than ever before.

The ongoing commitment of the staff and volunteers has had an impact on a number of our operational areas aligned with our key focuses of **Engage, Grow, Develop, Network** and **Assure**. A study of the key indicators within this report will show an increase in all of these areas.

The Council has implemented many of the changes that came about through their governance review working group which has facilitated a broader engagement with our global membership

The IRSE vision is to:
Deliver Safe and Sustainable Global Railways

To ENGAGE with and GROW a global NETWORK of railway signal and telecommunications engineers in order to DEVELOP and ASSURE high standards of ethics, knowledge, competence and safety in all aspects of train control.

which will in future afford a greater balance of representation at Council irrespective of where those members reside. More changes next year will see a greater emphasis on the IRSE's global presence.

To compensate for the inability to offer an Aspect or Convention several alternative on-line solutions were provided with high profile speakers and content relevant to the emerging challenges of operating a rail transport

service in a pandemic. The work of the local section coordinator has been essential in helping to maintain engagement with international sections and provide feedback on the changing priorities in lockdown.

We continue to make improvements to the website in the light of operational experience and the statistics later in this report will testify to the impact this is having in the Engage element of our strategy.

The five key elements of the IRSE strategic plan are



Engage

Digital platform for a global professional body 24/7/365, early careers support, communicate best practice in ethics, diversity, inclusion, produce technical documentation, knowledge transfer activities.



Grow

Peer recognition, professional development, practice support and guidance, support in professional obligations, Advance profession.



Network

Global local section development, International Technical Committee support, conferences, seminars and conventions, facilitate collaboration, latest information and news.



Develop

Signpost professional development, awards & bursaries, upskilling and re-skilling, examination, apprenticeships, promote benefits to the public.



Assure

International professional recognition, flexible pathways to professional registration, offer regulation in professional conduct, operate the licensing scheme.

Governance

Council

As a result of changes adopted at the AGM in April the IRSE is now governed by an elected Council of twenty-two Corporate Members, who are the Trustees of the Institution, led by the President.

Six meetings of the Council were held during the year in which the business of the Institution was conducted. The Articles of Association permit the current Chairs of all local sections, both in and outside the UK, and also Country Vice-Presidents to attend Council meetings. During the year a number of Chairs and Country Vice-Presidents attended meetings all of which were conducted via video conferencing.

In addition to conducting all the normal Council business during the year, Council discussions included the following topics:

- Adoption of the revised Memorandum and Articles of Association
- Changes to the election process to move to a three-year term of office for all Council members
- Receiving and agreeing the findings of the fees working group
- Developing a long-term succession plan for the office of President

- The creation of portfolio holders drawn from the Council membership to examine topics including equality, diversity and inclusion and professional development of engineers.

Council also receives and reviews the annual report from each of the sections of the IRSE.

Committees

The Institution has a number of committees which are accountable to Council, through which our activities are managed. The principal committees and their relationships to Council are shown in the diagram below. In addition, ad-hoc working groups are formed from time to time which focus on specific tasks. To assist in driving key areas of the Institution some members of Council have been allocated portfolios of responsibility.

Audit

External Audit

A number of areas of the Institution's business are audited on a regular basis by various external audit bodies:

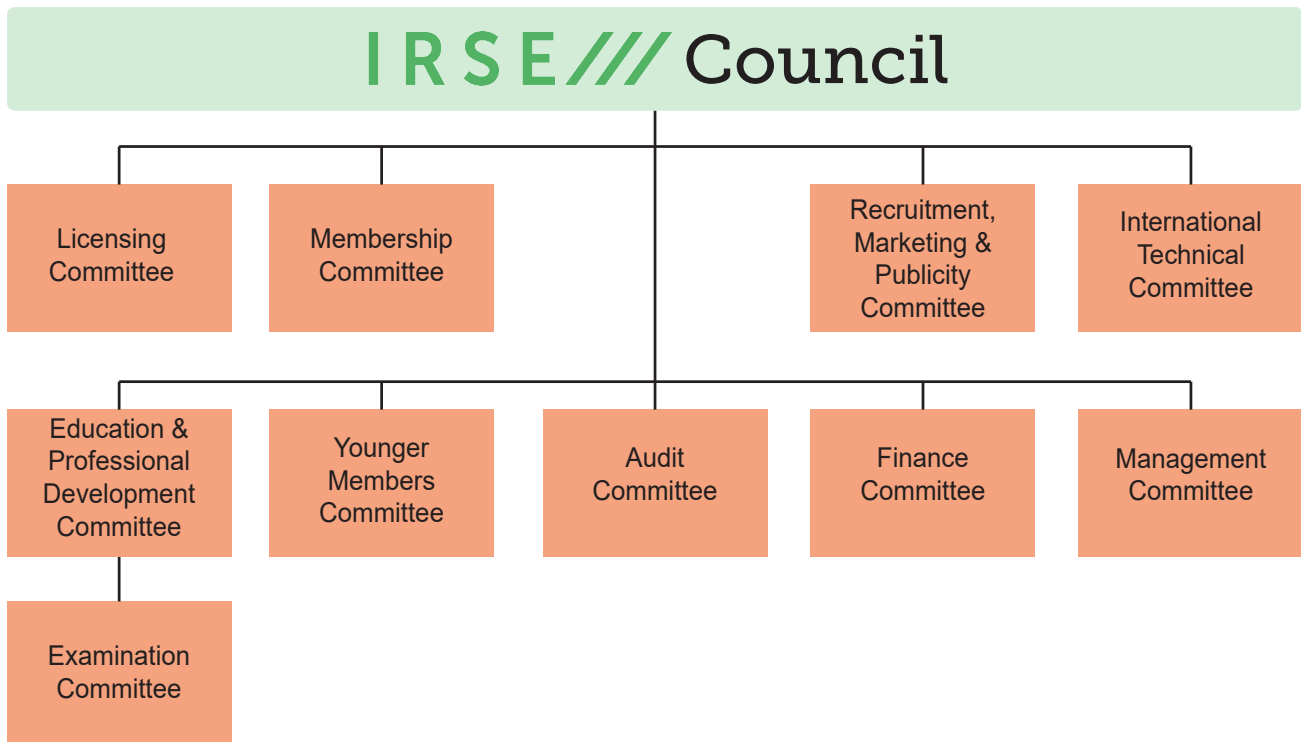
- All areas of finance are subject to audit annually by independent external auditors who submit their report to the Annual General Meeting;

- The Licensing Scheme is subject to an annual external audit by the United Kingdom Accreditation Service (UKAS);
- As a registered Charity, the Institution is subject to periodic external review by the Charity Commission;
- As the Institution is licensed by the Engineering Council in the UK to register Chartered and Incorporated Engineers and Engineering Technicians, it is subject to a review every five years by the Engineering Council in order to ensure compliance with their registration standards.

Internal audit

The IRSE's internal Audit Committee undertakes independent audits to complement the external audits, in order to ensure the Institution is running efficiently and effectively. The audits focus primarily on the role and remit of each of the principal committees of the Institution.

The Audit Committee normally performs two audits per annum. Each audit results in a report, which is presented to the Chair of that committee, the Chief Executive and subsequently the Council, which uses the recommendations to improve the management of the Institution's affairs for public benefit



and for the benefit of its members. The Institution maintains a Risk Register, which is reviewed annually by Council, and this is used as the basis for audit.

IRSE Enterprises

IRSE Enterprises Ltd is the trading company wholly owned by the Institution. The trading company handles several activities which are associated with but outside the direct scope of the charity.

Following a review of the governance of Enterprises Board and on the advice of the IRSE firm of Solicitors (Tozer's) an additional member of the board was appointed with specific responsibility for the Licensing scheme. This aspect of Enterprises activity was deemed to be of such significance that it should have its own non-executive director.

The Directors of the company appointed for the year April 2021 to April 2022 were:

- Chairman (Immediate Past President): Daniel Woodland
- President: Ian Bridges
- Senior Vice President: Andy Knight
- Junior Vice-President: Steve Boshier
- Junior Vice-President: Yuji Hairo
- Licensing Committee Representative: Paul McSharry
- IRSE Treasurer: Andrew Smith
- Company Secretary (CEO): Blane Judd

Any profits from the company are, where possible, gift-aided back to the Institution.

Sections

The IRSE sections around the world exist by authority of the IRSE Council, and they operate in accordance with a set of Articles of Association (or Bye-laws) that have been approved by Council. At the end of 2020 there were

23 sections in total. 15 Sections outside the UK in various parts of the world (Australasia, China, France, Hong Kong, India, Indonesia, Ireland, Japan, Malaysia, Netherlands, North America, Singapore, Southern Africa, Swiss, Thailand) and six of which are UK-based. The North America Section includes the USA, Canada and Mexico. The Ireland Section includes both Northern Ireland and the Republic of Ireland.

Two other sections also exist – the Younger Members' Section and the Minor Railways' Section. These are not geographically based, although their activities are predominantly within the UK. Some geographical Sections also have younger members' groups.

Each section has an organising committee, with elected officers for key roles. Information about the activities of the sections is provided elsewhere in this report.

IRSE volunteers

The Institution is heavily reliant on, and is very grateful to all its volunteers, without whom the Institution would not be able to perform all its duties, supporting the governance, running and reputation of the IRSE locally and internationally.

Just some of the areas in which our volunteers play a vital role are shown below.

Our volunteers develop useful skills, knowledge, experience and networking contacts through the work which they do for the Institution which they may not get the opportunity to gain within a work environment.

If you are interested in becoming a volunteer for to the IRSE, please contact your local section or hq@irse.org saying how you would like to contribute.

Thank you, as an IRSE volunteer you are an essential part of our institution.

IRSE Governance (Council, Management Committee, Finance Committee)	Membership & Registration Committee	Independent Case Panel		
Professional Registration assessors and interviewers	Audit Committee	Education & Professional Development Committee		Exam Committee
Exam question setters, markers, moderators, help desk people, study group leaders and tutors	Licensing Committee	International Technical Committee		Younger Members Committee
Local sections committees in the UK and worldwide	IRSE News editorial and production team	Visit, conference, seminar and event organisers		Ad hoc working groups, e.g. textbooks

Professional development

Supporting professional development of IRSE members and prospective members throughout the world is a key objective of the IRSE.

To do this, we have Judith Ward, our Director of Operations, the Education and Professional Development (E&PD) Committee and the Examination Committee.

IRSE Professional Examination

The IRSE professional examination is a Masters-level academic qualification which tests knowledge and understanding of railway systems with a particular emphasis on safety.

A new module was introduced in October 2020, the Certificate in Railway Control Engineering Fundamentals, which covers all aspects of railway control engineering at a foundation level and is a stand-alone qualification. This is also the mandatory starting module for anyone wishing to pass the full exam, now known as the Advanced Diploma in Railway Control Engineering. To complete the Advanced Diploma, candidates must pass three further modules covering railway safety and systems, principles and applications of railway control and communications engineering.

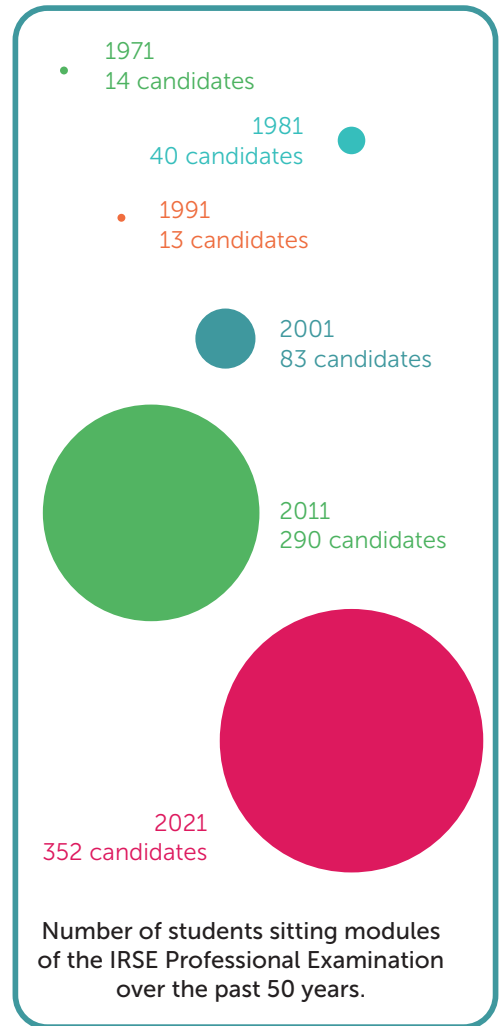
Passing the IRSE professional exam is one route to obtain Corporate membership of the IRSE and it can 'top up' engineering

or technology qualifications for professional registration with UK's Engineering Council.

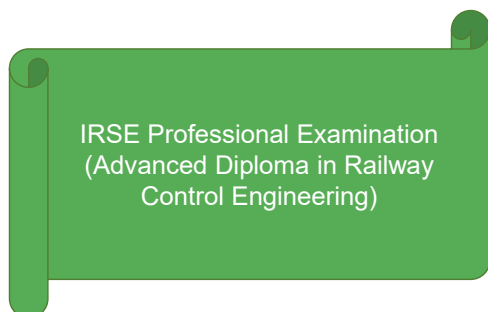
Many volunteers run exam study groups, the independent exam forum website and support the Younger Members' exam workshops to provide support for prospective examination candidates. All these continued to be run remotely throughout 2021 and Education and Professional Development Committee extend their thanks to all those who contributed to these various learning opportunities.

To enable our exam candidates to sit the exam in 2021, Education and Professional Development Committee agreed to hold the exam remotely again, with 375 candidates sitting the exam on 2 October. There has been a significant increase in the number of candidates since the exam started, as shown in the chart.

One of the advantages of the professional exam being online has been the geographic reach of the examination. In 2021, candidates sat the exam in 24 countries, many of which are not covered by sections, such as Denmark, Kuwait, Nigeria, and the Kingdom of Saudi Arabia. The quality of answers from candidates was slightly higher than last year, with the overall percentage of those achieving pass grade or higher was 61%.



The benefits of passing the IRSE Professional Examination include a route to corporate membership of the IRSE and Professional Registration.



Working in a role with "responsible experience" and has practical training / experience in lieu of training: members can apply to be an **Associate Member (AMIRSE)**, saving at least 5 years gaining development and experience

Working in a role with "senior responsible experience" and has practical training / experience in lieu of training: members can apply to be a **Member (MIRSE)**, saving at least 7 years gaining experience



With an accredited Higher National Diploma / Foundation Degree and suitable experience: members can apply to be an **Incorporated Engineer (IEng)** registered with UK's Engineering Council

With an accredited Bachelor's degree with honours and suitable experience: members can apply to be a **Chartered Engineer (CEng)** registered with UK's Engineering Council

Equivalence to the IRSE Professional Examination

Council has endorsed E&PD's recommendations that the University of Birmingham (UoB) Railway Safety and Control Systems (RSCS) MSc should be formally considered equivalent to the IRSE Professional Exam.

From 2021, individuals awarded an RSCS MSc by the University should be exempt from taking the IRSE Exam, and on award of the MSc should also be awarded by the IRSE an Advanced Diploma in Railway Control Engineering.

The granting of equivalence of the UoB RSCS MSc should be pre-dated to 2018. Individuals who have been awarded the UoB RSCS MSc prior to 2021 should be exempt from the IRSE Exam. However, they should NOT be awarded the IRSE Advanced Diploma in Railway Control Engineering since this was not available to those passing the IRSE Exam prior to 2021.

Continuing Professional Development (CPD)

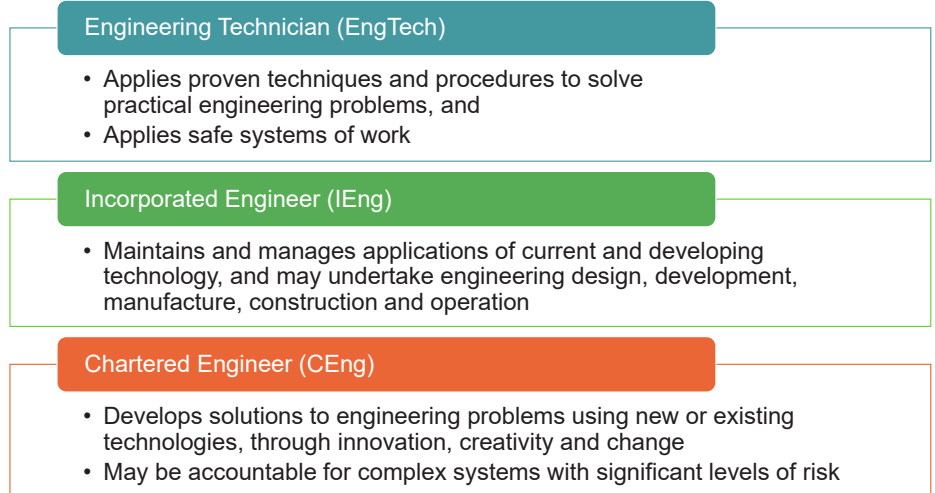
The Engineering Council requires that as of 2020, those who do not engage in the CPD monitoring process are removed from their register. Information about the importance of developing and maintaining members' professional competence through CPD has continued to be provided through IRSE News and the website.

The IRSE recommends the use of the 'Mycareerpath' system for CPD planning, recording, reflecting and reviewing. More information about Mycareerpath is available on the IRSE website.

Licensing

The IRSE Licensing Scheme continued to provide assurance for the competence of individuals to carry out technical safety critical or safety-related work on rail control systems throughout 2021. The Licensing Team continued to work from home, going into the office only very periodically in order to print licences, when government guidance permitted.

The team continued to deliver against the Scheme procedures and to the annual 2021 action plan, which was completed to deadline. During 2021 the Scheme was managed by Licensing Registrar, Sarah Loutfi, who joined IRSE in July 2020. Sarah worked closely with the Licensing Committee, which is chaired by Colin Porter.



The current Engineering Council UK descriptors for each level of Professional Registration.

Certified courses

The IRSE offers a process by which training providers can have their courses assessed and certificated by the IRSE.

This year ASAP Mobility, EtoE Transportation Training Services and Intellex gained IRSE certification for their courses covering railway signalling and telecommunications.

Other training providers are in the process of having their signalling and telecommunications courses assessed.

Professional Registration

The IRSE had its license renewed by the UK's Engineering Council in 2021 to register suitably qualified members as Chartered Engineer (CEng), Incorporated Engineer (IEng) and Engineering Technician (EngTech).

The requirements for these are defined by the Engineering Council for knowledge, understanding, competence, relevant work experience and commitment. Brief definitions are shown in the chart above.

Apprenticeships

IRSE have been an End Point Assessment Organisation (EPAO) for two English apprenticeships: Rail Engineering Design Technician (Level 3) and Rail Engineering Technician (Level 3). Due to lack of resources, the IRSE is unable to support the industry by remaining an EPAO and will be removing themselves from the register during 2022.

The Licensing Team, comprising the Registrar, Deputy Registrar and two Licensing Officers was joined in June 2021 by a Licensing Co-ordinator Sarah Gillis, who provides admin support.

During the year, a total of 1477 licences were issued, which is an increase of 401 on the 2020 licences issued figure, showing a good recovery from the Covid-19 period.

As at December 2021 there were c.5759 active licence holders which represents a slight decrease in the total no of licences held (c.5816 at December 2020).

For operations within the UK, the Licensing Scheme continues to hold full accreditation by the United Kingdom

Accreditation Service (UKAS) following its interim audit in April 2021, against the competence standard for the certification of persons: ISO17024:2012, with four yearly re-accreditation successfully achieved during 2018. The next 4 year accreditation assessment is due to take place in March 2022.

IRSE Assessing Agents are approved and appointed for the purposes of performing assessments of candidates for licences, and they are an essential part of the Licensing Scheme. The number of approved assessing agencies now stands at 25 as Amey closed their assessing agency during 2021.

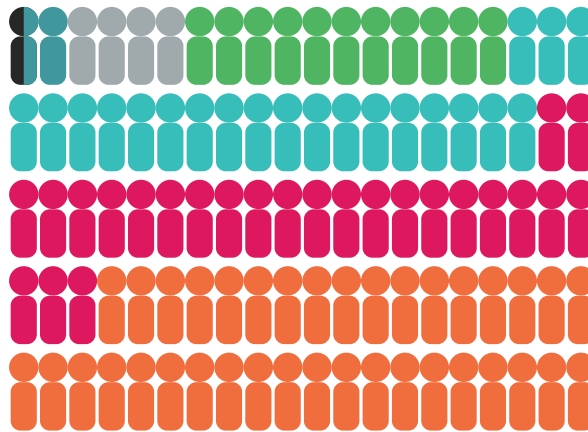
Membership and Registration

Remote, home-based working has remained in place throughout 2021 due to the Covid-19 pandemic and has resulted in Membership Committee meetings and professional registration interviews being held online using Microsoft Teams. The time and contribution of all involved is invaluable to the membership and registration process and is much appreciated.








We have processed 353 successful membership applications during 2021, 155 for corporate grades and 198 for non-corporate grades, there have also been 81 successful applications from members wanting to transfer to a different grade of membership.

The Membership and Registration Team has undertaken a thorough cleanse of our database during 2021 to ensure that the membership figures being reported are as accurate as possible. This work resulted in a significant number of memberships being deactivated due to non-payment of subscriptions going back a number of years despite the individual debtors being reminded using a number of communication methods.

Despite the above activity the total number of members has still increased slightly over last year's reported figure, with 4,937 members as of 31 December 2021.



The IRSE has around 5000 members worldwide. They belong to the following grades of membership:

-  <1% Companions
-  1% Hon Fellows
-  4% Accredited Technicians
-  11% Fellows
-  21% Associate Members
-  24% Affiliates
-  38% Members

During 2021 the IRSE has supported 73 engineers to achieve professional registration with the Engineering Council, the UK regulatory body for the engineering profession – 24 Chartered Engineers (CEng), 15 Incorporated Engineers (IEng) and 33 Engineering Technicians (EngTech). This represents an increase of 44 over 2020.

After a full audit carried out by the Engineering Council in September, the IRSE successfully retained its licence to register engineers against the three titles – CEng, IEng and EngTech. The IRSE has also reviewed its registration processes and documentation as part of the introduction of the revised

Engineering Council's Standards for professional registration – UK Standard for Professional Engineering Competence and Commitment (UK-SPEC 4th edition).

The Institution was sad to report the deaths of the following members during 2021: David Bickell, Keith Hannah, Brian Hesketh, Leslie Lawrence, Melvyn Nash, Joseph Noffsinger, Dennis Sharp, Brian Smith, Walter Sweetenham and Martin Wilkins. A number of these members were particularly strong supporters of the Institution for a considerable number of years, and in various ways had made significant contributions to the Institution's work.

The benefits of IRSE membership align with our strategic themes



Engage

You can have a greater impact across the whole of the engineering community, collaborating with partners to help solve challenges of the future because of the wider network of influencers involved with the Institution.



Grow

Being part of a growing and vibrant Institution amplifies individual voices within the industry, creating greater influence.



Network

By facilitating interactions globally, the Institution provides the opportunity to meet and share knowledge and experience with high-profile senior engineers working together to delivery safe and sustainable railways.



Develop

The Institution supports the continual professional development of members' knowledge of railway signalling, control and communications engineering through technical publications and papers, seminars, conferences and examination programmes.



Assure

Membership of the Institution brings international recognition of professional competence and a route to professional registration.

Awards

The IRSE makes several awards each year. The majority of these are to recognise, reward and encourage the professional development of engineers, particularly those in the earlier stages of their careers. The purpose behind this is not simply to

assist their career development, but to promote high standards of engineering excellence, thereby contributing to the public benefit objectives of the Institution.

Dell Award

Bridget Thomson

The Dell award is made annually under a bequest of the late Robert Dell OBE (Past President). It is awarded to a member of the Institution employed by London Underground (or its successor bodies) for achievement of a high standard of skill in the science and application of railway signalling. The award takes the form of a plaque with a uniquely designed shield with an engraved plate with the recipient's name being added each year.

The winner in 2021 was Bridget Thomson who is Principal Engineering Leader in Transport for London Engineering. Bridget has led the way promoting best practice within the business and the use of the IRSE licensing scheme. Bridget has been a licensing champion and technical mentor since 2005. She has sat on the committee for the Signal & Electrical Engineers' Technical Society for 30 years.



IRSE-Signet Award

Kauser Ismailjee



The IRSE-Signet award is the most recent award, introduced in 2016 and sponsored by Signet Solutions. This award is given annually to the person who obtains the highest marks in any single module of the IRSE Examination. The award takes the form of the Signet logo 'person' on a small plinth, engraved with the name and year of the winner, and bearing the IRSE's logo. The award also provides funding for the winner to attend the IRSE Convention.

The 2021 winner, Kauser Ismailjee is a Project Engineer for the Paddington to Heathrow ETCS project at Network Rail.

She achieved 87% in her Safety of Railway Signalling and Communications (module 1) and also successfully passed her IRSE Professional Examination in 2020.

IRSE Honorary Fellows

Claire Porter and Peter Symons

Honorary Fellowships of the IRSE are bestowed by Council on members in who have rendered outstanding or exceptional services to the Profession, or the Institution, or have furthered the objects of the Institution, and are deemed by the Council worthy of such admission. (Byelaw 2.3).

In 2021 Claire Porter and Peter Symons were made Honorary Fellows. Claire is Head of Transport Systems and Chief Technical Officer for Transport for London and became the Institution's first female President in 2011 where she played an active role in the development and modernisation of the IRSE. She has continued to support the profession as leader of the current development of the new Metro Signalling book, which

will enable many of those embarking on a career in signalling a significant insight into Metros.

Peter Symons was president of the IRSE from 2017-18 and retired as technical director of Tritun Pty in 2018. He was the representative for the Australasian Section on UK Council for many years as Country Vice President, is an active Council member and currently a co-opted past President. He was made an Honorary Fellow this year for his contribution to the industry through senior management roles with major supplier organisations as well as combining his project management skills with signalling system knowledge in various roles as a consultant and contractor to the major rail organisations.



IRSE Companion

David Horne



Council has the power to admit as Companions persons who are, by their association with the Profession, or through their occupation of a position of eminence, desirous of furthering the objectives of the Institution and (in the opinion of the Council) are worthy of such admission. (Byelaw 2.4) This year David Horne Managing Director of LNER and an affiliate member of the IRSE accepted the offer to become a Companion. David has been the

Managing Director of London North Eastern Railway since its formation in 2018. He leads the LNER executive team, who have recently introduced the Azuma trains and are working in partnership with Network Rail to provide £1.2bn of infrastructure improvements through the East Coast Upgrade Delivery Board.

David also chairs the East Coast Digital Programme industry steering board and is a non-executive director of RSSB.

IRSE Merit Award

Hedley Calderbank and Mick Ward

The Merit Award was introduced in 2007 in order to recognise exceptional service to the Institution by a volunteer or staff member anywhere in the world. The award is made by the Council following receipt of a nomination and takes the form of a plaque mounted on a rectangular plinth with an engraved citation.

In 2021 Merit Awards were awarded to Mick Ward FIRSE (pictured top right) and Hedley Calderbank FIRSE. Founding member and Secretary of the South East Section, Mick Ward received recognition for his lead role in adopting and rolling out the Exam Online

platform, his support and commitment to the delivery of the IRSE professional examinations online for the first time in 2020 and his part in the development of the Certificate in Railway Control Engineering Fundamentals.

Hedley Calderbank's Merit Award recognised his many years of support for the presidential lectures, international conventions and his recent services to the South East section, together with the development of the new modules A-D and taking of the IRSE professional examinations online. Hedley is pictured bottom right.



Frank Hewlett Bequest and Alan Fisher Memorial Fund

Frank Hewlett was an Associate Member of the Institution. He died in September 2008 and left a very generous and substantial bequest to the Institution. In 2009 the IRSE Council launched an appeal to establish a memorial fund for Alan Fisher, who died unexpectedly during his Presidency of the Institution. The intention was to use the fund to support the development of young S&T engineers, particularly those outside the UK. In normal times the income from the two

funds is used predominantly to provide a number of travelling bursaries for younger members from all over the world to support their attendance at major IRSE events. For 2021, once again as a result of the pandemic, the funds paid for free places to be made available to younger members to on the virtual High Speed Railways Seminar, run jointly by the IRSE, IET, IMechE, PWI, RIA and IRO.

Thorrowgood Scholarship

The Thorrowgood scholarship is awarded under a bequest of the late W J Thorrowgood (Past President) to assist the development of a young engineer employed in the signalling and telecommunications field of engineering.

The award is made to a candidate who has excelled in the IRSE professional examination and comprises an engraved medallion and funding for a study tour of railway signalling installations or signalling manufacturing facilities.

For the 2021 award no candidates achieved the necessary criteria in the 2020 examination.

Presidential programme

Each year the IRSE President plans a programme of major events, comprising a series of high-profile technical papers, face to face events and visits to IRSE sections across the world. Once again, Covid-19 social distancing restrictions prevented personal contact for most of 2021, including the IRSE Annual Dinner, so all events were held online as interactive webinars, 'hosted' internationally.

Our President to April 2021 was Daniel Woodland whose presidential theme was 'The challenges of change in complex command, control and signalling systems'. The final two papers in Dr Woodland's year were 'Digital resilience maturity matrix for the railway sector' presented in January by Alzbeta Helienek and Mathijs Arends and 'Automation in railway control centres' presented by Ian Mitchell and Dublin-based Nora Balfe in February.

Ian Bridges, our President for twelve months from April 2021, chose 'The age of the Intelligent Railway' as the

theme for his year. Ian had planned his Presidential Programme hoping papers could be presented in person to audiences across the world as he visited the international sections, but sadly Covid-19 dictated that the papers once again had to be delivered remotely online from each country followed by an interactive question and answer session. 'Measurement systems and machine learning' was the subject of his first paper presented in the UK by Jonathan Owen and Richard Parkinson, followed by Austria-based Martin Rosenberger's paper 'Improving railway operations with data driven technology' delivered in August. The third paper delivered by Paul Hendriks in the Netherlands was on the subject of 'Intelligent railways – Big Data' and the final paper of 2021 was given in November by USA based Rajendra Jadhav on 'Leveraging machine vision and data analytics'.

In addition to the traditional programme of Presidential papers, the IRSE also hosted two major industry seminars in

2021. In June, the IRSE organised the first online conference to be held following the lifting of Covid-19 restrictions on UK rail travel. Sponsored by Siemens Mobility, "Return to Rail – the Challenge" event delivered 18 presentations from key industry figures. The full programme can be viewed at returntorail.com.

Following on from the success of the 2020 Joint Institution seminar on 'Automated Railways', the IRSE collaborated once again in the autumn of 2021 with the Permanent Way Institution (PWI), Institution of Mechanical Engineers (IMechE), The Institution of Engineering and Technology (IET), the Railway Industry Association (RIA) and the Chartered Institution of Railway Operators (CIRO) to present a paid for two-day online seminar on the theme of "High Performing Railways".

All presidential papers are published in our monthly journal, IRSE News, and the presentations are available to watch on the IRSE Vimeo channel irse.info/vimeo or on the IRSE website.

RETURN TO RAIL THE CHALLENGE
FREE ONLINE CONFERENCE
19 SPEAKERS
CROSS INDUSTRY PERSPECTIVE
WWW.RETURNTORAIL.COM
 sponsored by **IRSE** and **SIEMENS**

Yes – it affects you!
 Cyber incident – you don't have to be the intended target
 Cyber Incident – it doesn't have to be a malicious attack

Cyber security: Digital resilience maturity matrix for the railway sector
 13:00 - 14:00
 The IRSE
 Admitted member

More from Presidential Lecture Series 2020-2021
 Cyber security: Di...
 TMS and further a...
 The IRSE

In the IRSE series of presidential lectures, Alzbeta Helienek and Mathijs Arends from Railworks Rail will consider the essential role of Cyber Security. Cyber security has become a critical part of delivering a resilient and safe railway, alongside the ever-evolving digital operational systems and the growing threat of security incidents. In this session, Alzbeta and Mathijs will explore the challenges of delivering a resilient and safe railway, alongside the ever-evolving digital operational systems and the growing threat of security incidents. In this session, Alzbeta and Mathijs will explore the challenges of delivering a resilient and safe railway, alongside the ever-evolving digital operational systems and the growing threat of security incidents.

HIGH PERFORMING RAILWAYS
LIVE SESSIONS 13/10 & 3/11
CONTENT AVAILABLE ON DEMAND FROM 23/09
2 live webinars
21 expert speakers
On-demand access
TICKETS NOW ON SALE
 IRSE // PERMANENT WAY INSTITUTION // IET // Railway Industry Association // CIRO

IRSE
Measurement systems and machine learning
 Jonathan Owen and Richard Parkinson

This, the first paper in the 2021/22 presidential programme, was presented online on 27 May 2021. A selection of the papers presented in the programme will be published in the IRSE News journal. The railway requires complex measurement systems and associated signalling equipment to ensure the safe and efficient operation of the railway. With increasing capacity demands, a focus on reducing and streamlining the need for infrastructure has become a key challenge for the railway. The need for greater efficiency and the need for greater resilience in the railway's infrastructure are key challenges for the railway. The need for greater efficiency and the need for greater resilience in the railway's infrastructure are key challenges for the railway.

Level crossing monitoring
 A key challenge for the railway is the need for level crossing monitoring. This is a complex task that requires the use of a variety of sensors and data processing techniques. The need for level crossing monitoring is a key challenge for the railway.

Remote condition monitoring and automated measurement systems are the key

Section activities

In addition to the Presidential Programme, every year there is a programme of lectures, seminars and technical visits organised by the Institution's 21 sections across the globe. Our sections are in Australasia, China, France, Hong Kong, India, Indonesia, Ireland, Japan, Malaysia, Netherlands, North America, Singapore, Switzerland, Thailand, and Southern Africa. Within the UK, sections cover London & South East, Midland & North Western, Plymouth, Scottish, Western, York and Minor Railways.

The geographical sections vary considerably in size (from around 20 members up to several hundred), and in levels of activity. Each has its own organising committee, elected officers

and programme of events. They report annually to the Council on their work.

For the second year running, many sections were unable to meet face-to-face for the majority of 2021. Some sections provided virtual meetings for their section members, which continued to attract large number of attendees. Several of these technical presentations were recorded and can be found on IRSE's Vimeo channel ([irse.info/vimeo](https://www.vimeo.com/irse)). Other sections were unable to provide these opportunities due to technical difficulties, the workload of the volunteers and, for some, fatigue of continuing to work and socialise via video conferencing. Some sections did manage to meet face-to-face on occasion, including the Swiss Section's

AGM, the Minor Railways Section's biennial technical seminar and the York Section's annual dinner.

The Council wishes to record its thanks to the officers, committee members and all others involved in the operation of the local sections, for the excellent work they undertake in organising technical meetings and other events particularly in this challenging year. Council also very much appreciates the help and support given by many companies in facilitating and supporting the events organised by the sections all over the world. Charles Page continues his excellent work in the role of Local Section Coordinator, supporting the sections.

Younger Members



The Younger Members Section is open to all IRSE members under 35 years old, or those within the first ten years of being in the industry. This year has been very similar to 2020 as we continued to hold events online. This has enabled us to reach out and engage with many other Younger Members around the globe who could not attend our UK based face-to-face events.

We began 2021 with an online version of the YM Convention with a day-long seminar of papers from a broad range of speakers across the globe on a variety of topics. This was held at the weekend to ensure higher levels of attendance from members whose work commitments prevent them from attending weekday events.

Other activities this year (all available to view on the IRSE Vimeo channel at [irse.info/vimeo](https://www.vimeo.com/irse)) included:

- ETCS webinar series of five sessions which covered an introduction to the system, current projects and the future of ETCS.
- We launched our series on 'Signalling systems around the world' starting in August with an interactive session online with Younger Members working in the Netherlands. More sessions with Younger Members around the world have been scheduled for 2022.
- Online study days and resources. Helping other members study for the IRSE Professional Exam and expand their industry knowledge continues

to be is a key aim for the Younger Members Section. Whilst we had hoped to hold in-person study days again this year alongside online sessions sadly the pandemic continued to prevent this. However we held a series of online study sessions all of which were well attended and have been added to our online suite of study resources.

We welcome members from around the world to share in this experience and thank everyone who has supported the section in realising its ambitions.

International Technical Committee

The IRSE's International Technical Committee (ITC) has 23 fully participating and 12 corresponding members from many parts of the world, including Australia, Belgium, Canada, Finland, France, Germany, Japan, the Netherlands, Spain, Switzerland, Singapore and the UK. There is also a Younger Members representative.

The ITC's primary purpose is to provide papers on strategic or technical topics relevant to train control and communications systems in the railway

environment. Its particular strength lies in its international membership at a senior level, enabling engineering principles and practices from a diverse range of countries to be brought to bear upon the subjects that ITC covers. The ITC tailors some of its papers to coincide with the presidential theme of the year. During the year, the ITC held four meetings, all online. There was a plan to return to in person meetings but the Covid-19 restrictions prevented that from happening.

The ITC produced nine papers during 2021, all of which have been published in IRSE News. Two presidential papers were presented by ITC members. There are approximately 17 papers either in progress or planned for the future. All completed ITC papers can be found on the IRSE website. ITC Members have also provided expertise for the IRSE textbooks in progress this year.

London office and personnel

The Institution leases a small suite of offices on the 4th floor of the Institution of Mechanical Engineers building at 1 Birdcage Walk, London, UK, from where the centrally organised activities of the Institution are managed – membership, licensing, events administration and financial administration.

The Covid-19 pandemic has meant that the offices have not been accessible since March 2020. As a result, all staff have had to make the transition to working from home. The Council and many members have on numerous occasions praised the efforts of the staff in maintaining a high level of professional service despite this significant disturbance to work patterns. It became apparent that there was a need to restructure in order to meet the differing demands of a distributed workforce and Council have overseen the work done by the Chief Executive and senior staff to effect these changes.

Chief Executive

The Chief Executive and General Secretary of the Institution is Blane Judd, a Chartered Engineer and Fellow of

the Institution of Engineering and Technology. He is responsible for directing and managing the resources of the Institution in order to implement the decisions of Council in an efficient manner and in compliance with UK company and charity law. He is accountable to Council. He also provides the focal point of contact for other institutions and external organisations, including the UK’s Engineering Council and the Royal Academy of Engineering, government agencies, the chief officers of other professional bodies, and the scientific, engineering and technology community. He is also responsible for ensuring compliance with the requirements of the Institution’s Articles of Association, Companies House, the Charities Commission and relevant legislation.

Office team

As of the 31 December 2021, our organisation is as shown in the chart below.

Most notable of those who have left us is Hilary Cohen, who due to ill health did not return to work. Hilary gave

12 years of dedicated service to the IRSE. Hannah Mueller has moved to a different role after six years with us.

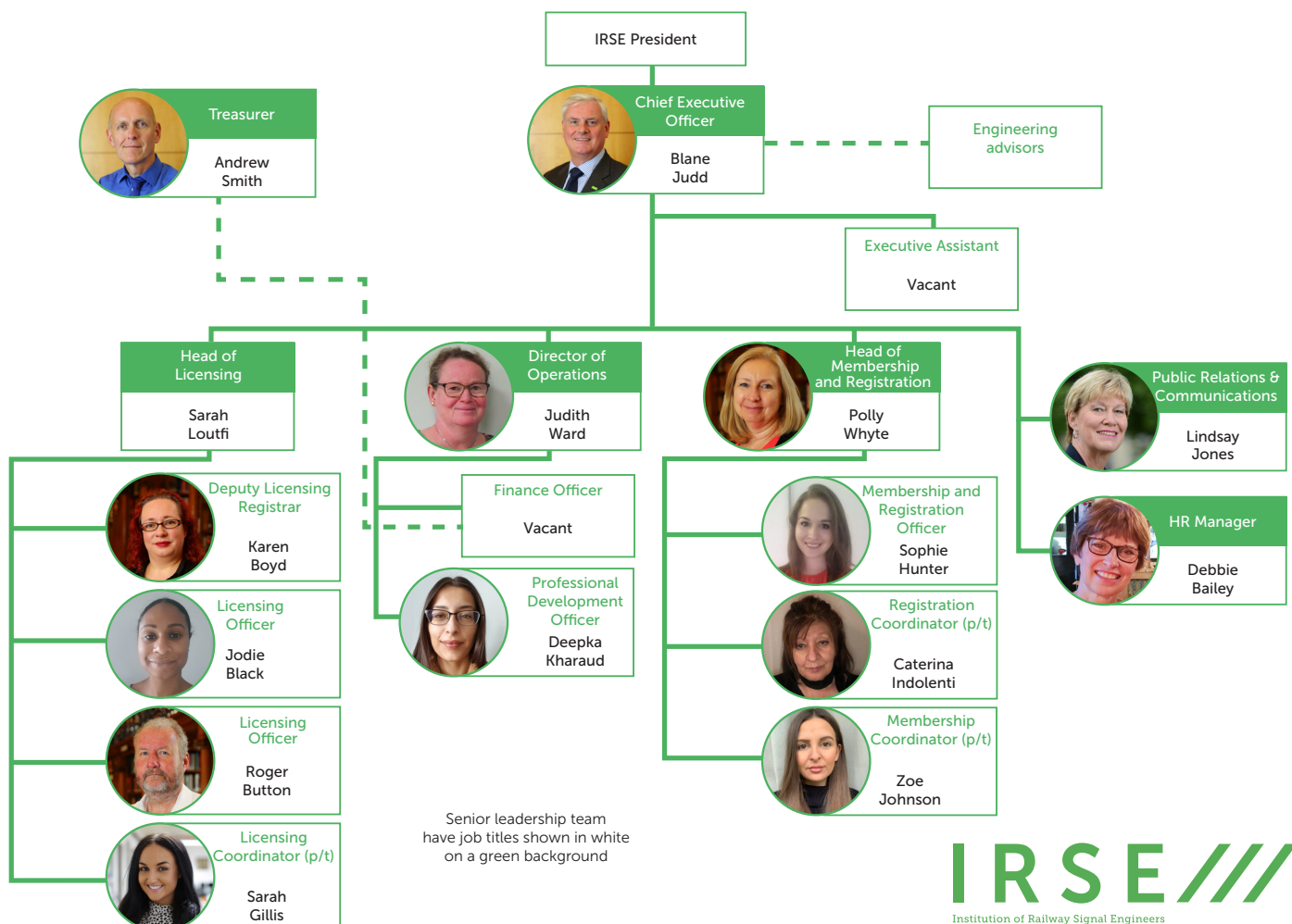
Contract support

The following members of the team work on a part-time contract basis.

Marketing and communication activities have been operated externally by Lindsay Jones of LJPR Ltd. Lindsay is a qualified journalist with an MSc in PR and she is successfully promoting the Institution to a much wider International stakeholder group. We are also receiving excellent support from Howard Elwyn-Jones of Prettybright on a wide range of social media activity, which includes the much-improved e-bulletin and video livestreaming of events.

Andrew Smith is the Institution’s Treasurer, with responsibility for the production of the budgets and accounts, and for monitoring the health of the Institution’s savings and investments.

Debbie Bailey is our HR Manager and is a Chartered Member of the Chartered Institute of Personnel and Development.



Annual General Meeting

The IRSE held its first virtual Annual General Meeting, on 22 April 2021, which was chaired by the retiring President, Daniel Woodland, in accordance with the Memorandum and Articles of Association. At this meeting the membership was asked to vote on the adoption of a revised set of Memorandum and Articles of Association. The main revisions saw a move from two-year terms of office for Council members to three-year terms. To facilitate this there was a reduction in the number of Fellows by one, to nine. That appointment being replaced by a second Junior Vice President position. There was also the addition of another Associate Members representative making three in total.

The overall Council number increased by one to twenty-two elected members in total. The revisited Memorandum and Articles were unanimously adopted. These changes also facilitate future changes next year to create a more balanced global representation on Council. All ordinary business was concluded at this meeting, and it was resolved to appoint HPH Chartered Accountants for 2022.

The membership received copies of the Annual Report for 2020 (published on 1 April 2021), and there being no comments or questions received through correspondence this report was adopted.

The ballot for the election of members to Council had resulted in Andy Stringer (UK) joining Council. The changes in the Council constitution resulted in new vacant seats into which Council appointed Jane Copperthwaite (Member) and Georgina Hartwell (Associate Member) in accordance with their powers as listed in the Articles of Association. The addition of a second Junior Vice President saw Yuji Hirao elevated to that position. The Council unanimously agreed to ask Charles Page as a Past President and Section Co-ordinator to remain on Council as Co-opted Past President to assist with the support of the sections.

Martin Fenner retired from the Council at the AGM, and was thanked for all his hard work over the past years.

IRSE Council

IRSE Council 2021-2022

IRSE Council 2021-2022	
President	Ian Bridges
Vice Presidents	Andy Knight, Steve Boshier, Yuji Hirao
Members of Council from the class of Fellow	Peter Allan, Ian J Allison, Harvinder Bhatia, Bogdan Godziejewski, Gordon Lam, Rod Muttram, Jane Power, Clive Roberts, Andy Stringer
Members of Council from the class of Member	Firas Al-Tahan, Rob Burkhardt, Rob Cooke, Jane Copperthwaite, Ryan Gould, Paul McSharry
Members of Council from the class of Associate Member	Xiaolu Rao, Georgina Hartwell, Keith Upton
Co-opted Past Presidents	George Clark, Charles Page, Daniel Woodland
Chief Executive	Blane Judd
Treasurer	Andrew Smith

Members' Lunch

Sadly this year's Annual Dinner had to be cancelled due to the pandemic and social distancing regulations, however after a delay enforced by further Covid-19 restrictions, 1 September saw the Union Jack Club in Waterloo, London, hosting the 2021 Members' Lunch. Clive Kessell, who was responsible for creating the first lunch during his Presidency in 1999/2000, took on the challenge of organising the event. 50 members signed up to attend the face-to-face event, the first held for around 16 months following lockdowns and restrictions on meeting inside. Following the lunch, Clive gave an enjoyable presentation to the assembled company, covering notable topics from signalling and telecoms in the railway industry over the last 12 months or so.

Following Clive's talk, the President took to the stage, where his first duty was to present a Merit Award to Hedley Calderbank as explained on p12 of this report.

The President then went on to inform the audience how the IRSE had been performing over the previous 12 months including the work being undertaken by the Governance Review Working Group, membership and registration statistics and some of the plans returning things to a degree of normality as soon as possible. Convivial conversation followed the talks, allowing those attending to share stories old and new.

IT systems

The three major IT components that support the Institution's operations are the membership and licensing database, the website, and the office IT systems.

We continue to use the full suite of Microsoft products including Microsoft Teams as both a virtual meeting product and as a VoIP for our phone system. This has been a great support to all staff working remotely during the pandemic.

We continue to develop our membership offering through the website. Additions such as the licence checker tool are helping to support users to get the best value from this 24/7/365 service. The inclusion of video content has continued to deliver a significant increase in the number of visits to the site.

Members are also able to use the site to update personal information independently.

Although we have moved to using MS Teams for the majority of meetings, we still hold additional licenses for the online conferencing tool, GoToMeeting (GTM), to support sections. As a result, all of the meetings that IRSE hold, both as part of its normal operational activities and with volunteers, has seen a large increase in membership engagement. We intend to continue to offer this service for the foreseeable future. The combination of GTM and Microsoft Teams has meant we have reached significantly more of the membership than we have been able to achieve in the past.

We are now holding the IRSE examination online as a permanent change of format. The platform we use, Moodle, has a lot of additional functionality which we are becoming more proficient in using as we become more familiar with its capabilities. There was a failure of the remote proctoring software (invigilation), during the examination in October, but we have offered candidates the opportunity to re-sit the examination at no charge if they are not happy with the results they obtained.

Thank you to all those who work for or with the Institution, including the volunteer network. Their ability to adapt so well to the challenges that we have faced as a result of the pandemic has been a tremendous help.

Publications and communications

Nobody expected the global Covid-19 pandemic to continue into another year. Whilst it had a severe impact on the Institution's traditional face-to-face offerings including the Annual Dinner and Presidential events, we built on the learnings and knowledge gained last year and further enhanced our digital output driven entirely in-house with the assistance of the IRSE News team, volunteers and Prettybright.

All of the Presidential Programme was delivered virtually through interactive webinars, and local sections were able to use IRSE GoTo meeting and webinar licences for online events. As a result we kept members informed via frequent e-bulletins and provided enhanced content on www.irse.org and our vimeo channel [irse.info/vimeo](https://www.vimeo.com/irse)

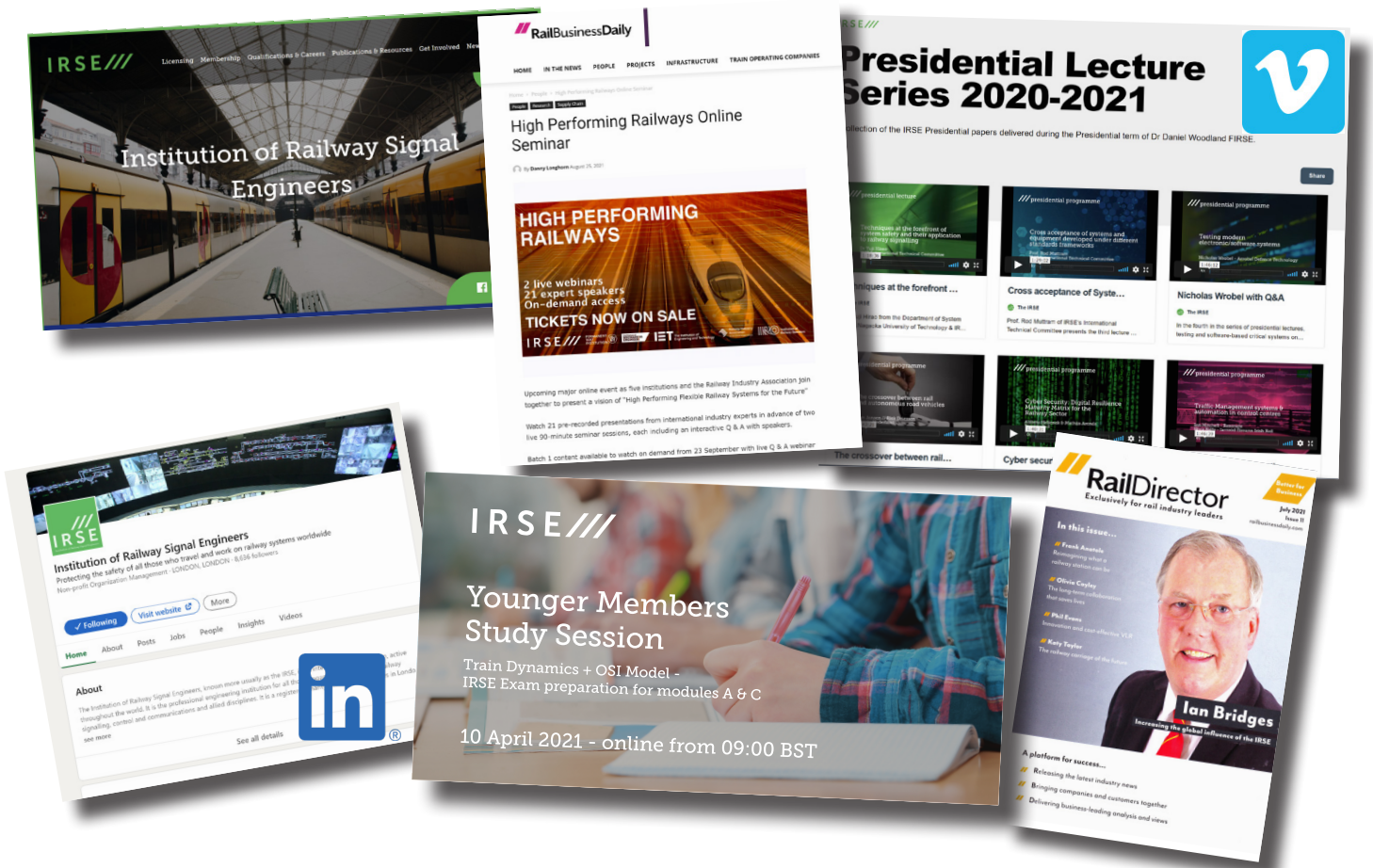
We were proud to have been the first organisation to deliver an online conference on the challenges of returning to rail just days after the UK Government lifted Covid-19 restrictions on rail travel in June 2021. Viewers from 33 different countries joined online to watch 18 different industry-leading presentations. The 'Return to rail – the challenge' conference can be viewed at returntorail.com. Following the success of last year's online event we also organised and presented the second paid-for joint institution seminar in November (see p13).

In all cases a far higher number of members attended the events virtually than ever before as a result even when it is possible to hold face-to-face events again, online and hybrid events will remain a key aspect of the IRSE communications strategy.

IRSE News

IRSE News is published monthly, except August, its purpose being primarily to inform IRSE members worldwide about industry news, technical developments, and the work and activities of the IRSE and its sections. Papers that comprise the presidential programme are published in IRSE News, together with a wide range of other internationally sourced educational papers and articles. We'd like to extend our thanks to the dedicated and hard-working editorial production team and committee led by Managing Editor Paul Darlington and Production Manager Mark Glover for another excellent year.





Proceedings

The Proceedings provide a summary of the Institution's activities and have been produced annually since the very first issue in 1913. A hard copy of the Proceedings is supplied to the British Library and to the library of the Institution of Engineering and Technology. PDF versions of the Proceedings are available on our website.

Website

The website provides details of Institution events, sections, information about the governance and operation of the IRSE, material for members taking the IRSE professional examination, and how to become a member, as well as a wealth of information relating to professional development. Members (and registered non-members) can update contact details, book events, order publications, and pay their subscriptions online. This year saw an increase in traffic of over 20% from 2020 with 161 000 active sessions by 78 000 users.

Video

During 2021 the number of videos available on the IRSE website increased significantly as we uploaded content including presidential events, section meetings and study guides. As a result in the past 12 months our content was viewed over 16 200 times, a total watch time of over 224 days!

E-Communications

A monthly email bulletin is sent to all members, containing information about upcoming events and other topical information. We also send out ad-hoc communications to members highlighting key presidential events and other important information.

Social media

The Institution has a social media presence on LinkedIn, Facebook and Twitter which play a key role in promoting our activities and signposting our content. Key events, presentations and topical news stories are posted on all these feeds on a regular basis to help keep members informed and raise the profile of the Institution amongst the wider railway industry. LinkedIn remains our key social media network and this channel has seen a 24% increase in engagement in the last 12 months, boasting almost 8500 followers with all posts about our Siemens Mobility-sponsored "Return to Rail" conference receiving over 1000 clicks each. Our Twitter audience has grown by over 7.5% and link clicks on posts doubled indicating that the content we are posting is of great interest to users.

Rail industry media

During this year we have developed our relationship with key railway media. Top quality editorial coverage for Ian Bridges' appointment as President, online IRSE events and our Professional Examination has been achieved in Modern Railways magazine, Rail Engineer, Rail Director and Rail Professional in addition to numerous mentions online in RailBusinessdaily and Railinsider.

Publications

The IRSE publishes a range of books on railway train control and communications systems, which provide a useful source of educational material for those relatively new to the profession, as well as providing a valuable record of the development of signalling. Extensive work continues to edit and modernise the Metro Signalling Handbook which will be published in 2022.

Library

Sadly, the IRSE Library which is housed in our London offices remained closed this year due to the pandemic. The building at Birdcage Walk which we share with several other professional engineering institutions has been closed with all staff continuing to work from home.

Collaboration

The IRSE has both formal and informal working relationships with several organisations in the UK and, either directly or through its sections, with organisations in other parts of the world. In China and South East Asia in particular, the IRSE's sections are forging closer links with other engineering and educational organisations, and with governments. This is to be welcomed.

The inability to engage with senior leaders during the Covid-19 lockdown period has hampered a lot of the networking activity with the sector. It is expected that as the restrictions on face-to-face engagement are lifted, more work will be able to be done to increase engagement with key stakeholders.

An important element of our five-year strategy is to strengthen our engagement with external bodies, including not only rail industry companies, but also other relevant organisations.

The Institution enjoys good working relationships with, and support from, many companies, but our ambition is to grow this further for mutual benefit. We will watch with interest the development

of Great British Railways (GBR) and be ready to support and comment as details emerge.

This year we completed our term as chair of the Rail Engineers Forum (REF). This body is made up of representatives from all of the Professional Engineering Institutions who have a rail interest and includes IMechE, IET, ICE, PWI, CIRO, INCOSE, CILT, RCEA and the Young Railway Professionals. The chair, Andrew Simmons, will hand over to Andrew Skinner of GWR as the IMechE takes on the role of Chair. While in normal times REF would encompass conferences, seminars, lectures, training, information services, publications and statements of policy to government and other regulatory bodies, this year has mainly focused on maintaining links across the sector.

Regular meetings take place with the Railway Industry Association (RIA) to ensure that where possible the two bodies are working closer together to link professional employees working in professional businesses. This working relationship helps the IRSE and RIA to

identify where we can together make a difference in the rail sector.

Our relationship with the Royal Academy of Engineering and Engineering UK is helping us to gain better traction with activities focusing on encouraging young people into careers in science, technology, engineering, and mathematics as a career opportunity. We can gain a better focus by working with these bodies than if we used our own smaller resources.

The UK's Engineering Council is responsible for the regulation of engineers, particularly in the UK. The IRSE is a licensed body of the Engineering Council and is thus licensed to register Chartered Engineers, Incorporated Engineers and Engineering Technicians.

Our most recent collaboration is with the Women in Transport group as part of the drive to adjust the gender balance within the IRSE membership. Council member Harvinder Bhatia is now the portfolio holder for Equality, Diversity and Inclusion and will be looking to support the Institution in this ambition.

Finances

The financial results are shown on pages 20 to 24. They are extracted from the consolidated accounts for the IRSE and its wholly owned trading subsidiary, IRSE Enterprises Limited. The term 'Group' at the top of a set of tables refers to the two companies combined, and 'Charity' to the IRSE alone. As far as possible, these extracted results use the titles and the format of the consolidated accounts.

As is generally the case, the headline figure from the 2021 financial results is the Total Charity Funds in the first table on page 21. Despite Covid-19 and its global consequences, the Total Charity Funds have increased by £177,417. However, yet again this increase is entirely due to a significant increase in value of the investments, in the form of shares, shown in Note 1 on page 21. Our activities during the year made a loss

which is not unexpected. Due to the pandemic we were unable once again to hold our two major fundraising activities, the annual dinner and convention. As a result, IRSE Enterprises did not make a surplus to donate to the IRSE, although our highly successful online Return to Rail Conference sponsored by Siemens Mobility generated a small amount of welcome income we would not otherwise have had.

There are some significant variations in costs between 2020 and 2021. In 2020 the post of Licensing Registrar was vacant whilst in 2021 this position was filled and associated annual salary paid. Additional staff costs were carried during 2021 due to one member of staff sadly being absent due to ill health for a prolonged period of time. This follows on from 2020 when, to manage knowledge

transfer, we had people shadowing others. It has raised the question of whether we should intentionally budget for staff sickness. This is always a problem for a small organisation as it could result in an unnecessary significant increase in budgeted expenditure and a consequential increase in required income. The alternative, which we continue to apply, is to cover these costs from our reserves, certainly while we continue to have deficits in our operations.

Last year's report made reference to a need to address how to increase operational income so that we are not reliant on the stock market to show an increase in assets. Those discussions came to a conclusion towards the end of the year and details of the conclusions will be published shortly.

Consolidated accounts (extract)

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS CONSOLIDATED BALANCE SHEET AS AT 31st DECEMBER 2021

	Notes	Consolidated 2021 £	Consolidated 2020 £	Charity 2021 £	Charity 2020 £
Fixed Assets					
Tangible assets		4,180	19,558	3,186	10,395
Investments	1	2,206,609	2,055,844	1,613,264	1,488,776
Total fixed assets		2,210,789	2,075,402	1,616,450	1,499,171
Current Assets					
Stocks	3	58,091	48,862	55,456	42,416
Debtors	4	165,442	207,530	295,779	290,623
Investments	5	211,177	209,668	211,177	209,668
Cash at bank and in hand		362,093	238,466	119,347	69,062
Total current assets		796,803	704,526	681,759	611,769
Creditors:					
amounts falling due within one year	6	(463,923)	(422,469)	(274,140)	(228,440)
Net current assets / (liabilities)		332,880	282,057	407,619	383,329
Total assets less current liabilities		2,543,669	2,357,459	2,024,069	1,882,500
Creditors:					
amount falling due after more than one year	7	(246,490)	(237,697)	-	-
Total net assets		2,297,179	2,119,762	2,024,069	1,882,500
Funds of the Charity	2				
Unrestricted funds		2,260,019	2,083,971	1,986,909	1,846,709
Restricted funds		37,160	35,791	37,160	35,791
Total charity funds		2,297,179	2,119,762	2,024,069	1,882,500

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS CONSOLIDATED CASH FLOW STATEMENT AS AT 31st DECEMBER 2021

	2021 £	2020 £
Net cash (used in) operating activities	(32,284)	(124,790)
Cash flow from investing activities:		
Purchase of tangible fixed assets	(2,220)	(5,784)
Purchase of fixed asset investments	(150,500)	(237,983)
Sale of fixed asset investments	273,112	237,082
Interest received	4,060	1,825
Dividends received	31,459	29,928
Net cash provided by / (used in) investing activities	155,911	25,068
Change in cash and cash equivalents in the year	123,627	(99,722)
Cash and cash equivalents at start of year	238,486	338,188
Cash and cash equivalents at end of year	362,093	238,466

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS
CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES AND INCOME AND EXPENDITURE
ACCOUNT FOR THE YEAR ENDED 31st DECEMBER 2021

	Notes	Unrestricted £	Restricted £	Total 2021 £	Total 2020 £
Income and Endowments from:					
Charitable activities:					
Donations and legacies	9	8,901	-	8,901	19,092
Other trading activities:					
Non-ancillary trading income	10	346,358	-	346,358	354,592
Other activities	10	528,073	-	528,073	480,916
Investments:					
Investment income	11	34,783	736	35,519	31,753
Total Income		918,115	736	918,851	886,353
Expenditure on:					
Raising Funds					
Other activities	12	6,070	-	6,070	3,857
Investment		9,208	-	9,208	8,008
Non-ancillary trading		403,600	-	403,600	422,322
		418,878	-	418,878	434,187
Charitable activities					
Awards	12	18,726	300	19,026	16,195
Promoting best practice		561,636	-	561,636	481,557
		580,362	300	580,662	497,752
Total Expenditure		999,240	300	999,540	931,939
Net Expenditure before (loss) / gain in investments					
		(81,125)	436	(80,689)	(45,586)
Net (loss) / gain on investments		257,173	933	258,106	232,336
Net Income / (Expenditure)		176,048	1,369	177,417	186,750
Reconciliation of funds					
Total funds brought forward		2,083,971	35,791	2,119,762	1,933,012
Total Funds Carried Forward		2,260,019	37,160	2,297,179	2,119,762

ANNUAL MEMBERS' REPORT WITH SUPPLEMENTARY MATERIAL

The tables set out on pages 20 to 24 are extracted from the full audited accounts of the Institution for the year ended 31 December 2021. They constitute supplementary material to this Annual Members' Report. Section 426A of the Companies Act 2006 requires the following statements to be made in respect of the supplementary material:

1. This annual report is only part of the company's annual accounts and reports prepared under the Companies Act.
2. A full copy of the company's annual accounts and reports may be obtained upon request from The Institution of Railway Signal Engineers, 4th Floor, 1 Birdcage Walk, Westminster, London SW1H 9JJ, UK.
3. The auditor's report on the annual accounts was unqualified.
4. The auditor's statement under section 496 of the Companies Act (whether the Trustees' Report is consistent with the accounts) was unqualified.

A P Smith
Treasurer

Approved by the Trustees on 10 March 2022.

IR Bridges
President
Director and Trustee

A Knight
Vice-President
Director and Trustee

**THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS
NOTES TO THE CONSOLIDATED ACCOUNTS
FOR THE YEAR ENDED 31st DECEMBER 2021**

1 Fixed Asset Investments (Group)

	Equities £	Government Securities £	Total £
Market value			
At 1 January 2021	1,862,373	193,471	2,055,844
Additions	131,280	19,220	150,500
Disposals	(260,492)	(12,620)	(273,112)
Revaluations	267,804	5,573	273,377
At 31 December 2021	<u>2,000,965</u>	<u>205,644</u>	<u>2,206,609</u>

2 Movement in Funds (Group)

	At 1.1.21 £	Net movement in funds £	At 31.12.21 £
Designated funds			
Scholarship Fund	78,068	247	78,315
Alan Fisher / Frank Hewlett Fund	425,321	4,967	430,288
General Development	307,000	-	307,000
Future ASPECT Conference	10,000	-	10,000
International Convention	27,500	-	27,500
Textbook Preparation	7,500	-	7,500
General Fund - Unrestricted fund	974,813	134,987	1,109,800
IRSE Enterprises - Non-charitable trading fund	253,769	35,847	289,616
	<u>2,083,971</u>	<u>176,048</u>	<u>2,260,019</u>
Restricted funds			
Dell Bequest	23,127	937	24,064
Thorowgood Bequest	12,664	432	13,096
TOTAL FUNDS	<u>35,791</u>	<u>1,369</u>	<u>37,160</u>

The company holds 20% or more of the issued share capital of the following company:

<u>Company</u>	<u>Country of incorporation</u>	<u>Share class</u>	<u>%age owned</u>
IRSE Enterprises Limited	England and Wales	Ordinary	100

	<u>Share capital and reserves</u>	<u>Profit for year</u>
IRSE Enterprises Limited	282,100	40,424

3 Stock	Consolidated 2021 £	Consolidated 2020 £	Charity 2021 £	Charity 2020 £
Stock	58,091	48,862	55,456	42,416

4 Debtors	£	£	£	£
Trade debtors	67,078	122,910	-	-
Other debtors	4,964	12,017	4,964	12,017
Pre-payments and accrued income	16,529	6,422	-	-
VAT	76,871	66,181	63,292	53,571
Amounts owed by group undertakings	-	-	227,523	225,035
	<u>165,442</u>	<u>207,530</u>	<u>295,779</u>	<u>290,623</u>

5 Current Asset Investments	£	£	£	£
National Savings	211,177	209,668	211,177	209,668
	<u>211,177</u>	<u>209,668</u>	<u>211,177</u>	<u>209,668</u>

6 Creditors: amounts falling due within one year	£	£	£	£
Trade creditors	53,457	28,984	45,749	18,093
Accruals	21,547	43,870	17,008	20,558
Deferred income	385,197	345,680	206,682	187,803
Other creditors	6,722	3,935	4,701	1,986
	<u>463,923</u>	<u>422,469</u>	<u>274,140</u>	<u>228,440</u>

7	Creditors: amounts falling due after one year	Consolidated 2021 £	Consolidated 2020 £	Charity 2021 £	Charity 2020 £
	Other creditors	246,490	237,697	-	-

Representing the proportion of licence fees receive which will be credited to Income after more than one year.

8	Activities of IRSE Enterprises	2021 £	2020 £
	<u>Turnover</u>		
	Donations	-	4
	Proceeds - Conventions and Conferences	-	784
	Proceeds - Dinners	-	-
	Proceeds - Technical visits and Seminars	22,332	13,008
	Licensing - Licence fees received	200,048	205,404
	Licensing - Audit fees	5,761	45,042
	Licensing - Assessing agents fees	106,887	82,306
	Licensing - Technical publications	11,330	8,044
		346,358	354,592
	<u>Cost of sales</u>		
	Costs - Conventions and Conferences	(1)	1,812
	Costs - Dinners	-	(2,653)
	Costs - Technical visits and Seminars	18,556	13,929
	Costs - Young members' Seminars and Visits	-	-
	Licensing - Logbooks opening stock	6,444	9,034
	Licensing - Engineer's fees	14,503	14,503
	Licensing - IRSE administration charges	219,980	162,753
	Licensing - Audit engineers	44,959	48,195
	Licensing - Accreditation	12,014	5,385
	Licensing - Logbooks closing stock	(2,635)	(6,444)
		313,820	246,514
	Gross profit	32,538	108,078
	<u>Other income</u>		
	Dividends receivable	7,266	6,105
	Bank interest receivable	7	119
		7,273	6,224
		39,811	114,302
	<u>Expenditure</u>		
	IRSE Admin charges	22,879	48,561
	Telephone	8,122	6,322
	Post and stationery	2,880	2,447
	Officers' expenses	-	-
	Accommodation and refreshments	105	675
	Computer costs	7,580	33,598
	Professional indemnity insurance	3,099	2,910
	Licensing - Treasurer's, Chief Executive's and Registrar's Fees	36,782	73,201
	Logbook purchases	-	-
	Investment Manager's fees	4,042	3,694
	Auditor's remuneration	2,000	2,000
	Exchange rate variance	-	(2)
		87,489	173,406
	<u>Finance costs</u>		
	Licensing - Bank charges	2,291	2,402
	Net figure	(49,969)	(61,506)
	<u>Gain / Loss on revaluation of assets</u>		
	Gain on revaluation of investments	85,816	111,066
	Net profit	35,847	49,560

9	Donations and Legacies (Group)				2021	2020
					£	£
	Donations				8,901	19,092
10	Other Trading Activities (Group)				£	£
	Subscriptions				451,423	407,702
	Professional reviews				7,710	3,350
	Advertising				13,513	12,555
	Booklets and text books				8,943	18,730
	IRSE ties, badges & cufflinks				64	26
	Examination fees and materials				44,920	38,553
	Proceeds from members' lunch				1,500	-
	Consultancy income				-	-
	IRSE Income				528,073	480,916
	Trading income:					
	Turnover of trading subsidiary - Note 8				346,358	354,592
11	Investment Income (Group)					
	Equities and government stocks				24,193	23,824
	Interest receivable				4,053	1,705
	IRSE Enterprises Ltd				7,273	6,224
					35,519	31,753
12	Analysis of Expenditure	Staff Costs	Depreciation	Other	2021	2020
		£	£	£	£	£
	Raising funds					
	Other activities	2,131	94	3,845	6,070	3,857
	Investment	-	-	9,208	9,208	8,008
	Non-ancillary trading	189,114	8,170	206,316	403,600	422,322
	Total raising funds	191,245	8,264	219,369	418,878	434,187
	Charitable activities					
	Awards	8,521	377	10,128	19,026	16,195
	Promoting best practice	202,372	8,958	350,306	561,636	481,557
	Total charitable activities	210,893	9,335	360,434	580,662	497,752
	Total expenditure	402,138	17,599	579,803	999,540	931,939
13	IRSE Charitable Expenditure				£	£
	Raising donations and legacies					
	Fund raising dinners				1,388	-
	Consultancy				-	-
	Charitable activities					
	Proceeding: editing and printing				4,511	4,028
	Newsletter: editing and printing				101,777	98,249
	Booklets and textbooks				3,766	5,628
	IRSE ties, cufflinks and badges				-	-
	Prizes				25	39
	Awards				300	767
	Activities funded by country subscription supplements				7,641	5,974
	Professional review costs				(820)	1,203
	Support costs					
	Staff costs				215,802	151,739
	Office rent and services				18,524	18,524
	Fees and honoraria				89,488	74,017
	Membership database				-	-
	Other administrative costs				130,900	128,160
	Investment manager's fees				9,208	8,008
	Fixtures and fittings				9,429	9,282
	Governance costs					
	Auditor's remuneration				4,000	4,000
	Total expenditure				595,939	509,618

Institution of Railway Signal Engineering

England & Wales - Charity number 1046999

Accounts

IRSE ///

Institution of Railway Signal Engineers

Annual Report

Number 108

1 January to 31 December 2020

Contents

This Annual Report briefly describes the activities undertaken by the Institution of Railway Signal Engineers (IRSE) throughout the world during 2020. Our President from April 2020 has been Daniel Woodland from the United Kingdom.

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For up to date information about the Institution or its activities, or to download a membership application form, log on to the IRSE website www.irse.org.

Follow us on Twitter @IRSEHQ

IRSE, 4th Floor, 1 Birdcage Walk,
Westminster, London,
SW1H 9JJ, United Kingdom



IRSE

Institution of Railway Signal Engineers

An introduction from our President

From March onwards, the 2020 year proved to be a difficult and most unusual one for many of our members, both in their personal and professional lives. With much of the world experiencing periods of COVID-19 related 'lockdown' and restrictions, our usual/familiar cycle of IRSE activities has also been impacted by this.

The AGM and annual dinner were the first IRSE event casualties, followed by the members lunch, convention and technical visits ... along, of course, with my own plans to visit local sections around the globe. It could have been a very quiet year for the institution, but I have been delighted to see how our staff and many volunteers have rallied around to find new, innovative, ways to facilitate continuing service of our memberships needs and fulfilment of our charitable aim to advance the science and practice of train control.

Back in 2018 (as I was becoming a Vice-President) we began to work on a 'beyond 2020' vision for the IRSE, which you can see summarised in the section on strategy on page 4 and laid out in full at irse.info/strategy. This encapsulated our vision, to 'Deliver Safe and Sustainable Global Railways' and five pillars of activity, or goals, ENGAGE, GROW, NETWORK, DEVELOP and ASSURE on which that is based.

Through 2020 it has been my privilege to lead the institution into that 'beyond 2020' period and we have been working to embed this vision into our planning and delivery to achieve the aims outlined in our Articles of Association. To draw out some highlights (which are by no means all that we have been doing):

1. Engage (with the sector and community)

2020 saw our first use of Civica (formerly electoral reform services ERS) to facilitate and run our Council election process – with nominations and voting now possible electronically. This was a significant step forward in engagement with our membership and represents the first stage in a review of our governance processes to explore how we can further improve representation of our global membership. I anticipate further changes coming out of this review to be implemented in 2021 and beyond. Looking further afield, throughout the year we have developed closer ties with our fellow professional institutions, the UK Railway Industry Association and Rail Business Daily, amongst others.



“From March onwards, the 2020 year proved to be a difficult and most unusual one for many of our members”

2. Grow (increase our membership)

Recognising that the expertise and experience of IRSE members and prospective members are key to addressing many of the sectors challenges, our ability to support them in developing and applying their competence depends largely on getting them to engage and join. Delivering on the Grow pillar, the IRSE therefore launched working groups during 2020 to explore our value proposition (for members and licence holders) and fee structure – looking to explore how we can tune our offering to the industry and better market that globally. Expect to see changes arising from these working groups being implemented in coming years.

3. Network (facilitate interactions globally)

As with all aspects of life, we have moved into online forms of activity and have now all become familiar with the plethora of online meetings, seminar and webinar tools! Delivering to the Network element, the programme of Presidential lectures has been able to continue as planned (completing George’s series on ‘Delivering Change’ and starting my own on ‘Complexities of Change’ in modern CCS systems), as have many local section events. By moving online, these have been able to attract wider audiences of both members and non-members. It has been pleasing to see higher attendances than we have for many years and participants joining from around the world, not just the area local to the event.

4. Develop (enhanced capability of the railway sector workforce)

The IRSE filled the void left by the decision to cancel the 2020 Convention in Toronto by proposing a joint institution seminar on ‘Practical Integration of Automated Operation in Railways: A System of Systems Perspective’. I was personally delighted that the IMechE, IET and PWI joined with us in that event, enabling a far richer and more holistic review of the topic than we could have assembled alone, delivering a fantastic set of presentations and Q&A through September and October (and now available to all members via the IRSE website). With Presidential and Local Section presentations having continued online, we have seen a wealth of material become available to aid development of our members and the wider sector workforce. Our next challenge will be to find ways of conducting ‘virtual’ technical visits – a task which is already being worked on.

5. Assure (set and uphold standards for people and processes)

Probably the most significant development for the IRSE over this year has been the movement of the IRSE Exams to an online format. This was (at least for our conservative industry) a radical move which required a huge effort from our staff and members of the Education and Professional Development and Examination committees – given that they only had a couple of months from realising that a physical invigilated exam would not be possible to having an online solution up and running, this was a really amazing achievement.

These highlights barely scratch the surface of all that has been going on within the institution and you will find details of more within the full annual report. My heartfelt thanks go out to our staff and volunteers for their significant efforts in keeping the institution active, relevant, and forward looking through all the trials of the year and despite all of the extra work, re-planning and challenges that has caused.

Dr Daniel Woodland, 2021

The IRSE at a glance

IRSE

The **Professional Engineering Institution** for all those engaged or interested in **railway signalling, control and communications** and allied disciplines

Over **5000** members in locations **across the world**

Providing world-class **presentations, seminars, conventions** and **conferences**

Industry leading competence assessment and **licensing** scheme

The world's leading **professional examination** for railway signalling, control and communications

11 issues of **IRSE News** each year: our specialist railway signalling, control and communications magazine

21 Sections representing the needs of members in their geographic region or specialism

Accredited by the Engineering Council to add **Chartered Engineers, Incorporated Engineers and Engineering Technicians** to the Professional Register

Vibrant **Younger Members** Section

Run by **engineers** for **engineers**

Founded in **1912**

Objectives of the Institution

The Institution's objectives are recorded in its Articles of Association. They can be traced back to the formation of the Institution in 1912 and are:

- a) The advancement for the public benefit of the science and practice of signalling by the promotion of research, the collection and publication of educational material and the holding of conferences, seminars and meetings, and
- b) The maintenance of high standards of practice and professional care amongst those working within the industry and the promotion of improved safety standards for the protection of the general public.

Although it might appear that the IRSE is concerned only with railway signalling, the full text of the objectives makes clear that all forms of train control and traffic management, and communications systems, are all within our scope of interest.

There is a clear emphasis in the objectives on 'public benefit'. This is most obvious in the sense of contributing to safety on the world's railways, where train control systems play a critical role. But we are also interested in

ensuring that railways are efficient, cost-effective and sustainable (in the widest sense). We meet our obligations to the public through the following principal mechanisms:

- The dissemination of knowledge, experience and good practice in the fields of railway signalling, control and communications and allied topics, to help ensure that those working in the profession do so with the best available knowledge for the safe, efficient and cost-effective construction and operation of the world's railways.
- The provision and management of the IRSE Licensing Scheme to assure the competence of those working in the profession. The Scheme is focused predominantly, but not exclusively, on ensuring safety in the design, construction, testing and maintenance of signalling and telecommunications systems.
- Our Code of Professional Conduct, with which IRSE members are required to comply in the course of their work. It emphasises topics such as personal responsibility for work undertaken or managed by

IRSE members, the importance of safeguarding the public interest (particularly safety), environmental management, the efficient use of resources, handling conflicts of interest etc.

- Undertaking specific initiatives to help ensure the safety and efficiency of railways. By bringing the IRSE Sections around the world together, we will facilitate the sharing of best practice and new initiatives to help engineers and others enhance their knowledge and professionalism. We will continue to reach out and grow our network of professionals around the world to harness the collective knowledge they possess for the benefit of all operators and users of railway transport.

The financial resources of the Institution are applied to achieve the objectives of the Institution, in addition to which members make a significant contribution to delivering the Institution's aims by their volunteer activities. The Institution has only a small number of full and part-time staff and most of the activities are organised by our members acting in a voluntary capacity.

Our Strategy

In 2020 we launched our new five-year rolling strategic plan 'Beyond a 2020 vision', details are available on the website at irse.info/strategy. The objective of making the IRSE accessible to members 24 hours a day seven days a week throughout the year, as long as you have an internet connection, was timed perfectly to address the challenges of the COVID-19 pandemic. You will read in this report how the Institution has swiftly responded to the challenges of maintaining services to the membership during this difficult time.

The rate of pace of change is testament to the commitment the staff and volunteers have made to continue to bring high quality information and services to you the membership.

Looking to the future the Council and its sub committees, as part of their governance activities have ensured that they continue monitor our progress and growth in the value we provide to the signalling and telecommunications community around the world.

Progress had to be halted in developing the international dimension of the Institution, with plans for the Toronto Convention in 2020 and work on ASPECT 2021 severely hampered by the pandemic. We obtained several video conferencing licences to support the Local Sections, and the work of the Local Section Coordinator has been essential in helping to roll this out internationally.

As part of the focus on new entrants into the sector, the Institution is working with training providers in the area of apprenticeships. We continue to offer our services as an End Point Assessment service. There will be developments into 2021 to support candidates in completing their programmes.

The IRSE vision is to:
Deliver Safe and Sustainable Global Railways



To **ENGAGE** with and **GROW** a global **NETWORK** of railway signal and telecommunications engineers in order to **DEVELOP** and **ASSURE** high standards of ethics, knowledge, competence and safety in all aspects of train control.

The five key elements of the IRSE strategic plan are

Engage

Digital platform for a global professional body 24/7/365, early careers support, communicate best practice in ethics, diversity, inclusion, produce technical documentation, knowledge transfer activities.

Grow

Peer recognition, professional development, practice support and guidance, support in professional obligations, Advance profession.

Network

Industry Partnership Scheme, global local section development, International Technical Committee support, conferences, seminars and conventions, facilitate collaboration, latest information and news.

Develop

Signpost professional development, awards & bursaries, upskilling and re-skilling, examination, apprenticeships, promote benefits to the public.

Assure

International professional recognition, flexible pathways to professional registration, offer regulation in professional conduct, operate the licensing scheme.



Governance

Council

The IRSE is governed by an elected Council of twenty-one Corporate Members, led by the President, who are the Trustees of the Institution.

Six meetings of the Council were held during the year in which the business of the Institution was conducted. The Articles of Association permit the current Chairs of all local sections, both in and outside the UK, and also Country Vice-Presidents to attend Council meetings. During the year a number of Chairs and Country Vice-Presidents attended meetings using video conference facilities due to COVID-19 restrictions, with the exception of the meetings in February and March which were held in person.

In addition to conducting all the normal Council business during the year, Council discussions included the following topics:

- Adoption of the 'Beyond a 2020 vision' strategy and the associated Implementation Plan.
- Agreement to review the Governance documents.
- Implement a fees structure working group to start in 2021.
- Establishing a succession plan for the office of President.
- Consideration of changes to voting to facilitate greater representation of members around the globe.

Council also receives and reviews the annual report from each of the international Sections of the IRSE.

Committees

The Institution has a number of Committees which are accountable to Council, through which our activities are managed. The principal Committees and their relationships to Council are shown in the diagram below. In addition, ad-hoc working groups are formed from time to time which focus on specific tasks.

Audit

External audit

A number of areas of the Institution's business are audited on a regular basis by various external audit bodies:

- All areas of finance are subject to audit annually by independent external auditors who submit their report to the Annual General Meeting.
- The Licensing Scheme is subject to an annual external audit by the United Kingdom Accreditation Service (UKAS).
- As a registered Charity, the Institution is subject to periodic external review by the Charity Commission.
- As the Institution is licensed by the Engineering Council in the UK to register Chartered and Incorporated Engineers and Engineering Technicians, it is subject to a review every five years by the Engineering Council in order to ensure compliance with their registration standards.

Internal audit

The IRSE's internal Audit Committee undertakes independent audits to complement the external audits, in

order to ensure the Institution is running efficiently and effectively. The audits focus primarily on the role and remit of each of the principal Committees of the Institution.

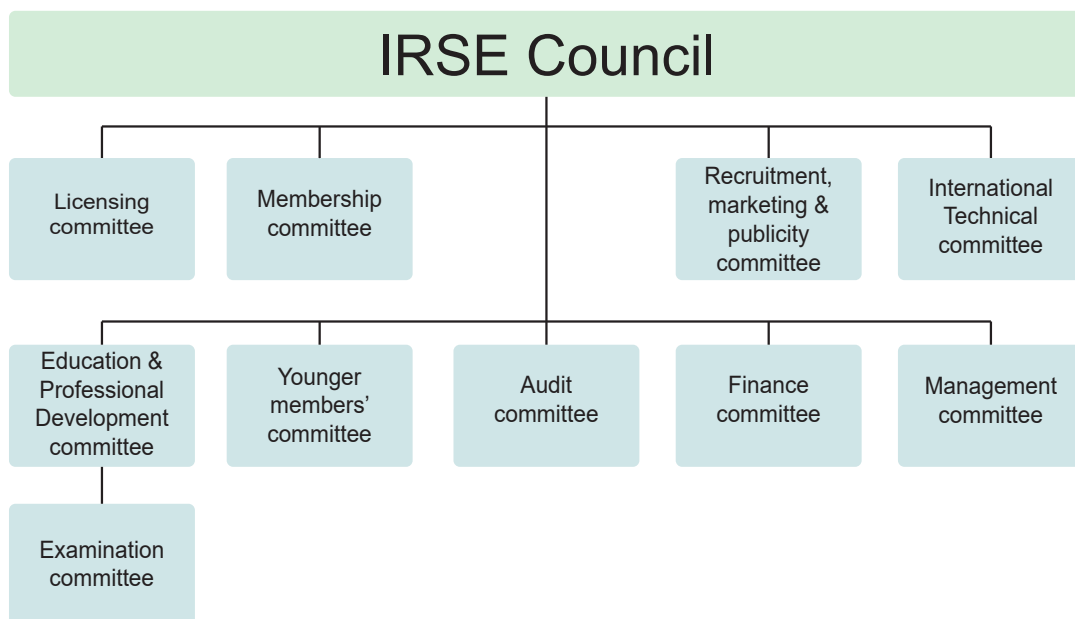
The Audit Committee normally performs two audits per annum. Each audit results in a report, which is presented to the Chair of that Committee and subsequently the Council, which uses the recommendations to improve the management of the Institution's affairs for public benefit and for the benefit of its members. The Institution maintains a Risk Register, which is reviewed annually by Council, and this is used as the basis for audit.

IRSE Enterprises

IRSE Enterprises Ltd is the trading company wholly owned by the Institution. The trading company handles a number of activities which are associated with but outside the direct scope of the charity. The Directors of the company appointed for the year April 2020 to April 2021 were:

- Chair (Immediate Past President): George Clark.
- President: Daniel Woodland.
- Senior Vice President: Ian Bridges.
- Junior Vice-President: Andy Knight.
- Council representative: Steve Boshier.
- IRSE Treasurer: Andrew Smith.
- Company Secretary (CEO): Blane Judd.

Any profits from the company are, where possible, gift-aided back to the Institution.



Sections

The IRSE Sections around the world exist by authority of the IRSE Council, and they operate in accordance with a set of Articles of Association (or Byelaws) that have been approved by Council. At the end of 2020 there were 23 sections in total. 15 Sections outside the UK in various parts of the world (Australasia, China, France, Hong Kong, India, Indonesia, Ireland, Japan, Malaysia,

Netherlands, North America, Singapore, Southern Africa, Swiss, Thailand) and six of which are UK-based. The North America Section includes the USA, Canada and Mexico. The Ireland Section includes both Northern Ireland and the Republic of Ireland.

Two other Sections also exist – the Younger Members' Section and the Minor Railways' Section. These are not geographically based, although their

activities are predominantly within the UK. Some geographical Sections also have younger members' groups.

Each Section has an organising Committee, with elected officers for key roles. Information about the activities of the Sections is provided elsewhere in this report.

Professional development

Supporting professional development of IRSE members and prospective members throughout the world is a key objective of the IRSE.

To do this, we have Judith Ward, our Director of Operations, the Education and Professional Development Committee and the Examination Committee.

IRSE Professional Examination

The IRSE professional examination is a Masters-level academic qualification which tests knowledge and understanding of railway systems with a particular emphasis on safety. A new module was introduced in October 2020, the Certificate in Railway Control Engineering Fundamentals, which covers all aspects of railway control engineering at a foundation level and is a stand-alone qualification.

To pass the full exam, to be known in future as the Advanced Diploma in Railway Control Engineering, candidates must pass four modules including a compulsory module on safety systems.

Passing the IRSE exam is one route to obtain either Associate Member or Member of the IRSE and it can 'top up' engineering or technology qualifications for professional registration with UK's Engineering Council. An accredited Bachelor's degree with honours plus IRSE exam may demonstrate knowledge and understanding for Chartered Engineer applicants and an accredited Higher National Diploma / Foundation Degree plus IRSE exam may demonstrate knowledge and understanding for Incorporated Engineer applicants.

Many volunteers run exam study groups, the independent exam forum website and support the Younger Members' exam workshops to provide support for prospective examination candidates.

To enable our exam candidates to sit the exam in 2020, Education and Professional Development Committee agreed to hold the exam remotely for the first time in the Institution's history, with 286 candidates sitting the exam on 3 October. This was an increase in the number of candidates, the majority of whom were sitting the new Certificate in Railway Control Engineering Fundamentals (module A). The quality of answers from candidates was similar to 2019, with the overall percentage of those achieving pass grade or higher was 57%. Candidates sat the exam across the globe, covering 16 geographic sections and several countries not covered by sections.

October 2020 was the final time candidates could sit numbered modules. From October 2021, four mandatory modules covering the whole syllabus to the same high standards will be available, the successful completion of which will be known as Advanced Diploma in Railway Control Engineering .

Continuing Professional Development (CPD)

The Engineering Council requires that as of 2020, those who do not engage in the CPD monitoring process are removed from their register.

Information about the importance of developing and maintaining members' professional competence through CPD has continued to be provided through IRSE NEWS and the website.

The IRSE recommends the use of the Mycareerpath system for CPD planning, recording, reflecting and reviewing. More information about Mycareerpath is available on the IRSE website.

Certified courses

The IRSE offers a process by which training providers can have their courses assessed and certificated by the IRSE.

This year ASAP Mobility Sdn (Malaysia), Signet Solutions (UK) and PM Training and Assessing (UK) gained IRSE certification for their courses covering railway signalling and telecommunications.

Other training providers are in the process of having their signalling and telecommunications courses assessed.

Professional Registration

The IRSE is licensed by the UK's Engineering Council to register suitably qualified members as Chartered Engineer (CEng), Incorporated Engineer (IEng) and Engineering Technician (EngTech).

The requirements for these are defined by the Engineering Council for knowledge, understanding, competence, relevant work experience and commitment. Brief definitions are that: Engineering Technicians apply proven techniques and procedures to practical problems; Incorporated Engineers maintain and manage applications of current and developing technology; Chartered Engineers develop solutions to engineering problems using new or existing technologies and/or have technical accountability for complex systems with significant levels of risk.

Apprenticeships

IRSE are End Point Assessment Organisation (EPAO) for two English apprenticeships: Rail Engineering Design Technician (Level 3) and Rail Engineering Technician (Level 3).

Membership and Registration

Remote working due to the COVID-19 issues has been both a challenge and an opportunity for the Membership and Registration activity of the IRSE. With the ingenuity and flexibility of both staff and volunteers we have succeeded in continuing to effectively process applications for both membership and professional registration.

From late March the Membership Committee has been meeting online to assess applications for IRSE membership and Engineering Council registration and deal with procedural and policy matters. There were 305 successful membership applications, 130 for corporate graded and 175 for non-corporate grades, there have also been 72 members who have transferred to a different grade of membership.

The total number of members has remained static over the last year, with 4,918 members on 31 December 2020.

During 2020 the IRSE has also supported 29 engineers to achieve professional registration with Engineering Council, the UK regulatory body for the engineering profession – 13 Chartered Engineers (CEng), 2 Incorporated Engineers (IEng) and 14 Engineering Technicians (EngTech).



We have been continuing to encourage our membership to engage with us electronically by email and through the IRSE website which has been vital during 2020 with the continued disruption caused by the COVID-19 pandemic. We are still hoping to pursue the development of a fully automated online application process for membership but the progress of this has not been possible over the last year.

The Institution was sad to report the deaths of the following members during 2020: Brian Foster, Denys Dyson, Paul Hepworth, Christopher Mitchell, Vivian Brown, Timothy Howard, Michael Hynd, Yoshio Ishihara, Stephen Harris, Walter Cooper, Paul Coulson, John Franklin, Michael Horne, Richard Stokes, Ray Weedon, Kevin Boyd, Derek Brown, David Norton and Ian Page.

Licensing

The IRSE Licensing Scheme continued to provide assurance for the competence of individuals to carry out technical safety critical or safety-related work on rail control systems throughout 2020. The Licensing Team was impacted by various factors relating to COVID-19 including staff working from home, a lack of access to the office and working with a slightly reduced team. Despite this, the team continued to deliver and the Scheme continues to provide a cross-industry accepted benchmark of competence for personnel.

Competence standards are reviewed at least five yearly and during 2020 nine licence standards were reviewed. Briefing notes were also published on a range of topics including:

- Revisions to 1.4.230 Signalling Maintainer and Fault Finder competence standard.
- Updates to 1.2, Signalling Installation Suite of Licences.
- Updates to the Licensing Standard, and a number of Licensing Procedures.

- Revisions to the Engineering Manager and Senior Engineering Manager suite of licences.
- Coronavirus (COVID-19) restrictions: extension to licence validity.

During the first half of 2020 the Scheme was managed by an interim Licensing Registrar, David Weedon, who stepped down from the role in November. Sarah Loutfi joined the Institution as the new Licensing Registrar in July working under the direction of the Licensing Committee, chaired by Colin Porter.

The Licensing Team was joined in December 2020 by a further Licensing Officer to assist with the processing of applications and will soon be joined by a Licensing Co-ordinator, providing an admin support function, a new role for the team.

During the year, a total of 1076 licences were issued, slightly lower than previous years.

There has been a significant impact of the COVID-19 situation on the number of

licence applications received and issued. A six month extension to the validity of licences was agreed at the beginning of the lockdown period, and that has had an effect.

There are currently c.5816 active licence holders, which represents a slow decrease in the total no of licences held (c.6800 at December 2019).

For operations within the UK, the Licensing Scheme continues to hold accreditation by the United Kingdom Accreditation Service against the competence standard for the certification of persons: ISO17024:2012, with four yearly re-accreditation successfully achieved during 2018.

IRSE Assessing Agents are approved and appointed for the purposes of performing assessments of candidates for licences, and they are an essential part of the Licensing Scheme. The number of approved assessing agencies remains at 26, with one new agency and one ceasing to operate during the year.

Awards

The IRSE makes several awards each year. The majority of these are to recognise, reward and encourage the professional development of engineers, particularly those in the earlier stages of their careers. The purpose behind this is not simply to

assist their career development, but to promote high standards of engineering excellence, thereby contributing to the public benefit objectives of the Institution.

Frank Hewlett Bequest and Alan Fisher Memorial Fund

Frank Hewlett was an Associate Member of the Institution. He died in September 2008 and left a very generous and substantial bequest to the Institution. In 2009 the IRSE Council launched an appeal to establish a memorial fund for Alan Fisher, who died unexpectedly during his Presidency of the Institution. The intention was to use the fund to support the development of young S&T engineers, particularly those outside the UK.

In normal times the income from the two funds is used predominantly to provide a number of travelling bursaries for younger members from all over the world to support their attendance at major IRSE events. For 2020, as a result of the pandemic, the funds paid for free places to be made available to younger members to on the virtual Rail Automation Seminar, run jointly by the IRSE, IET, IMechE and PWI. In total 32 places were provided to members from India, UK, Indonesia, Canada, Egypt, UAE, Australia, Nigeria, Hong Kong, South Africa and the Netherlands.

Thorowgood Scholarship

The Thorowgood scholarship is awarded under a bequest of the late W J Thorowgood (Past President) to assist the development of a young engineer employed in the signalling and telecommunications field of engineering.

The award is made to a candidate who has excelled in the IRSE professional examination and comprises an engraved medallion and funding for a study tour of railway signalling installations or signalling manufacturing facilities.

For the 2020 award no candidates achieved the necessary criteria in the 2019 examination.

Dell Award

The Dell award is made annually under a bequest of the late Robert Dell OBE (Past President). It is awarded to a member of the Institution employed by London Underground (or its successor bodies) for achievement of a high standard of skill in the science and application of railway signalling. The award takes the form of a plaque with a uniquely designed shield with an engraved plate being added each year with the recipient's name.

No award was made in 2020.

IRSE-Signet Award

Jonathan Farrell

The IRSE-Signet award is the most recent of awards, introduced in 2016 and sponsored by Signet Solutions. This Award is given annually to the person who obtains the highest marks in any single module of the IRSE Examination.

The Award takes the form of the Signet logo 'person' on a small plinth, engraved with the name and year of the winner, and bearing the IRSE's logo. The Award also comprises funding for the winner to attend the IRSE Convention.

This year's IRSE-Signet Award was presented to Jonathan Farrell of Irish Rail for achieving 90% in module 1 (safety of railway signalling and communications).

IRSE Merit Award

David Came, Trevor Foulkes and Mark Glover

The Merit Award was introduced in 2007 in order to recognise exceptional service to the Institution by a volunteer or staff member anywhere in the world. The award is made by the Council following receipt of a nomination and takes the form of a plaque mounted on a rectangular plinth with an engraved citation.

In 2020 Merit awards were awarded to David Came MIRSE, Trevor Foulkes FIRSE and Mark Glover FIRSE.

David Came was recognised for his continuous work and support for the IRSE Plymouth Section, from inauguration to the 50th Anniversary. Trevor Foulkes played an important role

in establishing the new London and South East section which he now chairs. He has been a good contributor to the Institution for many years, presenting a number of papers particularly on telecoms topics and supporting the IRSE exam review and development of the revised arrangements.

Since late 2014 Mark Glover has undertaken the production of key Institution publications. In all his work, Mark demonstrates a high level of commitment and workmanship, and the IRSE has benefited hugely from the professional image that his work portrays.

Presidential programme

As a result of the COVID-19 pandemic, after March 2020 no group gatherings could be held. The AGM was cancelled and IRSE history was made when incoming president Dr Daniel Woodland was the first to deliver his presidential address virtually.

Our President up to April 2020 was George Clark. His theme for 2020 was 'Delivering Change' and his series of presidential events looked at ways in which challenges faced by change could be addressed. His final three presidential programme events were: 'Delivering change – the race against obsolescence' presented by Wim Coenraad in Holland in January, in February Nicola Furness and Michel Ruesen presented their paper on 'Future reference CCS architecture' in London and in March Steve Allday presented 'Delivering metro travel' in Sydney.

President Dr Daniel Woodland then faced a completely different challenge; how to carry out traditional presidential duties in the time of COVID-19.

Whilst extremely disappointed he would not be able to travel internationally to visit sections, he worked hard to deliver a full presidential programme on his theme of the 'Challenges of change in complex command, control and signalling systems' virtually. In addition to this programme of lectures, he was also the instigator of the first highly successful joint revenue-generating seminar between the IRSE, IET, IMechE and PWI. This online Automated Railway seminar

held across two sessions on 1 September and 8 October, delivered 17 expert presentations to a global audience of over 200 attendees.

He also took part in the first ever online Rail Broadcast Week hosted by the Railway Gazette in September and was a panellist in the 'ERTMS & ETCS: The future of railway signalling' conference held in December.

Three Presidential Programme webinars were presented between June 2020 and December 2020, all followed by an interactive question and answer session. In June, Professor Yuji Hirao presented 'The forefront of system safety and its application to railway signalling'. Tom Jansen, delivered 'The crossover between rail and autonomous road vehicles' in October and in November Professor Rod Muttram presented 'Cross acceptance of systems and equipment developed under different standards frameworks'. Nicholas Wrobel, presented his paper on 'Testing modern electronic/software systems' in December.

All presidential papers are published in our monthly journal, IRSE News, and the presentations are available to watch on the IRSE Vimeo channel irse.info/vimeo or on the IRSE website.



About the presenter

- Consider myself as primarily a systems engineer
- Now over 50 years experience in 4 industries where safety is a priority
 - Nuclear
 - Material processing
 - Defence – the last 26 years
 - Railways – the last 26 years
- Director level positions in Railtrack and VP at Bombardier
- Fellow of the Royal Academy of Engineering, the IET and the IRSE
- IRSE Council Member and member of the International Technical Committee (ITC)



IRSE ///



Presidential Lecture Series 2020-2021

A collection of the IRSE Presidential papers delivered during the Presidential term of Dr Daniel Woodland IRSE.

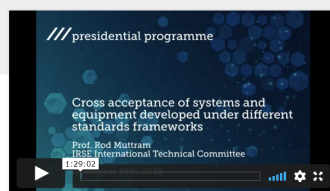
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Techniques at the forefront of sy...

The IRSE

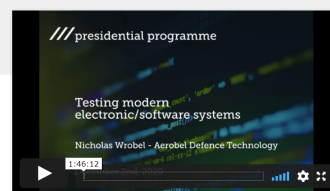
Dr Yuji Hirao from the Department of Sustain...



Cross acceptance of Systems & ...

The IRSE

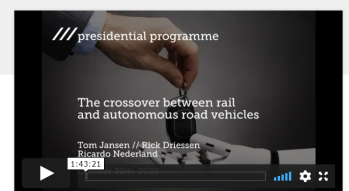
Prof Rod Muttram of IRSE's International Techn...



Nicholas Wrobel with Q&A

The IRSE

In the fourth in the series of presidential lectures, testing



The crossover between rail and ...

The IRSE

Tom Jansen and Rick Driessen of Ricardo Rail present the

Section activities

In addition to the Presidential Programme, every year there is a programme of lectures, seminars and technical visits organised by the Institution's 22 sections across the globe. Our sections are in Australasia, China, France, Hong Kong, India, Indonesia, Ireland, Japan, Malaysia, Netherlands, North America, Singapore, Switzerland, Thailand, and Southern Africa. Within the UK, sections cover London & South East, Midland & North Western, Plymouth, Scottish, Western, York and Minor Railways.

The geographical sections vary considerably in size (from around 20 members up to several hundred), and in levels of activity. Each has its own organising Committee, elected officers and programme of events. They report annually to the Council on their work.

In 2020 sections were unable to meet face-to-face for the majority of the year. Some adapted and provided virtual meetings and others were unable to provide these opportunities

due to technical difficulties and the workload of the volunteers. Paul Darlington (Chair Midland & North Western) and Trevor Foulkes (Chair London & South East) produced a guide for sections organising and running virtual meetings and many of the sections who ran these have reported record numbers of attendees. Several technical presentations were recorded and can be found on IRSE's Vimeo channel [irse.info/vimeo](https://www.vimeo.com/irse).

The Council wishes to record its thanks to the officers, committee members and all others involved in the operation of the local sections, for the excellent work they undertake in organising technical meetings and other events particularly in this challenging year. Council also very much appreciates the help and support given by many companies in facilitating and supporting the events organised by the sections all over the world. Charles Page continues his excellent work in the role of Local Section Coordinator, supporting the sections.

Younger Members

2020 marked the spirited relaunch of the IRSE Younger Members Section chaired by Aaron Sawyer. This section exists to ensure that the activities of the Institution are relevant to the professional development of younger and less experienced members.

The expansion of the committee, and the revised energy imparted by its members, has enabled the section to grow in strength and significantly increase the benefits offered to the community. The section focused on five key areas for development: major events, attract & expand, digital initiatives, support development and sustain & improve.

Under these focus areas the section delivered on an array of existing and new initiatives with an agile shift to online events. The highlights included:

- Preparation for major events including a flagship competition and accident investigation weekend.
- The 'IRSE Super Train Challenge: A Journey Around the World' and associated online STEM webinar. The event followed the semi-fictional character Prerna the Great Inventor and her quest to build a Super Train.
- International outreach where the section worked closely with younger members around the world to facilitate future collaboration and increase diversity within our committee.
- A newly automated mentoring scheme that connects mentors with mentees in a simple self-managed system to be released in 2021, alongside improvements to the 'Maintain your Competency' system.
- A 12-week IRSE Cyber Academy course bringing together developing engineers within the field of railway cyber security.
- And of course, our continued support for the IRSE Exam through study events and over 24 hours of recorded material.

With the strength of the Younger Members section ever growing, there are now over 20 volunteers dedicated to bringing increased benefits our community. We welcome members from around the world to share in this experience and thank everyone who has supported the section in realising its ambitions.

International Technical Committee

The IRSE's International Technical Committee (ITC) has 23 fully participating and 11 corresponding members from many parts of the world, including Japan, the UK, Netherlands, Germany, Switzerland, Belgium, Finland, France, Australia, Spain, Singapore and Canada. The ITC's primary purpose is to provide thought leadership and disseminate learning on strategic or technical topics relevant to train control and communications systems in the railway environment, thereby providing value not only to IRSE members but to the wider rail industry. Its particular strength lies in its international membership at senior level, enabling engineering principles and practices from a diverse range of countries to be brought to bear upon the subjects that the ITC debates.

During the year, the ITC held four meetings. Due to COVID-19 measures all four were held as video conference meetings. The ITC experienced video conference meetings effective however live interaction in this international setting is essential. After lockdown the ITC will hold its meetings in a mix of video conferencing and live meetings. This will have also a positive effect on our carbon-footprint. The ITC produced six papers, all of which have been published in IRSE News, three of them were given as presidential papers. All ITC papers can be found on the IRSE website. The meetings are hosted by members in their country and minutes are produced for each meeting.

The ITC is aligned with the IRSE strategy. From this year the ITC has decided to keep in touch with the younger membership by having a Younger Member official position on the committee – the first Younger Member to join is Robin Lee. The ITC also focused on Safety – issues of cross-acceptance and standards as well as requirements management and system integration. The Junior Vice President and Senior Vice President are members of the ITC so that they can influence the choice of topics to be discussed, to align with the presidential theme. Papers in the pipeline also include Signalling Power Supplies and the Effectiveness of Security Measures.

London office and personnel

The Institution leases a small suite of offices on the 4th floor of the Institution of Mechanical Engineers, 1 Birdcage Walk, London, UK, from where the centrally organised activities of the Institution are managed – membership, licensing, events administration and financial administration.

The COVID-19 pandemic has meant that the offices have not been accessible since March 2020. As a result, all staff have had to make the transition to working from home. The Council and many members have on numerous occasions praised the efforts of the staff in maintaining a high level of professional service despite this significant disturbance to work patterns. It became apparent that there was a need to restructure in order to meet the differing demand of a distributed workforce and Council have overseen the work done by the Chief Executive and senior staff to effect these changes.

Chief Executive

The Chief Executive and General Secretary of the Institution is Blane Judd, a Chartered Engineer and Fellow of the Institution of Engineering and Technology. He is responsible for directing and managing the resources of the Institution in order to implement the decisions of Council in an efficient manner and in compliance with UK company and charity law. He is accountable to the Council. He also provides the focal point of contact for other Institutions and external organisations, including the UK's Engineering Council and the Royal

Academy of Engineering, government agencies, the chief officers of other professional bodies, and the scientific, engineering and technology community. He is also responsible for ensuring compliance with the requirements of the Institution's Articles of Association, Companies House, the Charities Commission and relevant legislation.

Office team

The office team comprises:

- Polly Whyte, Head of Membership and Registration
- Hilary Cohen, Executive Assistant
- Judith Ward, Director of Operations (part-time)
- Sarah Loutfi, Licensing Registrar
- Karen Boyd, Deputy Licensing Registrar
- Roger Button, Licensing Assistant
- Caterina Indolenti, Membership and Registration Administrator
- Sophie Hunter, Membership and Registration Assistant (fixed term contract)
- Hannah Mueller, Finance Assistant (part-time)
- Swaathy Bhaskaran, Licensing Assistant (part-time)

October 2020 saw the departure of two members of the team – Anja Laitinen, after eight years with the IRSE and Laura Freeborn at the end of her temporary contract.

We also received the shock news that Hilary Cohen had been taken seriously ill and would be absent from work for some time. As many will know Hilary, who has been with the IRSE for more than ten years, is a key member of staff and is engaged in a number of member facing activities. We have appointed Deepka Kharaud to provide temporary cover for her position.

Contract support

The following members of the team work part time on a contract basis:

Marketing and Communication activities have been operated externally by Lindsay Jones of LJPR Ltd. Lindsay is a qualified journalist with a MSc in public relations and runs her own PR consultancy. She is successfully promoting the Institution to a much wider International stakeholder group. We are also receiving excellent support from Howard Elwyn-Jones of Prettybright on a wide range of social media activity, which includes the much-improved e-bulletin and video livestreaming of events.

Andrew Smith is the Institution's Treasurer, with responsibility for the production of the budgets and accounts, and for monitoring the health of the Institution's savings and investments.

Debbie Bailey, is the Institution's HR Manager. She is a Chartered Member of the CIPD and runs her own HR consultancy business. Debbie has provided HR services to the staff of the IRSE for more than eight years and has been much involved this year in supporting the staff through the pandemic and in particular the transition to remote working.

Annual General Meeting

The IRSE's intended 107th Annual General Meeting, which was to be chaired by the retiring President, George Clark, was initially postponed until July 2020 due to the COVID-19 pandemic, in accordance with the Memorandum and Articles of Association. It was hoped that by July the situation would have been sufficiently controlled to allow a normal AGM to take place. As the year progressed it became apparent, prior to the July date, that International lockdown restrictions would not allow a meeting to be held in person. After considerations of a number of options it was resolved by Council that there would be no AGM in 2020. All ordinary business was concluded by correspondence and it was resolved to appoint HPH Chartered Accountants for 2020.

The membership received copies of the Annual Report for 2019 (published on 1 April 2020), and there being no comments or questions received through correspondence this report was adopted.

The ballot for the election of members to Council had resulted in Harvinder Bhatia (UK), Gordon Lam (Hong Kong), Clive Roberts (UK), Rob Cooke (Singapore) and Firas Al-Tahan (N America) joining Council.

Grateful thanks go to Pierre-Damien Jourdain, Cassandra Gash and Lynsey Hunter all of whom retired from Council.

IRSE Council

IRSE Council 2020-2021	
President	Daniel Woodland
Vice Presidents	Ian Bridges, Andy Knight
Members of Council from the class of Fellow	Peter Allan, Ian J Allison, Harvinder Bhatia ,Steve Boshier, Bogdan Godziejewski, Yuji Hirao, Gordon Lam, Rod Muttram, Jane Power, Clive Roberts
Members of Council from the class of Member	Firas Al-Tahan, Rob Burkhardt, Rob Cooke, Martin Fenner, Ryan Gould, Paul McSharry
Members of Council from the class of Associate Member	Xiaolu Rao, Keith Upton
Co-opted Past Presidents	George Clark, Markus Montigel, Peter Symons
Chief Executive	Blane Judd
Treasurer	Andrew Smith

IT systems

The three major IT components that support the Institution's operations are the Membership and Licensing database, the website, and the London office IT systems.

The decision to migrate our office software systems to a more secure cloud-based server facility, could not have been taken at a better time. We could not have known that by the first quarter of 2020 we would be locked out of the offices and hence access to any IT-based systems located there.

After many years of support from Mike Tyrrell who single-handedly kept our old telephony system working, a decision to change the obsolete equipment was made in the first quarter of 2020. The initial discussions were to install a similar but more modern private automatic branch exchange (PABX). The lockdown however, made us rethink that decision and complete 'softphone' voice over internet protocol (VoIP) was adopted. This has facilitated us being able to make and receive calls while working from home, or on mobiles without interruption of service. The VoIP system also allows us to manage calls remotely from the office system, giving us a greater flexibility and improved communication service to members.

We have now had a year of operating with the new website which again has been extremely helpful in allowing us to maintain a high standard of service for the membership. The inclusion of video content has seen a significant increase in the number of visits to the site. Members are also able to use the site to update information, previously managed manually by staff in the office. Throughout 2021 there are plans to increase the functionality of the site in line with our vision to be accessible 24/7/365 wherever there is an internet connection.

Just after lockdown occurred, we acquired additional licenses for the online conferencing tool, GoToMeeting (GTM), which we had been using for many of the IRSE virtual meetings. Some of these licenses were offered free by LogMeln, the company that owns GTM, as part of a support package for charities. We have been able to distribute these licenses to the sections that wanted to be able to run virtual meetings. As a result, all of the meetings that IRSE hold, both as part of its normal operational activities and with volunteers, have seen a large increase in membership engagement. We intend to continue to offer this service even once lockdown has been lifted.

The combination of GTM and Microsoft Teams has meant we have reached more of the membership that we have been able to achieve in the past.

You will read elsewhere in this report that we held IRSE examination online for the first time this year, through necessity. The platform we used, Moodle, has a lot of additional functionality which we will be looking to exploit as we become more familiar with its capabilities. The aim is to increase the educational offerings under the Knowledge, Skills and Behaviours initiative, started by Markus Montigel in his presidential year, using Moodle at the foundation for this development.

We cannot express our gratitude more strongly, to all those who work for or with the Institution, including the volunteer network. Their ability to adapt so well to the challenges that we have faced as a result of the pandemic has been a tremendous help. Hopefully 2021 will bring a better year and see us able to use much of what we have learnt during lockdown for the benefit of the membership, wherever they are in the world.

Publications and communications

Publications and communications

The global pandemic has impacted on every aspect of our lives. Sometimes out of necessity comes innovation, and this has certainly been the case for the IRSE.

Towards the end of George Clark's presidency, we successfully trialled the webinar format for his November presidential programme event. This learning was to prove invaluable in the months to come.

As it became clear that face to face meetings would not be possible for the foreseeable future, HQ staff, members and volunteers all stepped up to devise robust ways to keep the Institution running as normally as possible in the 'virtual' world. Section meetings were held via GoToMeeting or Zoom platforms and the presidential programme was delivered with outstanding success by GoTo Webinar. In all cases, a far higher number of members attended the events virtually than ever before from all over the world.

For the first time in the Institution's history, a paid-for joint online seminar on Automated Railway was held in partnership with the IET, IMechE and PWI. Not only did this event generate much needed revenue for the Institution but it was watched internationally by over 200 people.

We were able to build on the work carried out since 2018 to upgrade and improve our digital communications and as a result our digital platforms came into their own enabling us to keep members informed via frequent e-bulletins and enhanced content on www.irse.org.

IRSE News

IRSE News is published monthly, its purpose being primarily to inform IRSE members worldwide about industry news, technical developments, and the work and activities of the IRSE and its Sections. Papers that comprise the presidential programme are published in IRSE News, together with a wide range of other internationally sourced educational papers and articles. We'd like to extend our thanks to the dedicated and hard-working editorial production team and committee led by Managing Editor Paul Darlington for another excellent year.

Proceedings

The Proceedings provide a summary of the Institution's activities and have been produced annually since the very first issue in 1913. A hard copy of the Proceedings is supplied to the British Library and to the library of the Institution of Engineering and Technology and pdf versions of the Proceedings are available for all to read via our website.

Website

The website provides details of Institution events, Sections, information about the governance and operation of the IRSE, material for members taking the IRSE professional examination, how to become a member, as well as a wealth of information relating to professional development. Members

(and registered non-members) can update contact details, book events, order publications, and pay their subscriptions online. This year almost 72 000 visitors from 137 countries viewed more than a million pages at www.irse.org.

Video

During 2020 the number of videos available on the IRSE website increased significantly as we uploaded content including presidential events, section meetings and study guides. As a result in the past 12 months we saw a 1700% increase in video views and more than 3000% increase in audience size. IRSE videos received over 15 000 views.

E-Communications

A monthly email bulletin is sent to all members, containing information about upcoming events and other topical information. In addition, we send out ad-hoc electronic communications to members highlighting key presidential events and other important information.

Social Media

The Institution has a social media presence on LinkedIn, Facebook and Twitter which play a key role in promoting our activities and signposting our content. Key events, presentations and topical news stories are posted on all these feeds on a regular basis to help keep members informed and raise the profile of the Institution amongst the wider railway industry.

LinkedIn has seen a 90% increase in engagement in the last 12 months, boasting almost 7000 followers. On average, IRSE posts on LinkedIn which linked to content were clicked over 58 times each (7400 clicks), while over 55% of our tweets were re-shared by other Twitter users. Link clicks on Twitter are up over 700% on 2019, while on Facebook, links to IRSE content were clicked 1600 times.

Rail Industry media

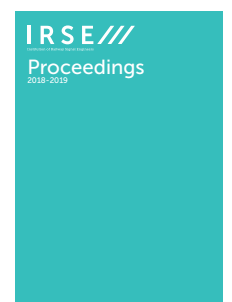
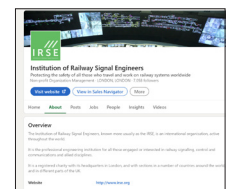
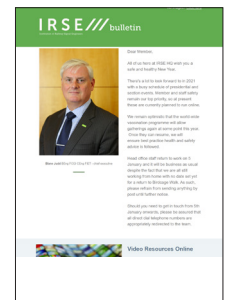
During this year we have developed our relationship with more key railway media. Until the lockdown, Modern Railway Magazine had included selected section events in their events section, and presidential events have been promoted in the online Railbusinessdaily.com e-zine.

Publications

The IRSE publishes a range of books on railway train control and communications systems, which provide a useful source of educational material for those relatively new to the profession, as well as providing a valuable record of the development of signalling. Extensive work continues to edit and modernise the Metro Signalling Handbook.

Library

Sadly, the IRSE Library which is housed in our London offices has been closed this year due to the pandemic. The building at Birdcage Walk which we share with several other professional engineering institutions has remained closed with all staff working from home.



Collaboration

The IRSE has formal and informal working relationships with a number of organisations in the UK and with organisations in other parts of the world. In China and South East Asia in particular, the IRSE's sections are forging closer links with other engineering and educational organisations, and with governments.

The Industry Partnership Scheme has been slow to get off the ground mainly due to the inability to engage with senior leaders during the COVID-19 lockdown period. That said, some dialogue with employers has started to highlight the areas that would be of interest and benefit to Industry. It is expected that as the restrictions on face-to-face engagement are lifted, more work will be able to be done to move this initiative forward.

An important element of our strategy, is to strengthen our engagement with external bodies, including rail industry companies and other relevant organisations. The Institution enjoys good working relationships and support from many companies, but our ambition is to grow this further. As a result, the

development of the Future Integrated Rail Think Tank (FIRTT), a collaboration with WSP, KPMG, the Rail Delivery Group and IRSE, has focused on several key areas of railway operation, to debate key issues. The first two of these were held this year and the outputs were published on the IRSE website.

This is the second of the IRSE two-year term as chair of the Rail Engineers Forum (REF). The REF (theref.org.uk) is made up of representatives from the Professional Engineering Institutions who have a rail interest e.g., IMechE, IET, ICE, PWI, IRO, INCOSE, CILT, RCEA and the Young Railway Professionals. The chair, Andrew Simmons, a former President of the IRSE, continues to work with HQ to help focus on REF's aim, to harmonise the various strengths of the constituent Institutions to support the railway community. In normal times this would encompass conferences, seminars, lectures, training, information services, publications and statements of policy to Government and other regulatory bodies. This year has mainly focused on maintaining links across the sector.

Regular meetings are taking place with the UK's Railway Industry Association (RIA) to ensure that where possible the two bodies are working closer together to promote the principle of professional employees working in professional businesses. This working relationship is helping the IRSE and RIA identify where we can make a difference.

A closer relationship with the Royal Academy of Engineering and Engineering UK is helping us to gain better traction with activities focusing on encouraging young people into careers in science, technology, engineering and mathematics as a career opportunity. We are able to gain a better exposure working with these bodies than if we used our own smaller resources.

The UK's Engineering Council is responsible for the regulation of engineers, particularly in the UK. The IRSE is a licensed body of the Engineering Council and is thus licensed to register Chartered Engineers, Incorporated Engineers and Engineering Technicians. We work closely with them to maintain standards of engineering excellence.

Finances

The financial results are shown on pages 16 to 20. They are extracted from the consolidated accounts for the IRSE and its wholly owned trading subsidiary, IRSE Enterprises Limited. The term 'Group' at the top of a set of tables refers to the two companies combined, and 'Charity' to the IRSE alone. As far as possible, these extracted results use the titles and the format of the consolidated accounts.

Probably the headline figure from the 2020 financial results is the Total Charity Funds in the first table on page 16. Despite the outbreak of COVID-19 and its global consequences, the Total Charity Funds have increased by £186,750. This increase is entirely due to a significant increase in value of the investments, in the form of shares, shown in Note 1 on page 18. Our activities during the year made a loss which is not unexpected, given two major fundraising activities, the annual dinner and convention, did not take place, so IRSE Enterprises did not make a surplus to donate to the IRSE.

For part of 2020 because our activities were forcibly reduced by the pandemic we were able to furlough some members of staff under the UK Government's

furlough scheme although as we introduced innovative new ways to deliver the service to our Members, by the end of the year all employees were back working as normal. During the year we took on two new members of staff, both of whom required training in order to take on their roles. However, as we have a very small workforce, to suddenly, if only temporarily, expand our expenses to cover them would have required a sudden, significant increase in income. We could have increased subscriptions or licence fees significantly, only to put them back down again for 2021, but we identified some of our reserves as being saved to cover for eventualities like this. As a consequence, during the year there was a transfer from investments to cover these additional costs.

An issue that has come to our attention can be seen by comparing Notes 10 and 12. Note 10 includes a figure which is the total income from our main activities whilst Note 12 is the cost of running the charity. It can be seen that for the last two years the charity's costs have been higher than the income. Historically this has been the case, but the surplus from IRSE Enterprises has topped up

the income to cover the difference, and commonly led to a net surplus. However, in 2020, clearly, this didn't happen although additional unexpected income was realised through the Institution's first ever and highly successful paid-for online seminar held jointly between the IRSE, IET, PWI and IMechE. In addition, the introduction of the new Module A Exam Certificate in Railway Control Engineering Fundamentals created a surge in Exam income for 2020. We face a similar situation for 2021 as COVID-19 restrictions prevent us once again from holding either the annual dinner or a traditional convention. Whilst it is to be hoped these events will reappear in the IRSE's calendar as soon as possible, it has exposed a potential challenge for the future, especially if it continues to prove difficult to organise big events for several years. As a consequence work is currently underway considering how to increase the Charity's income. Naturally, given that most is from subscriptions, it is this area that is being particularly addressed. There are no conclusions so far, so they will have no impact on 2021, but will need to be included in the budget for 2022.

Consolidated accounts (extract)

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS CONSOLIDATED BALANCE SHEET AS AT 31st DECEMBER 2020

	Notes	Consolidated 2020 £	Consolidated 2019 £	Charity 2020 £	Charity 2019 £
Fixed Assets					
Tangible assets		19,558	31,227	10,395	16,871
Investments	1	2,055,844	1,812,394	1,488,776	1,342,570
		2,075,402	1,843,621	1,499,171	1,359,441
Current Assets					
Stocks	3	48,862	45,110	42,416	36,076
Debtors	4	207,530	194,705	290,623	269,580
Investments	5	209,668	209,205	209,668	209,205
Cash in hand		238,466	338,188	69,062	108,013
		704,526	787,208	611,769	622,874
Creditors: amounts falling due within one year	6	(422,469)	(438,934)	(228,440)	237,003
Net current assets / (Liabilities)		282,057	348,274	383,329	385,871
Total assets less current liabilities		2,357,459	2,191,895	1,882,500	1,745,312
Creditors: amount falling due after more than one year	7	(237,697)	(258,883)	-	-
Net assets		2,119,762	1,933,012	1,882,500	1,745,312
Funds	2				
Unrestricted funds		2,083,971	1,896,893	1,846,709	1,709,193
Restricted funds		35,791	36,119	35,791	36,119
Total charity funds		2,119,762	1,933,012	1,882,500	1,745,312

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS CONSOLIDATED CASH FLOW STATEMENT AS AT 31st DECEMBER 2020

	2020 £	2019 £
Net cash (used in) operating activities	(124,790)	(78,758)
Cash flow from investing activities:		
Purchase of tangible fixed assets	(5,784)	(44,793)
Purchase of fixed asset investments	(237,983)	(231,680)
Sale of fixed asset investments	237,082	193,471
Interest received	1,825	2,534
Dividends received	29,928	36,371
Net cash provided by / (used in) investing activities	25,068	(44,097)
Change in cash and cash equivalents in the year	(99,722)	(122,855)
Cash and cash equivalents at start of year	338,188	461,043
Cash and cash equivalents at end of year	238,466	338,188

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS
CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES AND INCOME AND EXPENDITURE
ACCOUNT FOR THE YEAR ENDED 31st DECEMBER 2020

	Notes	Unrestricted £	Restricted £	Total 2020 £	Total 2019 £
INCOME AND ENDOWMENTS FROM:					
Charitable activities:					
Donations and legacies	9	19,092	-	19,092	41,708
Other trading activities:					
Non-ancillary trading income	10	354,592	-	354,592	425,921
Other activities	10	480,916	-	480,916	448,263
Investments:					
Investment Income	11	31,685	68	31,753	38,905
Total Income		886,285	68	886,353	954,797
EXPENDITURE ON:					
Raising Funds					
Other activities	12	3,857	-	3,857	8,567
Investment		8,008	-	8,008	7,865
Non-ancillary trading		422,322	-	422,322	438,884
		434,187	-	434,187	455,316
Charitable activities					
Awards	12	16,195	-	16,195	24,529
Promoting best practice		481,557	-	481,557	534,779
		497,752	-	497,752	559,308
Total Expenditure		931,939	-	931,939	1,014,624
Net Expenditure before (loss) / gain in investments		(45,654)	68	(45,586)	(59,827)
Net (loss) / gain on investments		232,732	(396)	232,336	280,451
NET INCOME / (EXPENDITURE)		187,078	(328)	186,750	220,624
RECONCILIATION OF FUNDS					
Total funds brought forward		1,896,893	36,119	1,933,012	1,712,388
TOTAL FUNDS CARRIED FORWARD		2,083,971	35,791	2,119,762	1,933,012

ANNUAL MEMBERS' REPORT WITH SUPPLEMENTARY MATERIAL

The tables set out on pages 16 to 20 are extracted from the full audited accounts of the Institution for the year ended 31 December 2020. They constitute supplementary material to this Annual Members' Report. Section 426A of the Companies Act 2006 requires the following statements to be made in respect of the supplementary material:

1. This annual report is only part of the company's annual accounts and reports prepared under the Companies Act.
2. A full copy of the company's annual accounts and reports may be obtained upon request from The Institution of Railway Signal Engineers, 4th Floor, 1 Birdcage Walk, Westminster, London SW1H 9JJ, UK.
3. The auditor's report on the annual accounts was unqualified.
4. The auditor's statement under section 496 of the Companies Act (whether the Trustees' Report is consistent with the accounts) was unqualified.

A P Smith
Treasurer

Approved by the Trustees on 11 March 2021.

D Woodland
President
Director and Trustee

I Bridges
Vice-President
Director and Trustee

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS
NOTES TO THE CONSOLIDATED ACCOUNTS
FOR THE YEAR ENDED 31st DECEMBER 2020

1 Fixed Asset Investments (Group)

	Equities £	Government Securities £	Total £
Market value			
At 1 January 2020	1,602,145	210,249	1,812,394
Additions	237,983	-	237,983
Disposals	(211,545)	(25,537)	(237,082)
Revaluations	233,790	8,759	242,549
At 31 December 2020	1,862,373	193,471	2,055,844

2 Movement in Funds (Group)

	At 1.1.20 £	Net movement in funds £	At 31.12.20 £
Designated funds			
Scholarship fund	77,128	940	78,068
Alan Fisher / Frank Hewlett Fund	407,071	18,250	425,321
General Development	307,000	-	307,000
Future ASPECT Conference	10,000	-	10,000
International Convention	27,500	-	27,500
Textbook Preparation	7,500	-	7,500
General Fund - Unrestricted Fund	856,485	118,328	974,813
IRSE Enterprises - Non-charitable Trading Fund	204,209	49,560	253,769
	1,896,893	187,078	2,083,971
Restricted funds			
Dell Bequest	23,432	(305)	23,127
Thorowgood Bequest	12,687	(23)	12,664
TOTAL FUNDS	36,119	(328)	35,791

The company holds 20% or more of the issued share capital of the following company:

<u>Company</u>	<u>Country of incorporation</u>	<u>Share class</u>	<u>%age owned</u>
IRSE Enterprises Limited	England and Wales	Ordinary	100

	<u>Share capital and reserves</u>	<u>Profit for year</u>
IRSE Enterprises Limited	£241,676	£49,590

3 Stock	Consolidated 2020 £	Consolidated 2019 £	Charity 2020 £	Charity 2019 £
Stock	48,862	45,110	42,416	36,076

4 Debtors	£	£	£	£
Trade debtors	122,910	58,801	-	-
Other debtors	12,017	9,707	12,017	9,707
Pre-payments and accrued income	6,422	78,555	-	-
VAT	66,181	47,642	53,571	35,995
Amounts owed by group undertakings	-	-	225,035	223,878
	207,530	194,705	290,623	269,580

5 Current Asset Investments	£	£	£	£
National Savings	209,668	209,205	209,205	209,205
	209,668	209,205	209,205	209,205

6 Creditors: amounts falling due within one year	£	£	£	£
Trade creditors	28,984	38,981	18,093	28,520
Deferred income and accruals	200,644	196,505	177,332	176,262
Other taxes and social security costs	-	-	-	-
Other creditors	192,841	203,448	33,015	32,221
	422,469	438,934	228,440	237,003

7	Creditors: amounts falling due after one year	Consolidated 2020 £	Consolidated 2019 £	Charity 2020 £	Charity 2019 £
	Deferred income	237,697	258,883	-	-

Representing the proportion of licence fees receive which will be credited to Income after more than one year.

8	Activities of IRSE Enterprises	2020 £	2019 £
	<u>Turnover</u>		
	Donations	4	(10)
	Proceeds - Conventions and Conferences	784	15,559
	Proceeds - Dinners	-	51,466
	Proceeds - Technical Visits and Seminars	13,008	35,453
	Licensing - Licence Fees Received	205,404	194,321
	Licensing - Audit Fees	45,042	56,022
	Licensing - Assessing Agents Fees	82,306	62,564
	Licensing - Technical Publications	8,044	10,546
		354,592	425,921
	<u>Cost of sales</u>		
	Costs - Conventions and Conferences	1,812	4,801
	Costs - Dinners	(2,653)	31,285
	Costs - Technical Visits and Seminars	13,929	35,354
	Costs - Young Members' Seminars and Visits	-	1,104
	Licensing - Logbooks Opening Stock	9,034	4,721
	Licensing - Engineer's fees	14,503	14,081
	Licensing - IRSE Administration Charges	162,753	122,032
	Licensing - Audit Engineers	48,195	58,825
	Licensing - Accreditation	5,385	10,980
	Licensing - Logbooks Closing Stock	(6,444)	(9,034)
		246,514	274,149
	GROSS PROFIT	108,078	151,773
	<u>Other income</u>		
	Dividends receivable	6,105	6,413
	Bank interest receivable	119	367
		6,224	6,780
		114,302	158,553
	<u>Expenditure</u>		
	IRSE Admin Charges	48,561	18,990
	Telephone	6,322	7,033
	Post and Stationery	2,447	6,441
	Officers' expenses	-	-
	Accommodation and Refreshments	675	3,584
	Computer costs	33,598	34,522
	Sundry expenses	2,910	2,975
	Licensing - Treasurer's, Chief Executive's and Registrar's Fees	73,201	71,500
	Logbook Purchases	-	9,025
	Investment Manager's Fees	3,694	3,421
	Auditor's remuneration	2,000	4,000
	Exchange rate variance	(2)	7
		173,406	161,498
	<u>Finance costs</u>		
	Licensing - Bank charges	2,402	3,238
		(61,506)	(6,183)
	<u>Gain / Loss on revaluation of assets</u>		
	Gain on revaluation of investments	111,066	77,292
	NET PROFIT	49,560	71,109

9	Donations and Legacies (Group)				2020	2019
					£	£
	Donations				19,092	41,708
10	Other Trading Activities (Group)				£	£
	Subscriptions				407,702	404,989
	Professional Reviews				3,350	915
	Advertising				12,555	9,075
	Booklets and text books				18,730	7,138
	IRSE ties, badges & cufflinks				26	26
	Examination Fees and materials				38,553	25,413
	Proceeds from members' lunch				-	707
	Consultancy Income				-	-
	IRSE Income				480,916	448,263
	Trading income:					
	Turnover of trading subsidiary - Note 8				354,592	425,921
11	Investment income (Group)					
	Equities and government stocks				23,824	29,958
	Interest receivable				1,705	2,167
	IRSE Enterprises Ltd				6,224	6,780
					31,753	38,905
12	Analysis of Expenditure	Staff Costs	Depreciation	Other	2020	2019
		£	£	£	£	£
	Raising Funds					
	Other Activities	1,494	93	2,270	3,857	8,567
	Investment	-	-	8,008	8,008	7,865
	Non-ancillary trading - Note 8	126,654	8,170	287,498	422,322	438,884
	Total raising funds	128,148	8,263	297,776	434,187	455,316
	Charitable Activities					
	Awards	5,977	371	9,847	16,195	24,529
	Promoting best practice	141,955	8,818	330,784	481,557	534,779
	Total charitable activities	147,932	9,189	340,631	497,752	559,308
	Total Expenditure	276,080	17,452	638,407	931,939	1,014,624
13	IRSE Charitable Expenditure				£	£
	Raising donations and legacies					
	Fund raising dinners				-	4,190
	Consultancy				-	-
	Charitable activities					
	Proceeding: editing and printing				4,028	4,517
	Newsletter: editing and printing				98,249	94,728
	Booklets and textbooks				5,628	5,773
	IRSE ties, cufflinks and badges				-	1,295
	Prizes				39	1,111
	Awards				767	7,020
	Activities funded by country subscription supplements				5,974	8,821
	Professional review costs				1,203	2,682
	Support costs					
	Staff costs				151,739	191,176
	Office rent and services				18,524	20,202
	Fees and honoraria				74,017	71,070
	Membership database				-	8,420
	Other administrative costs				128,160	127,100
	Investment manager's fees				8,008	7,865
	Fixtures and fittings				9,282	15,770
	Governance costs					
	Auditor's remuneration				4,000	4,000
	Total Expenditure				509,618	575,740

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

(Charity number: 1046999)

ANNUAL REPORT AND FINANCIAL STATEMENTS

for the year ended

31 December 2020

HPH
Chartered Accountants
54 Bootham
York
YO30 7XZ

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS
ANNUAL REPORT AND FINANCIAL STATEMENTS

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THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT **FOR THE YEAR ENDED 31 DECEMBER 2020**

The trustees, who are also directors of the charity for the purposes of the Companies Act 2006, present their report with the financial statements of the charity for the year ended 31 December 2020.

The Charity is a Public Benefit Entity.

The Financial Statements comply with the Charities Act 2011, the Companies Act 2006, the Memorandum and Articles of Association, and the relevant version of the 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).

STRUCTURE, GOVERNANCE AND MANAGEMENT

The Institution is a Company Limited by Guarantee and governed by its Memorandum and Articles of Association, last amended on 27 April 2018. Trustees are members of the Institution and elected by the membership following their proposal by members or the governing Council of the Institution.

The Institution is managed by its Council, which is headed by the President, assisted by the Senior and Junior Vice Presidents. The Council constitutes committees to assist in the operation of the Institution as it sees fit. Currently, for the general management of the Institution there is a Management Committee, consisting of the President, Vice Presidents, one or more past Presidents, a number of ordinary members of Council, along with the Chief Executive and Treasurer, and Finance Committee, consisting of the President and Vice Presidents, the previous President, the Chief Executive and Treasurer and one ordinary member of Council.

There is no formal training of trustees, but they are periodically provided with the current version of the Charity Commission document 'Charities and Investment Matters: A Guide for Trustees'. Exceptionally, in connection with these accounts, they have also been provided with information regarding the possible impact of COVID-19 on them. Formally, all decisions related to the operation of the Institution are made by the Council. Often, these decisions are based on recommendations from subsidiary committees, particularly Finance and Management. Staff involvement is only related to low-value day to day purchases for the efficient operation of the Institution.

Staff salaries are agreed by Finance Committee on the recommendation of the Chief Executive. A small number of senior management are contracted to the Institution. Their remuneration is likewise agreed by Finance Committee on the Chief Executive's recommendation, with the exception of the Chief Executive, where the remuneration is at the discretion of the Trustees on Finance Committee. The benchmark taken for proposals is generally based on the ruling CPI as published by the Government in October.

The Institution's operating subsidiary is IRSE Enterprises. Its managing board has the Treasurer, President, Vice Presidents, immediate past President, and a Council representative as directors. The Chief Executive is Secretary.

OBJECTIVES AND ACTIVITIES

Public Benefit

The Institution's objects and principal activities continue to be the advancement of the science and practice of signalling and railway telecommunications for the public benefit by the promotion of research, the collection and publication of educational material and the holding of conferences, seminars and meetings, the maintenance of high standards of practice and professional care amongst those working within the industry and the promotion of improved safety standards for the protection of the general public. The trustees have complied with the duty in section 17 of the Charities Act 2011 to have due regard to public benefit guidance published by the Charity Commission.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT **FOR THE YEAR ENDED 31 DECEMBER 2020**

OBJECTIVES AND ACTIVITIES - continued

Custodian Trustee Disclosures

No assets were held by any trustee or by the Institution on behalf of any other charity.

Regular Activities

The Institution's main fund raises money by way of subscriptions, joining fees and donations. The Institution issues a magazine to its members 11 times a year, containing papers, articles and other information pursuant to the Institution's objects. It also sells technical papers and books it publishes itself or buys for re-sale.

The Institution normally organises a number of technical meetings, conferences, seminars and dinners, for some of which it makes a charge. These provide a forum for discussion and the transfer of knowledge. To open up the access to these events some of them are filmed and made available at the time and subsequently through an on-line video link. The COVID-19 pandemic meant from March meetings and seminars were organised using internet-based meeting software and no in-person events took place, including dinners and conferences.

The Licensing scheme, run through the subsidiary IRSE Enterprises, provides accreditation to individuals and organisations within the industry after having complied with certain laid-down standards. Various fees are charged in connection with this. Licences issued are for a 5-year period and therefore one-fifth of the income is credited each year to the Income and Expenditure account, the balance being carried forward as a liability in the Balance Sheet. Following the initial COVID-19 outbreak, a 6-month grace period on licence renewals was introduced. This has now expired but meant there was a significant reduction of licence income for 6 months.

Whilst no formal criteria are applied to measure the success or otherwise of all charged events, there is an expectation they will, at least, break even, whilst for free events a visibly full venue is considered a success. During COVID 19 these measures have been adjusted as a full venue is unacceptable as a measure in a virtual environment. Instead, success has been measured by comparison of online attendance, both live and post event, with equivalent face to face attendance seen previously. It is noted attendance has exceeded expectation and engaged a wider geographical spread, assisting in promoting the charitable objects. In the case of the Institution's exam, the criterion is a suitably high pass-rate.

The Institution is a fully nominated Body of the Engineering Council licensed to register Chartered Engineers, Incorporated Engineers and Engineering Technicians.

GRANT-MAKING

Bursaries and prizes are made available for some events, in particular conventions and conferences. Bursaries are allocated based on an application form and interview by senior members of the Institution. Prizes are based on documented criteria, some of which depend on suitable success in the Institution's exam.

VOLUNTEERS

Volunteers provide considerable assistance in the operation of the Institution, both in its local sections and technical societies, where the objects mirror those of the Institution itself, and centrally, to provide a source of expert input and background assistance. This applies, particularly, in the operation of the Institution's professional exam and the production of the Institution's magazine IRSE News.

SOCIAL INVESTMENT

No financial social investment is undertaken, but the high-level object regarding the maintenance of high standards and the promotion of safety standards is directed towards the protection of the general public whilst on or near railways.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT FOR THE YEAR ENDED 31 DECEMBER 2020

FUNDRAISING

No fundraising activities are undertaken by the Institution.

ACHIEVEMENTS AND PERFORMANCE

The outbreak of the COVID-19 pandemic significantly affected the ability of the IRSE to organise its events as normal. This had a considerable impact on the finances of the Institution during 2020 as the budget was based on their contribution of the overall income. One success, though was the transfer of the Institution's Exam to an on-line platform, allowing all except Module 2 to go ahead as usual. The planned programme of lectures (provided through on-line platforms) was supplemented by two 'webinars' which have suggested that this communication medium may prove more successful than in-person events.

Beyond the events discussed above, there are no specific fundraising activities. No expenditure has been incurred to raise that income, beyond that involved in the organisation of the events themselves.

FINANCIAL REVIEW

The results of the Institution are set out in the Consolidated Statement of Financial Activities and Income and Expenditure Account which may be found on page 11.

The net deficit of the group for the year before fair value adjustments to the carrying value of investments was £45,586 (2019: £59,827) and total funds carried forward are now £2,119,762 (2019: £1,933,012). The closing funds comprised of £35,791 relating to restricted funds (2019: £36,119), £855,389 relating to unrestricted designated funds (2019: £836,199) and £1,228,582 relating to unrestricted general funds (2019: £1,060,694).

The annual budgets are normally based on the status quo. During 2020 two additional people were employed, one with a view to replacing a current employee moving towards retirement and the other to take on a senior role temporarily being covered by an experienced volunteer. The costs associated with these activities were considered 'development' and covered by transfers from reserves.

As in previous years, the accounts of each of the individual funds of the Institution, which are listed below, have been prepared and approved by the Trustees.

The Trustees' Report and Accounts set out in the following pages include the following:

Restricted funds:

- Robert Dell bequest
- Thorrowgood Scholarship bequest

Unrestricted funds:

- General
- IRSE Main fund

Designated

- Scholarship fund
- Fisher / Hewlett fund
- General development fund
- Future Conventions fund
- International conferences fund
- Textbook preparation fund
- Unrealised investments revaluation reserves.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT **FOR THE YEAR ENDED 31 DECEMBER 2020**

INVESTMENTS

Investment policy and objectives

Under the Memorandum and Articles of Association the charity trustees have the power to invest the assets of the Institution in such a manner, as may from time to time be considered desirable. The Trustees take advice from their investment managers, Rathbones. Dividends received are immediately reinvested.

KEY RISKS AND UNCERTAINTIES DISCLOSURE

A Risk Register is held by the Chief Executive and regularly reviewed by Management Committee. Significant risks for the long-term health of the Institution may be summarised as:

- Loss of membership and membership income;
- Loss of key staff including contractors, given the size of the organisation;
- Loss of support for the Licensing Scheme;
- Claims against the Licensing Scheme following an incident on a railway;
- Long-term loss of IT systems;
- Members' personal data loss;
- Financial failure of a major event.

PLANS FOR FUTURE PERIODS

It is hoped that the planned 2020 Convention to be held in Toronto, can be rearranged in 2021, but this will depend on the progress of the COVID-19 pandemic. The same will apply to other events that might normally occur during the year. It is currently a working assumption that events proposed for 2022 will be able to go ahead.

The impact of the loss of events on the finances of the Institution initiated a review of the subscription rates towards the end of 2020 with a view to rebalancing the balance of income between the charity and IRSE Enterprises.

The work to revise / update / republish the Institutions' publications, starting with the Metro textbook, has been underway during the year, but the planned re-publication will not happen until 2021.

PENSION LIABILITIES

The Institution's pension scheme is a defined contribution scheme through an external provider and there are no liabilities arising to the Institution.

RESERVES

The Institution has a Reserves Policy in accordance with the Charity Commission's requirements. This is reviewed annually by Council. The current values of the reserves are detailed in these accounts. The value of the Hewlett / Fisher fund has been reduced to cover the recent costs of providing the bursaries for recent Conventions and conferences. The General fund will be used to refund the costs of the renewal of the Institution's website during the next financial year. The planned return to a modest surplus will help to replenish this, along with movements in the stock market.

Funds in Deficit and Going Concern

No funds are currently in deficit. There is no current reason to believe that the Institution is unable to continue as a going concern.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT
FOR THE YEAR ENDED 31 DECEMBER 2020

REFERENCE AND ADMINISTRATIVE DETAILS

Registered name of the Charity

The Institution of Railway Signal Engineers

Registered Company number

0125685 (England and Wales)

Registered Charity numbers

1046999

Principle address and registered office

4TH Floor, 1 Birdcage Walk

Westminster

London

SW1H 9JJ

Trustees and Directors

The Trustees and Directors who served during the year were:

P A Allan

I J Allison

S W Boshier

I Bridges

R E Burkhardt

G E Clark

M R Fenner

B Godziejewski

R C Gould

Y Hirao

A Knight

P H J McSharry

M Montigel

R Muttram

J E Power

X Rao

P Symons

K Upton

D N Woodland

H S Bhatia (Appointed 23 April 2020)

R L Cooke (Appointed 23 April 2020)

G B S Lam (Appointed 23 April 2020)

C Roberts (Appointed 23 April 2020)

F Al-Tahan (Appointed 23 April 2020)

Resigned from the Board:

C K Gash (Resigned 23 April 2020)

L M Hunter (Resigned 23 April 2020)

P-D Jourdain (Resigned 23 April 2020)

C R Page (Resigned 23 April 2020)

Company Secretary

B Judd

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT
FOR THE YEAR ENDED 31 DECEMBER 2020

REFERENCE AND ADMINISTRATIVE DETAILS - continued

Chief Executive Officer

B Judd

Names and addresses of advisers:

Auditor

HPH, Chartered Accountants
54 Bootham
York
YO30 7XZ

Bankers

National Westminster Bank Plc
Clapham Common Branch
145 Clapham High Street
London
SW4 7SZ

Solicitors

Tozers LLP
10 St. Pauls Road
Newton Abbot
Devon
TQ12 4PR

Investment managers

Rathbone Investment Management
8 Finsbury Circus
London
EC2M 7AZ

Key Management Personnel

B Judd – Chief Executive Officer
A Smith – Treasurer
D Bailey – HR Advisor

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT **FOR THE YEAR ENDED 31 DECEMBER 2020**

STATEMENT OF TRUSTEES RESPONSIBILITIES

The Trustees (who are also the Directors of The Institution of Railway Signal Engineers for the purposes of Company Law) are responsible for preparing the Report of the Trustees and the Financial Statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice), including Financial Reporting Standard 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland".

Company Law requires the Trustees to prepare Financial Statements for each financial period which give a true and fair view of the state of affairs of the Charitable Company and of the incoming resources and application of resources, including the income and expenditure, of the Charitable Company for that period. In preparing those Financial Statements, the Trustees are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in the Charity SORP;
- make judgements and estimates that are reasonable and prudent;
- prepare the Financial Statements on the going concern basis unless it is inappropriate to presume that the Charitable Company will continue in business.

The Trustees are responsible for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the Charitable Company and to enable them to ensure that the Financial Statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the Charitable Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

In so far as the Trustees are aware:

- there is no relevant audit information of which the Charitable Company's auditors are unaware; and
- the Trustees have taken all steps that they ought to have taken to make themselves aware of any relevant audit information and to establish that the Auditors are aware of that information.

AUDITOR

The auditor, HPH is appointed under section 487(1) of the Companies Act 2006.

Approved by order of the board of trustees on 11 March 2021 and signed on its behalf by:

D N Woodland
President and Trustee

HPH

Chartered Accountants

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

OPINION

We have audited the financial statements of The Institution of Railway Signal Engineers (the 'charitable company') for the year ended 31 December 2020, which comprise the Statement of Financial Activities, the Balance Sheet and the related notes, including significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including Financial Reporting Standard 102 'The Financial Reporting Standard applicable in the UK and Republic of Ireland' (United Kingdom Generally Accepted Accounting Practice).

In our opinion the financial statements:

- give a true and fair view of the state of the group's and the charitable company's affairs as at 31 December 2020 and of the group's incoming resources and application of resources for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Companies Act 2006.

BASIS OF OPINION

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the charitable company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the United Kingdom, including the Financial Reporting Council'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'/director's 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 company'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 directors with respect to going concern are described in the relevant sections of this report.

HPH

Chartered Accountants

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

OTHER INFORMATION

The trustees/directors are responsible for the other information contained within the annual report. The other information comprises the information included in the Annual Report, other than the financial statements and our Auditor's report thereon. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether 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.

OPINION ON OTHER MATTERS PRESCRIBED BY THE COMPANIES ACT 2006

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the Trustees' report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the Trustees' report has been prepared in accordance with applicable legal requirements.

MATTERS ON WHICH WE ARE REQUIRED TO REPORT BY EXCEPTION

In the light of the knowledge and understanding of the charitable company and its environment obtained in the course of the audit, we have not identified material misstatements in the Trustees' report.

We have nothing to report in respect of the following matters in relation to which the Companies Act 2006 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept, or returns adequate for our audit have not been received from branches not visited by us; or
- the financial statements are not in agreement with the accounting records and returns; or
- certain disclosures of directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

RESPONSIBILITIES OF DIRECTORS

As explained more fully in the Trustees' responsibilities statement on page 7, 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 charitable company'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 charitable company or to cease operations, or have no realistic alternative but to do so.

HPH

Chartered Accountants

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF
THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**

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.

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

We considered the opportunities and incentives that may exist within the organisation for fraud and identified the greatest potential for fraud in the following areas: timing of recognition of commercial income, posting of unusual journals along with complex transactions and manipulating the charitable company's key performance indicators to meet targets. We discussed these risks with client management, designed audit procedures to test the timing of commercial revenue, tested a sample of journals to confirm they were appropriate and reviewed areas of judgement for indicators of management bias to address these risks.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at: 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 charitable company's members in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the charitable company's members 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 charitable company and the charitable company's members for our audit work, for this report, or for the opinions we have formed.

.....

Robert Woolley (Senior Statutory Auditor)

For and on behalf of HPH, Statutory Auditor

54 Bootham
York
YO30 7XZ

15 March 2021

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES
AND INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED 31 DECEMBER 2020

	Note	Unrestricted Funds £	Restricted Funds £	Total 2020 £	Total 2019 £
Income and endowments from:					
Charitable activities					
Donations and legacies	4	19,092	-	19,092	41,708
Other trading activities					
Non-ancillary trading income	5	354,592	-	354,592	425,921
Other activities	5	480,916	-	480,916	448,263
Investments					
Investment income	6	31,685	68	31,753	38,905
Total income		£ 886,285	£ 68	£ 886,353	£ 954,797
Expenditure on:					
Raising funds					
Other activities	7	3,857	-	3,857	8,567
Investment		8,008	-	8,008	7,865
Non-ancillary trading		422,322	-	422,322	438,884
		434,187	-	434,187	455,316
Charitable activities					
Awards	7	16,195	-	16,195	24,529
Promoting best practice		481,557	-	481,557	534,779
		497,752	-	497,752	559,308
Total expenditure		£ 931,939	£ -	£ 931,939	£ 1,014,624
Net (expenditure) / income before gain / (loss) on investments					
		(45,654)	68	(45,586)	(59,827)
Net gain / (loss) on investments	13	232,732	(396)	232,336	280,451
Net income / (expenditure) for the year		187,078	(328)	186,750	220,624
Reconciliation of funds:					
Total funds brought forward		1,896,893	36,119	1,933,012	1,712,388
Total funds carried forward		£ 2,083,971	£ 35,791	£ 2,119,762	£ 1,933,012

The notes on pages 14 to 25 form part of these financial statements.

Income and net movement in funds derive wholly from continuing operations.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

CONSOLIDATED BALANCE SHEET

AS AT 31 DECEMBER 2020

Registration number: 0125685

		Consolidated		Charity only	
	Note	2020	2019	2020	2019
		£	£	£	£
Fixed assets:					
Tangible fixed assets	12	19,558	31,227	10,395	16,871
Investments	13	2,055,844	1,812,394	1,488,776	1,342,570
		2,075,402	1,843,621	1,499,171	1,359,441
Current assets:					
Stocks	14	48,862	45,110	42,416	36,076
Debtors	15	207,530	194,705	290,623	269,580
Investments	16	209,668	209,205	209,668	209,205
Cash at bank and in hand	26	238,466	338,188	69,062	108,013
		704,526	787,208	611,769	622,874
Liabilities:					
Creditors: amounts falling due within one year	17	422,469	438,934	228,440	237,003
		282,057	348,274	383,329	385,871
		2,357,459	2,191,895	1,882,500	1,745,312
Creditors: amounts falling due after more than one year	18	237,697	258,883	-	-
		£ 2,119,762	£ 1,933,012	£ 1,882,500	£ 1,745,312
The funds of the charity:					
Unrestricted funds	20	2,083,971	1,896,893	1,846,709	1,709,193
Restricted funds	21	35,791	36,119	35,791	36,119
		£ 2,119,762	£ 1,933,012	£ 1,882,500	£ 1,745,312

The financial statements were approved by the Board of Trustees on 11 March 2021 and were signed on its behalf

D N Woodland
President and Trustee

I Bridges
Vice President and Trustee

The notes on pages 14 to 25 form part of these financial statements.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

CONSOLIDATED CASH FLOW STATEMENT
FOR THE YEAR ENDED 31 DECEMBER 2020

	Note	2020		2019	
		£	£	£	£
Net cash used in operating activities	25		(124,790)		(78,758)
Cash flow from investing activities:					
Purchase of tangible fixed assets		(5,784)		(44,793)	
Purchase of fixed asset investments		(237,983)		(231,680)	
Sale of fixed asset investments		237,082		193,471	
Interest received		1,825		2,534	
Dividends received		29,928		36,371	
		<hr/>		<hr/>	
Net cash provided by / (used in) investing activities			25,068		(44,097)
			<hr/>		<hr/>
Change in cash and cash equivalents in the year	27		(99,722)		(122,855)
Cash and cash equivalents at beginning of the year			338,188		461,043
			<hr/>		<hr/>
Cash and cash equivalents at end of the year	26		£238,466		£338,188
			<hr/> <hr/>		<hr/> <hr/>

The notes on pages 14 to 25 form part of these financial statements.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS **FOR THE YEAR ENDED 31 DECEMBER 2020**

1 ACCOUNTING POLICIES

Legal entity

The Institution of Railway Signal Engineers is regulated by the Charities Commission (1046999), limited by guarantee and is registered in England and Wales. The address of the registered office and principal place of business is 4th Floor, 1 Birdcage Walk, Westminster, London, SW1H 9JJ.

In the event of the charity being wound up, the liability in respect of the guarantee is limited to £1 per member of the charity.

The charity constitutes a public benefit entity as defined by FRS 102.

Basis of preparation

The financial statements have been prepared in accordance with the relevant version of the 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), the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS102), the Charities Act 2011 and the Companies Act 2006.

The Institution of Railway Signal Engineers meets the definition of a public benefit entity under FRS102. Assets and liabilities are initially recognised at historical cost or transaction value unless otherwise stated in the relevant accounting policy note(s).

The consolidated accounts include the results of Institution of Railway Signal Engineers and IRSE Enterprises Limited, which are consolidated on a line by line basis. In accordance with section 408 of the Companies Act 2006, no separate Statement of Financial Activities (SOFA) or Cash Flow has been presented for the Charity alone.

Going concern

As described in the Trustees' Annual Report, special consideration has been given to the COVID-19 pandemic. The Trustees/Directors have prepared financial projections, taking into consideration the current economic climate and its potential impact on the sources of income and planned expenditure. They have a reasonable expectation that adequate financial resources are available to enable the Charitable Company to continue in operational existence for the foreseeable future, and have adequate contingency plans in the event that income streams are reduced. Consequently the financial statements have been prepared on the basis that the Charitable Company is a going concern.

Income

All income is recognised in the Statement of Financial Activities once the charity has entitlement to the funds, it is probable that the income will be received and the amount can be measured reliably.

For donations to be recognised, if not received before the year end, the charity will have been notified of the amounts and settlement date in writing.

Fixed asset gifts in kind are recognised when receivable and are included at fair value. They are not deferred over the life of the asset.

Investment income is earned through holding assets for investment purposes such as shares and property. It includes dividends, interest and rent, included on a receivable basis.

Revenue in the trading subsidiary is recognised to the extent that it is probable that the economic benefits will flow to the company and the revenue can be reliably measured. Revenue is measured as the fair value of the consideration receivable, excluding discounts, rebates, value added tax and other sales taxes. The company has no long term contracts or on-going projects.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS **FOR THE YEAR ENDED 31 DECEMBER 2020**

1 ACCOUNTING POLICIES (continued)

Expenditure and irrecoverable VAT

Expenditure is accrued as soon as a liability is considered probable, discounted to present value for longer-term liabilities. Expenditure attributable to more than one cost category is apportioned to them on the basis of the estimated amount attributable to each activity in the year, either by reference to staff time or the use made of the underlying assets, as appropriate. Expenses are shown net of VAT with the irrecoverable element included within direct costs.

Raising funds includes all expenditure incurred by the charity to raise funds for its charitable purposes and includes costs of fundraising activities, events and non-charitable trading.

Governance costs represent those costs attributable to the management of the charity's assets, organisational administration and compliance with constitutional and statutory requirements.

Support costs are those costs that assist the work of the charity but do not directly represent charitable activities and include office costs and governance costs, including payroll costs. They are incurred directly in support of expenditure on the objectives of the charity. Where support costs cannot be directly attributed to particular headings they have been allocated to costs of raising funds and expenditure on charitable activities on a basis consistent with use of the resources.

Tangible fixed assets

Tangible fixed assets are included in the financial statements at their historical cost. Depreciation is calculated to write off the cost of fixed assets over their expected useful lives on a straight line basis. The rates used are as follows:

Fixtures and fittings	20% per annum straight line
IT and software	33% per annum straight line

Stocks

Stocks are stated at the lower of cost and net realisable value, after making due allowance for obsolete and slow moving stock.

Fund accounting

General funds - These are funds which can be used in accordance with the charity's charitable objectives at the discretion of the board.

Designated funds - these comprise unrestricted funds that have been set aside by the trustees for particular purposes. The aim and use of each designated fund is set out in the notes to the financial statements.

Restricted funds - These are subject to specific restrictive conditions imposed by the donors of funds received for specific purposes and projects.

Financial instruments

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

Cash at bank and in hand

Cash at bank and cash in hand includes cash and any short term deposit accounts with a maturity of three months or less from the date of opening.

Other financial assets

Other financial assets are initially measured at fair value, which is normally the transaction price. Such assets are subsequently carried at fair value and the changes in fair value are recognised in the Statement of Financial Activities, except investments that are not publicly traded and whose fair values cannot be measured reliably are measured at cost less impairment.

Debtors

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

Investments

The investment portfolios have been valued at market value at 31 December 2020. The Statement of Financial Activities includes the net gains and losses on investments arising on revaluation at the year end and on disposals throughout the year. Realised gains and losses on sales of investments are calculated as the difference between the sale proceeds and opening market value. Unrealised gains and losses represent the movement between market values.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS **FOR THE YEAR ENDED 31 DECEMBER 2020**

1 ACCOUNTING POLICIES (continued)

Other financial instruments

All other financial instruments are initially recognised at fair value, which is normally the transaction price. Other financial instruments are subsequently measured at fair value with any changes in the fair value recorded in the Statement of Financial Activities.

Creditors and provisions

Creditors and provisions are recognised where the charity has a present obligation resulting from a past event that will probably result in the transfer of funds to a third party and the amount due to settle the obligation can be measured or estimated reliably. Creditors and provisions are normally recognised at their settlement amount after allowing for any trade discounts due.

Operating leases

Rentals payable under operating leases are charged in the Statement of Financial Activities on a straight line basis over the lease term.

Foreign currencies

Assets and liabilities in foreign currencies are translated into sterling at the rates of exchange ruling at the balance sheet date. Transactions in foreign currencies are translated into sterling at the rate of exchange ruling at the date of transaction. Exchange differences are taken into account in arriving at the operating result.

Pension costs and other post-retirement benefits

The charitable company operates a defined contribution pension scheme. Contributions payable to the charitable company's pension scheme are charged to the Statement of Financial Activities in the period to which they relate.

Significant judgements and estimates

In the application of the group's accounting policies, the directors are required to make judgements, estimates and assumptions in areas where this information is not readily available from other sources. In particular the directors use judgment in assessing the carrying amount of assets and liabilities. The estimates and assumptions are based on the historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised where the revision affects only that period, or in the period of the revision and future periods where the revision affects both current and future periods.

Investments

Investments are included on the Balance Sheet and are stated at market value as at the balance sheet date. Gains and losses on disposal and revaluations of investments are charged or credited to the Statement of Financial Activities.

2 TAXATION

As a registered charity, The Institute of Railway Signal Engineers is exempt from the tax on income falling within sections 466 to 493 of the Corporation Tax Act 2010 to the extent that this is applied to its charitable objects. No tax charges have arisen in the Company.

3 OPERATING SURPLUS

The surplus for the year is stated after charging:

Depreciation

Auditor's remuneration

2020

£

17,453

6,000

2019

£

22,948

8,000

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2020

4 CHARITABLE ACTIVITIES - DONATIONS AND LEGACIES	2020	2019
	£	£
Donations	£ 19,092	£ 41,708

All donations related to unrestricted funds.

5 OTHER TRADING ACTIVITIES	2020	2019
	£	£
Other activities		
Subscriptions	407,702	404,989
Professional reviews	3,350	915
Advertising	12,555	9,075
Booklets & textbooks	18,730	7,138
IRSE ties, cufflinks and badges	26	26
Examination fees and materials	38,553	25,413
Proceeds from members' lunch	-	707
	<u>480,916</u>	<u>448,263</u>

All other activities relate to unrestricted funds.

Trading income

IRSE Enterprises Limited	354,592	425,921
--------------------------	---------	---------

6 INVESTMENT INCOME	2020	2019
	£	£
Equities & Government stocks	23,824	29,958
Interest receivable	1,705	2,167
IRSE Enterprises Limited	6,224	6,780
	<u>£ 31,753</u>	<u>£ 38,905</u>

£68 of investment income relates to restricted funds (2019: £61).

7 ANALYSIS OF EXPENDITURE

	Staff costs	Other	Depreciation	2020	2019
	£	£	£	£	£
Raising funds					
Other activities	1,494	2,270	93	3,857	8,567
Investment	-	8,008	-	8,008	7,865
Non-ancillary trading	126,654	287,498	8,170	422,322	438,884
Total raising funds	<u>128,148</u>	<u>297,776</u>	<u>8,263</u>	<u>434,187</u>	<u>455,316</u>
Charitable activities					
Awards	5,977	9,847	371	16,195	24,529
Promoting best practice	141,955	330,784	8,818	481,557	534,779
Total charitable activities	<u>147,932</u>	<u>340,631</u>	<u>9,189</u>	<u>497,752</u>	<u>559,308</u>
Total Expenditure	<u>£ 276,080</u>	<u>£ 638,407</u>	<u>£ 17,452</u>	<u>£ 931,939</u>	<u>£ 1,014,624</u>

All raising funds expenditure relates to unrestricted funds.

£nil of charitable activities expenditure relates to restricted funds (2019: £300).

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2020

8 GOVERNANCE COSTS	2020	2019
	£	£
Auditors' remuneration	£ 6,000	£ 8,000

All governance costs relate to unrestricted expenditure.

9 AUDITOR'S REMUNERATION

Amounts payable to the auditor for statutory audit services of the group are £6,000 (2019 - £8,000) and of the charity are £4,000 (2019 - £4,000).

10 TRUSTEE REMUNERATION AND BENEFITS

Trustees' travel expenses totalling £2,030 were reimbursed to 2 Trustees during the year. In 2019 Trustees' travel expenses totalling £2,551 were reimbursed to 2 Trustees.

11 STAFF COSTS	2020	2019
	£	£
Wages and salaries	237,796	256,872
Social security costs	20,095	15,665
Defined contribution pension costs	18,189	18,200
	<u>£ 276,080</u>	<u>£ 290,737</u>

The average number of employees during the year was as follows:

	2020	2019
Administration	<u>10</u>	<u>10</u>

There are no employees who received total employee benefits (excluding employer pension costs) of more than £60,000 (2019 - None).

The key management personnel of the charitable company, comprise the Trustees and Chief Executive Officer as disclosed on page 6. The total amount of employee benefits (including employer pension contributions) received by key management personnel for their services to the charitable company was nil (2019: nil). The total amount paid to the key management personnel in respect of their services totalled £80,729 (2019: £79,278).

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2020

12 TANGIBLE FIXED ASSETS - GROUP

	Fixtures and fittings £
Cost:	
At 1 January 2020	322,896
Additions	5,784
Disposals	-
At 31 December 2020	<u>328,680</u>
Depreciation:	
At 1 January 2020	291,669
Charge for the year	17,453
Re-classification	-
At 31 December 2020	<u>309,122</u>
Net book values:	
31 December 2020	<u>£ 19,558</u>
31 December 2019	<u>£ 31,227</u>

All of the tangible fixed assets relate to unrestricted funds.

TANGIBLE FIXED ASSETS - CHARITY

	Fixtures and fittings £
Cost:	
At 1 January 2020	295,907
Additions	2,808
Disposals	-
At 31 December 2020	<u>298,715</u>
Depreciation:	
At 1 January 2020	279,036
Charge for the year	9,284
Re-classification	-
At 31 December 2020	<u>288,320</u>
Net book values:	
31 December 2020	<u>£ 10,395</u>
31 December 2019	<u>£ 16,871</u>

All of the tangible fixed assets relate to unrestricted funds.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS
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13 FIXED ASSET INVESTMENTS - GROUP

	Equities	Government securities	Total
	£	£	£
Market value			
At 1 January 2020	1,602,145	210,249	1,812,394
Additions	237,983	-	237,983
Disposals	(211,545)	(25,537)	(237,082)
Revaluation	233,790	8,759	242,549
At 31 December 2020	<u>£ 1,862,373</u>	<u>£ 193,471</u>	<u>£ 2,055,844</u>

£35,666 of investments relates to restricted funds (2019: £36,062).

£396 of losses on investments relates to restricted funds (2019: £329).

FIXED ASSET INVESTMENTS - CHARITY

	Subsidiary company	Equities	Government securities	Total
	£	£	£	£
Market value				
At 1 January 2020	4,415	1,173,504	164,651	1,342,570
Additions	-	137,854	-	137,854
Disposals	-	(88,580)	(25,537)	(114,117)
Revaluation	-	115,686	6,783	122,469
At 31 December 2020	<u>£ 4,415</u>	<u>£ 1,338,464</u>	<u>£ 145,897</u>	<u>£ 1,488,776</u>

£35,666 of investments relates to restricted funds (2019: £36,062).

£396 of losses on investments relates to restricted funds (2019: £329).

The charitable company's investments at the balance sheet date in the share capital of companies include the following:

IRSE Enterprises Limited

Registered office: 4th Floor, 1 Birdcage Walk, Westminster, London, SW1H 9JJ

Nature of business: Administration & finance support for parent

	% holding	2020	2019
		£	£
Class of share:			
Ordinary	100		
Aggregate capital and reserves		241,676	192,116
Profit / (loss) for the year		<u>49,560</u>	<u>71,109</u>

No donation (2019: £nil) was made from the company to the charity in the year due to the fact that the company did not make a taxable profit.

14 STOCKS - GROUP

	2020	2019
	£	£
Stocks	<u>£ 48,862</u>	<u>£ 45,110</u>

STOCKS - CHARITY

	2020	2019
	£	£
Stocks	<u>£ 42,416</u>	<u>£ 36,076</u>

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2020

15 DEBTORS

	Consolidated		Charity	
	2020	2019	2020	2019
	£	£	£	£
Trade debtors	122,910	58,801	-	-
Other debtors	12,017	9,707	12,017	9,707
Prepayments and accrued income	6,422	78,555	-	-
VAT	66,181	47,642	53,571	35,995
Amounts owed by group undertakings	-	-	225,035	223,878
	<u>£ 207,530</u>	<u>£ 194,705</u>	<u>£ 290,623</u>	<u>£ 269,580</u>

All debtors relate to unrestricted funds.

16 CURRENT ASSET INVESTMENTS - GROUP

	2020	2019
	£	£
National Savings	<u>£ 209,668</u>	<u>£ 209,205</u>

All debtors relate to unrestricted funds.

17 CREDITORS: amounts falling due within one year

	Consolidated		Charity	
	2020	2019	2020	2019
	£	£	£	£
Trade creditors	28,984	38,981	18,093	28,520
Accruals and deferred income	200,644	196,505	177,332	176,262
Taxation and social security	-	-	-	-
Other creditors	192,841	203,448	33,015	32,221
	<u>£ 422,469</u>	<u>£ 438,934</u>	<u>£ 228,440</u>	<u>£ 237,003</u>

All creditors relate to unrestricted funds.

18 CREDITORS: amounts falling due after more than one year - GROUP

	2020	2019
	£	£
Other creditors	<u>£ 237,697</u>	<u>£ 258,883</u>

Representing the proportion of licence fees received in advance, which will be credited to income after more than one year.

19 ANALYSIS OF NET ASSETS BETWEEN FUNDS

	Tangible fixed assets	Investments	Net current (liabilities)/ assets	Long term liabilities	Total 2020
	£	£	£	£	£
Unrestricted funds	10,395	1,448,695	383,205	-	1,842,295
Restricted funds	-	35,666	125	-	35,791
Total Charity Funds	<u>10,395</u>	<u>1,484,361</u>	<u>383,330</u>	<u>-</u>	<u>1,878,086</u>
IRSE Enterprises Limited	9,163	571,483	(101,273)	(237,697)	241,676
Total for the group	<u>£ 19,558</u>	<u>£ 2,055,844</u>	<u>£ 282,057</u>	<u>£ (237,697)</u>	<u>£ 2,119,762</u>

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

**NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2020**

19 ANALYSIS OF NET ASSETS BETWEEN FUNDS - continued

2019 comparatives

	Tangible fixed assets	Investments	Net current (liabilities)/ assets	Long term liabilities	Total 2019
	£	£	£	£	£
Unrestricted funds	16,871	1,302,093	385,813	-	1,704,777
Restricted funds	-	36,062	57	-	36,119
Total Charity Funds	16,871	1,338,155	385,870	-	1,740,896
IRSE Enterprises Limited	14,356	474,239	(37,596)	(258,883)	192,116
Total for the group	£ 31,227	£ 1,812,394	£ 348,274	£ (258,883)	£ 1,933,012

20 UNRESTRICTED FUNDS

	Balance at 01/01/2020	Income	Expenditure	Gains on investments	Transfers	Balance at 31/12/2020
	£	£	£	£	£	£
Designated funds						
Scholarship	77,128	940	-	-	-	78,068
Alan Fisher memorial / Frank Hewlett Bequest	407,071	19,017	(767)	-	-	425,321
General Development	307,000	-	-	-	-	307,000
Future ASPECT Conference	10,000	-	-	-	-	10,000
International conventions	27,500	-	-	-	-	27,500
Textbook Preparation	7,500	-	-	-	-	7,500
	836,199	19,957	(767)	-	-	855,389
Unrestricted funds						
General Fund	856,485	505,512	(508,850)	121,666	-	974,813
Charity	1,692,684	525,469	(509,617)	121,666	-	1,830,202
Non charitable trading funds	204,209	360,816	(422,322)	111,066	-	253,769
Total for the group	£ 1,896,893	£ 886,285	£ (931,939)	£ 232,732	£ -	£ 2,083,971
<i>2019 comparatives</i>						
	Balance at 01/01/2019	Income	Expenditure	Gains on investments	Transfers	Balance at 31/12/2019
	£	£	£	£	£	£
Designated funds						
Scholarship	76,232	896	-	-	-	77,128
Alan Fisher memorial / Frank Hewlett Bequest	423,017	40,774	(6,720)	-	(50,000)	407,071
General Development	307,000	-	-	-	-	307,000
Future ASPECT Conference	10,000	-	-	-	-	10,000
International conventions	27,500	-	-	-	-	27,500
Textbook Preparation	7,500	-	-	-	-	7,500
	851,249	41,670	(6,720)	-	(50,000)	836,199
Unrestricted funds						
General Fund	691,352	480,365	(568,720)	203,488	50,000	856,485
Charity	1,542,601	522,035	(575,440)	203,488	-	1,692,684
Non charitable trading funds	133,100	432,701	(438,884)	77,292	-	204,209
Total for the group	£ 1,675,701	£ 954,736	£ (1,014,324)	£ 280,780	£ -	£ 1,896,893

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

**NOTES TO THE FINANCIAL STATEMENTS
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21 RESTRICTED FUNDS	Balance at 01/01/2020	Income	Expenditure	Losses on investments	Balance at 31/12/2020
	£	£	£	£	£
Restricted funds					
Dell Bequest	23,432	-	-	(305)	23,127
Thorrowgood Bequest	12,687	68	-	(91)	12,664
	<u>£ 36,119</u>	<u>£ 68</u>	<u>£ -</u>	<u>£ (396)</u>	<u>£ 35,791</u>
 <i>2019 comparatives</i>					
	Balance at 01/01/2019	Income	Expenditure	Losses on investments	Balance at 31/12/2019
	£	£	£	£	£
Restricted funds					
Dell Bequest	23,985	-	(300)	(253)	23,432
Thorrowgood Bequest	12,702	61	-	(76)	12,687
	<u>£ 36,687</u>	<u>£ 61</u>	<u>£ (300)</u>	<u>£ (329)</u>	<u>£ 36,119</u>

Dell Bequest

The Dell Award is made annually under a bequest of the late Robert Dell OBE (Past President). It is awarded to a member of the Institution employed by London Underground Ltd (or its successor bodies) for achievement of a high standard in the science and application of railway signalling. The award consists of a plaque with a uniquely designed shield, engraved with the recipient's name together with a cheque.

Thorrowgood Bequest

The Thorrowgood Scholarship is awarded annually to a candidate who has excelled in the IRSE's Professional Examination. The award, which is presented at the Institution's AGM in the April following the examination, comprises the Thorrowgood Scholarship Medallion and a cheque.

22 OPERATING LEASE COMMITMENTS

As at 31 December 2020 the charitable company had future minimum lease payments under non-cancellable operating leases as follows:

	2020	2019
	£	£
Within one year	10,291	41,164
Between one and five years	-	10,291
	<u>£ 10,291</u>	<u>£ 51,455</u>

23 RELATED PARTIES

Other than those detailed in notes 10 and 11, there were no other related parties in the year.

24 ULTIMATE CONTROLLING PARTY

There is no ultimate controlling party. The charity is managed by its board of trustees. The liability of each of the charity's trustees is limited to £1.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2020

25 RECONCILIATION OF NET INCOME TO NET CASH FLOW FROM OPERATING ACTIVITIES	2020	2019	
	£	£	
Net income for the reporting period	186,750	220,624	
Depreciation of tangible Fixed Assets	17,453	22,948	
Gains on Investments	(242,549)	(280,451)	
Interest received	(1,825)	(2,534)	
Dividends received	(29,928)	(36,371)	
(Increase) / decrease in Stocks	(3,752)	1,736	
Increase decrease in Debtors	(12,825)	(18,356)	
Increase in Current Asset Investments	(463)	(1,498)	
(Decrease) / increase in Creditors	(37,651)	15,144	
<i>Net cash used in operating activities</i>	£ (124,790)	£ (78,758)	
26 ANALYSIS OF CASH AND CASH EQUIVALENTS - GROUP	2020	2019	
	£	£	
Cash at bank and in hand	238,466	338,188	
Total cash and cash equivalents	£ 238,466	£ 338,188	
ANALYSIS OF CASH AND CASH EQUIVALENTS - CHARITY	2020	2019	
	£	£	
Cash at bank and in hand	69,062	108,013	
Total cash and cash equivalents	£ 69,062	£ 108,013	
27 ANALYSIS OF CHANGES IN NET DEBT			
	At		At
	01/01/2020	Cash-flows	31/12/2020
	£	£	£
Cash	338,188	(99,722)	238,466
		(99,722)	
	338,188	(99,722)	238,466

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NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2020

28 COMPARATIVE CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES AND INCOME AND EXPENDITURE ACCOUNT

	Unrestricted Funds 2019 £	Restricted Funds 2019 £	Total 2019 £	Total 2018 £
Income and endowments from:				
Charitable activities				
Donations and legacies	41,708	-	41,708	1,763
Other trading activities				
Non-ancillary trading income	425,921	-	425,921	590,739
Other activities	448,263	-	448,263	452,035
Investments				
Investment income	38,844	61	38,905	37,102
Total income	£ 954,736	£ 61	£ 954,797	£ 1,081,639
Expenditure on:				
Raising funds				
Other activities	8,567	-	8,567	9,714
Investment	7,865	-	7,865	8,067
Non-ancillary trading	438,884	-	438,884	562,274
	455,316	-	455,316	580,055
Charitable activities				
Awards	24,229	300	24,529	32,102
Promoting best practice	534,779	-	534,779	557,098
	559,008	300	559,308	589,200
Total expenditure	£ 1,014,324	£ 300	£ 1,014,624	£ 1,169,255
Net (expenditure) before gain / (loss) on investment				
	(59,588)	(239)	(59,827)	(87,616)
Net gain / (loss) on investments	280,780	(329)	280,451	(118,978)
Net income / (expenditure) for the year	221,192	(568)	220,624	(206,594)
Reconciliation of funds:				
Total funds brought forward	1,675,701	36,687	1,712,388	1,918,982
Total funds carried forward	£ 1,896,893	£ 36,119	£ 1,933,012	£ 1,712,388

The following pages do not form part of the statutory financial statements
and contain unaudited information

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

**DETAILED STATEMENT OF FINANCIAL ACTIVITIES
FOR THE YEAR ENDED 31 DECEMBER 2020**

Income	2020		2019	
	£	£	£	£
Donations and legacies				
Donations	19,092		41,708	
<i>Total donations and legacies</i>		19,092		41,708
Other trading activities				
Advertising	12,555		9,075	
Booklets & textbooks	18,730		7,138	
IRSE ties, cufflinks & badges	26		26	
Examination fees & materials	38,553		25,413	
Subscriptions	407,704		404,989	
Professional reviews	3,350		915	
Proceeds from functions	-		707	
<i>Total other trading activities</i>		480,918		448,263
Investments				
Equities & government stocks	23,824		29,958	
Interest receivable	1,705		2,167	
<i>Total income from investments</i>		25,529		32,125
Total income		<u>525,539</u>		<u>522,096</u>
Expenditure				
Raising donations and legacies				
Fund raising dinners	-		4,190	
<i>Total raisings donation and legacies</i>		-		4,190
Charitable activities				
Proceedings: editing & printing	4,028		4,517	
Newsletter: editing & printing	98,249		94,728	
Booklets & textbooks	5,628		5,773	
IRSE ties, cufflinks & badges	-		1,295	
Prizes	39		1,111	
Awards	767		7,020	
Activities funded by country subscription supplements	5,974		8,821	
Professional Review Costs	1,203		2,682	
	<u>115,888</u>		<u>125,947</u>	
<i>Carried forward</i>	<u>115,888</u>		<u>125,947</u>	

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

DETAILED STATEMENT OF FINANCIAL ACTIVITIES
FOR THE YEAR ENDED 31 DECEMBER 2020

	2020		2019	
	£	£	£	£
Charitable activities - continued				
<i>Brought forward</i>	115,888		125,947	
Support costs				
Wages	131,525		168,825	
Social security	9,402		7,244	
Pension	8,499		10,310	
Staff training	2,313		4,797	
Office rent & services	18,524		20,202	
Fees & honoraria	74,017		71,070	
Membership database project	-		8,420	
Other administrative costs	128,160		127,100	
Investment manager's fees	8,008		7,865	
Fixtures and fittings	9,282		15,770	
<i>Total support costs</i>	<u>389,730</u>		<u>441,603</u>	
Governance costs				
Auditors' remuneration	4,000		4,000	
<i>Total expenditure on charitable activities</i>		<u>509,618</u>		<u>571,550</u>
Total expenditure		<u>509,618</u>		<u>575,740</u>
Net income / (expenditure) before gains and losses		15,921		(53,644)
Gains on fixed asset investments		121,269		203,159
Net Charity income		<u>137,190</u>		<u>149,515</u>
Profit arising IRSE Enterprises Limited		49,560		71,109
Net income		<u>£ 186,750</u>		<u>£ 220,624</u>