



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 FIRSE 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

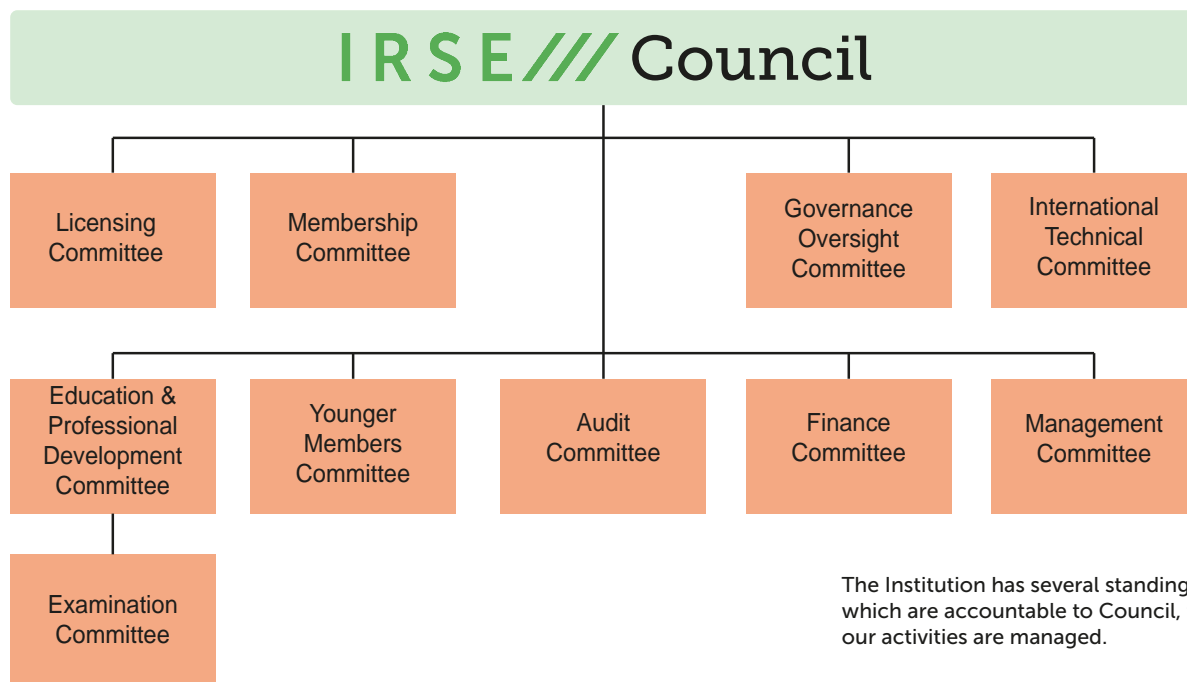
Profits from the company when generated are gift-aided back to the Institution.

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.



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 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.



irse.info/dei

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



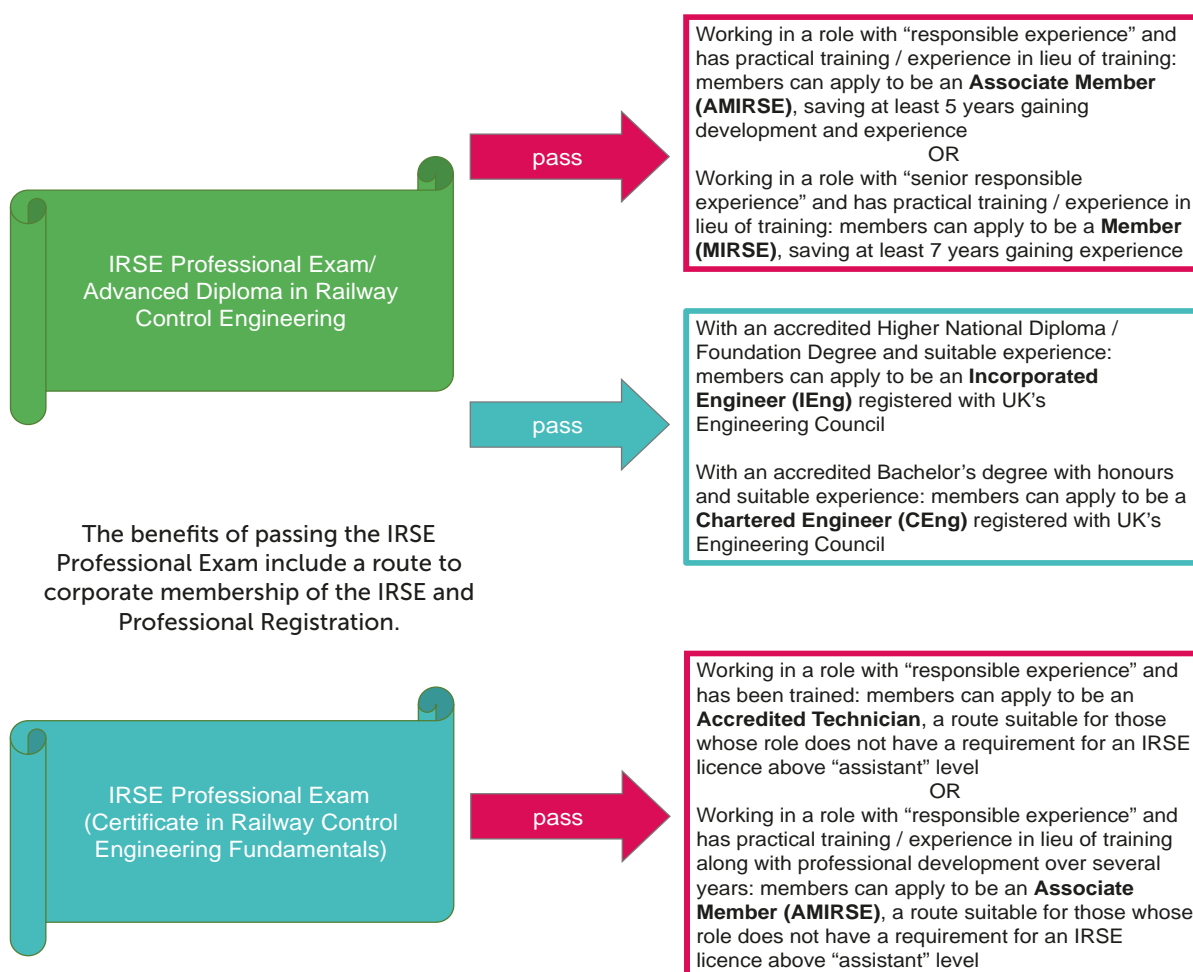
irse.info/irseexam



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

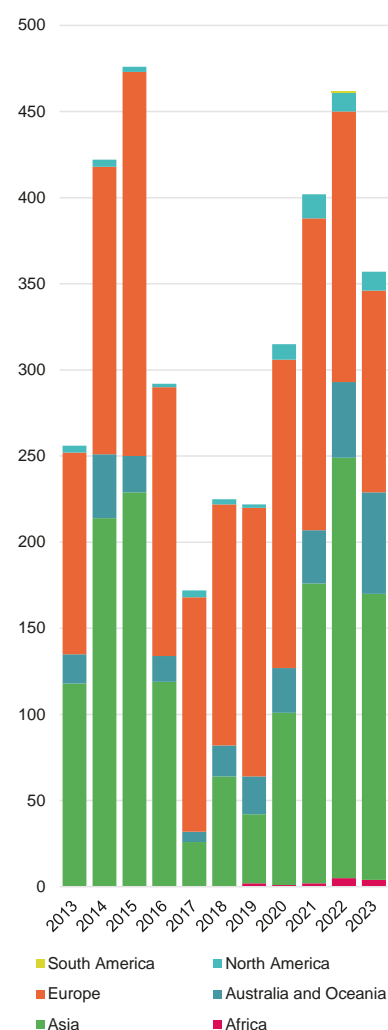
The IRSE offers a process by which training providers can have their courses assessed and certificated by the IRSE. Some training providers are in the process of having their signalling and telecommunications courses assessed and PM Training and Assessing Limited had their signalling installation course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



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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.

Thorrowgood Scholarship

Joseph Conlon and Ashley Murray

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.

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.

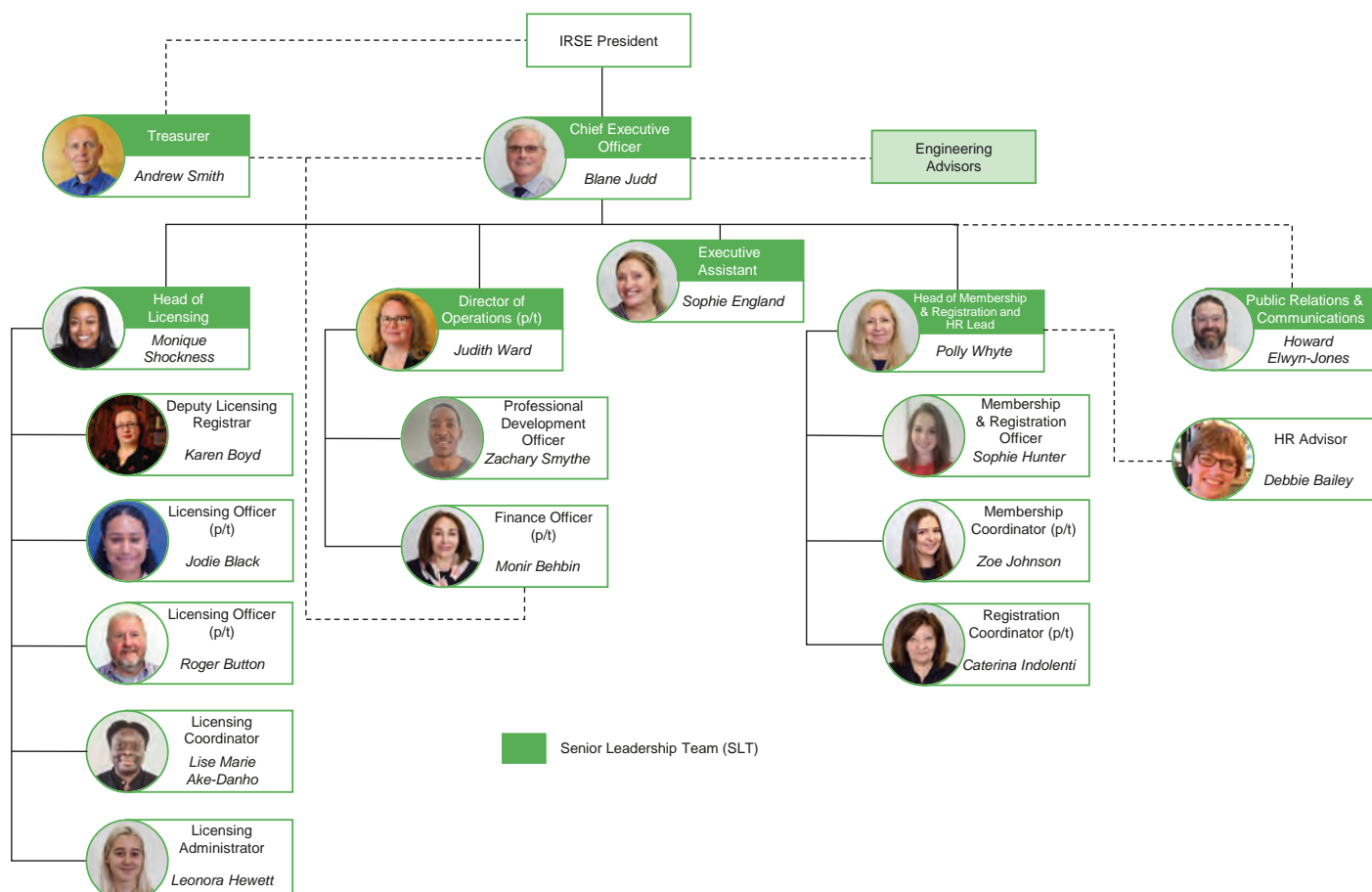
Contract support

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.

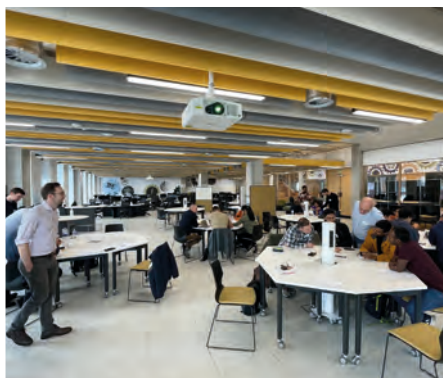


irse.info/youngermembers

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 Thorowgood 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

IRSE ///

President

Steve Boshier FIRSE

Vice-presidents

Jane Power FIRSE
Bogdan Godziejewski FIRSE
Rod Muttram FIRSE

Co-opted past-presidents

Andy Knight FIRSE
Ian Bridges FIRSE
Charles Page 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

Chief Executive

Blane Judd

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

Treasurer

Andrew Smith FIRSE

From the class of Associate Member

Georgina Hartwell AMIRSE
Xialou Rao MIRSE
(was AMIRSE when elected)
Keith Upton AMIRSE

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 Thorrowgood 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.



irse.info/irseneews



www.irse.org



irse.info/vimeo

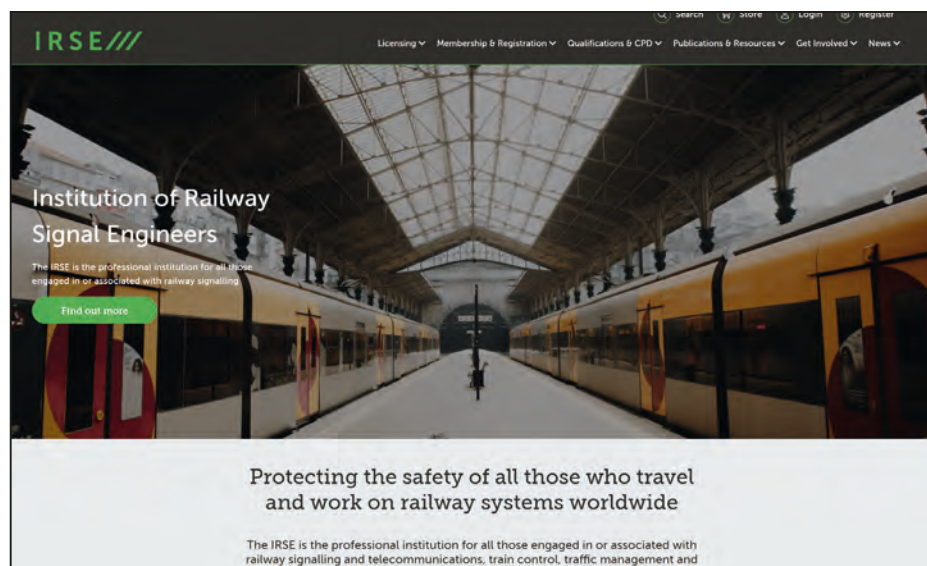
The top five countries by viewership were UK (34%), India (18%), Australia (15%), and Hong Kong (8%).

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.

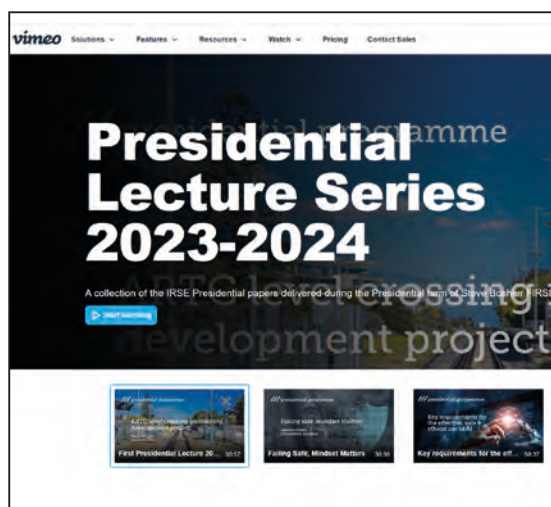


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irse.info/publications

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	12				
Other activities		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	12				
Awards		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