



Institution of Railway Signal Engineers

Annual Report

Number 108

1 January to 31 December 2020

Contents

This Annual Report briefly describes the activities undertaken by the Institution of Railway Signal Engineers (IRSE) throughout the world during 2020. Our President from April 2020 has been Daniel Woodland from the United Kingdom.

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

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IRSE ///

Institution of Railway Signal Engineers

An introduction from our President

From March onwards, the 2020 year proved to be a difficult and most unusual one for many of our members, both in their personal and professional lives. With much of the world experiencing periods of COVID-19 related 'lockdown' and restrictions, our usual/familiar cycle of IRSE activities has also been impacted by this.

The AGM and annual dinner were the first IRSE event casualties, followed by the members lunch, convention and technical visits ... along, of course, with my own plans to visit local sections around the globe. It could have been a very quiet year for the institution, but I have been delighted to see how our staff and many volunteers have rallied around to find new, innovative, ways to facilitate continuing service of our memberships needs and fulfilment of our charitable aim to advance the science and practice of train control.

Back in 2018 (as I was becoming a Vice-President) we began to work on a 'beyond 2020' vision for the IRSE, which you can see summarised in the section on strategy on page 4 and laid out in full at irse.info/strategy. This encapsulated our vision, to 'Deliver Safe and Sustainable Global Railways' and five pillars of activity, or goals, ENGAGE, GROW, NETWORK, DEVELOP and ASSURE on which that is based.

Through 2020 it has been my privilege to lead the institution into that 'beyond 2020' period and we have been working to embed this vision into our planning and delivery to achieve the aims outlined in our Articles of Association. To draw out some highlights (which are by no means all that we have been doing):

1. Engage (with the sector and community)

2020 saw our first use of Civica (formerly electoral reform services ERS) to facilitate and run our Council election process – with nominations and voting now possible electronically. This was a significant step forward in engagement with our membership and represents the first stage in a review of our governance processes to explore how we can further improve representation of our global membership. I anticipate further changes coming out of this review to be implemented in 2021 and beyond. Looking further afield, throughout the year we have developed closer ties with our fellow professional institutions, the UK Railway Industry Association and Rail Business Daily, amongst others.



“From March onwards, the 2020 year proved to be a difficult and most unusual one for many of our members”

2. Grow (increase our membership)

Recognising that the expertise and experience of IRSE members and prospective members are key to addressing many of the sectors challenges, our ability to support them in developing and applying their competence depends largely on getting them to engage and join. Delivering on the Grow pillar, the IRSE therefore launched working groups during 2020 to explore our value proposition (for members and licence holders) and fee structure – looking to explore how we can tune our offering to the industry and better market that globally. Expect to see changes arising from these working groups being implemented in coming years.

3. Network (facilitate interactions globally)

As with all aspects of life, we have moved into online forms of activity and have now all become familiar with the plethora of online meetings, seminar and webinar tools! Delivering to the Network element, the programme of Presidential lectures has been able to continue as planned (completing George’s series on ‘Delivering Change’ and starting my own on ‘Complexities of Change’ in modern CCS systems), as have many local section events. By moving online, these have been able to attract wider audiences of both members and non-members. It has been pleasing to see higher attendances than we have for many years and participants joining from around the world, not just the area local to the event.

4. Develop (enhanced capability of the railway sector workforce)

The IRSE filled the void left by the decision to cancel the 2020 Convention in Toronto by proposing a joint institution seminar on ‘Practical Integration of Automated Operation in Railways: A System of Systems Perspective’. I was personally delighted that the IMechE, IET and PWI joined with us in that event, enabling a far richer and more holistic review of the topic than we could have assembled alone, delivering a fantastic set of presentations and Q&A through September and October (and now available to all members via the IRSE website). With Presidential and Local Section presentations having continued online, we have seen a wealth of material become available to aid development of our members and the wider sector workforce. Our next challenge will be to find ways of conducting ‘virtual’ technical visits – a task which is already being worked on.

5. Assure (set and uphold standards for people and processes)

Probably the most significant development for the IRSE over this year has been the movement of the IRSE Exams to an online format. This was (at least for our conservative industry) a radical move which required a huge effort from our staff and members of the Education and Professional Development and Examination committees – given that they only had a couple of months from realising that a physical invigilated exam would not be possible to having an online solution up and running, this was a really amazing achievement.

These highlights barely scratch the surface of all that has been going on within the institution and you will find details of more within the full annual report. My heartfelt thanks go out to our staff and volunteers for their significant efforts in keeping the institution active, relevant, and forward looking through all the trials of the year and despite all of the extra work, re-planning and challenges that has caused.

Dr Daniel Woodland, 2021

The IRSE at a glance

IRSE

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

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

Providing world-class
presentations, seminars, conventions and conferences

Industry leading competence assessment and
licensing
scheme

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

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

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

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

Vibrant
Younger Members
Section

Run by
engineers
for
engineers

Founded in **1912**

Objectives of the Institution

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

- 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
- The maintenance of high standards of practice and professional care amongst those working within the industry and the promotion of improved safety standards for the protection of the general public.

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

There is a clear emphasis in the objectives on 'public benefit'. This is most obvious in the sense of contributing to safety on the world's railways, where train control systems play a critical role. But we are also interested in

ensuring that railways are efficient, cost-effective and sustainable (in the widest sense). We meet our obligations to the public through the following principal mechanisms:

- The dissemination of knowledge, experience and good practice in the fields of railway signalling, control and communications and allied topics, to help ensure that those working in the profession do so with the best available knowledge for the safe, efficient and cost-effective construction and operation of the world's railways.
- The provision and management of the IRSE Licensing Scheme to assure the competence of those working in the profession. The Scheme is focused predominantly, but not exclusively, on ensuring safety in the design, construction, testing and maintenance of signalling and telecommunications systems.
- Our Code of Professional Conduct, with which IRSE members are required to comply in the course of their work. It emphasises topics such as personal responsibility for work undertaken or managed by

IRSE members, the importance of safeguarding the public interest (particularly safety), environmental management, the efficient use of resources, handling conflicts of interest etc.

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

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

Our Strategy

In 2020 we launched our new five-year rolling strategic plan 'Beyond a 2020 vision', details are available on the website at irse.info/strategy. The objective of making the IRSE accessible to members 24 hours a day seven days a week throughout the year, as long as you have an internet connection, was timed perfectly to address the challenges of the COVID-19 pandemic. You will read in this report how the Institution has swiftly responded to the challenges of maintaining services to the membership during this difficult time.

The rate of pace of change is testament to the commitment the staff and volunteers have made to continue to bring high quality information and services to you the membership.

Looking to the future the Council and its sub committees, as part of their governance activities have ensured that they continue monitor our progress and growth in the value we provide to the signalling and telecommunications community around the world.

Progress had to be halted in developing the international dimension of the Institution, with plans for the Toronto Convention in 2020 and work on ASPECT 2021 severely hampered by the pandemic. We obtained several video conferencing licences to support the Local Sections, and the work of the Local Section Coordinator has been essential in helping to roll this out internationally.

As part of the focus on new entrants into the sector, the Institution is working with training providers in the area of apprenticeships. We continue to offer our services as an End Point Assessment service. There will be developments into 2021 to support candidates in completing their programmes.

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

IRSE

ENGAGE
GROW
NETWORK
DEVELOP
ASSURE

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

The five key elements of the IRSE strategic plan are

Engage

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

Grow

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

Network

Industry Partnership Scheme, global local section development, International Technical Committee support, conferences, seminars and conventions, facilitate collaboration, latest information and news.

Develop

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

Assure

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



Governance

Council

The IRSE is governed by an elected Council of twenty-one Corporate Members, led by the President, who are the Trustees of the Institution.

Six meetings of the Council were held during the year in which the business of the Institution was conducted. The Articles of Association permit the current Chairs of all local sections, both in and outside the UK, and also Country Vice-Presidents to attend Council meetings. During the year a number of Chairs and Country Vice-Presidents attended meetings using video conference facilities due to COVID-19 restrictions, with the exception of the meetings in February and March which were held in person.

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

- Adoption of the 'Beyond a 2020 vision' strategy and the associated Implementation Plan.
- Agreement to review the Governance documents.
- Implement a fees structure working group to start in 2021.
- Establishing a succession plan for the office of President.
- Consideration of changes to voting to facilitate greater representation of members around the globe.

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

Committees

The Institution has a number of Committees which are accountable to Council, through which our activities are managed. The principal Committees and their relationships to Council are shown in the diagram below. In addition, ad-hoc working groups are formed from time to time which focus on specific tasks.

Audit

External audit

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

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

Internal audit

The IRSE's internal Audit Committee undertakes independent audits to complement the external audits, in

order to ensure the Institution is running efficiently and effectively. The audits focus primarily on the role and remit of each of the principal Committees of the Institution.

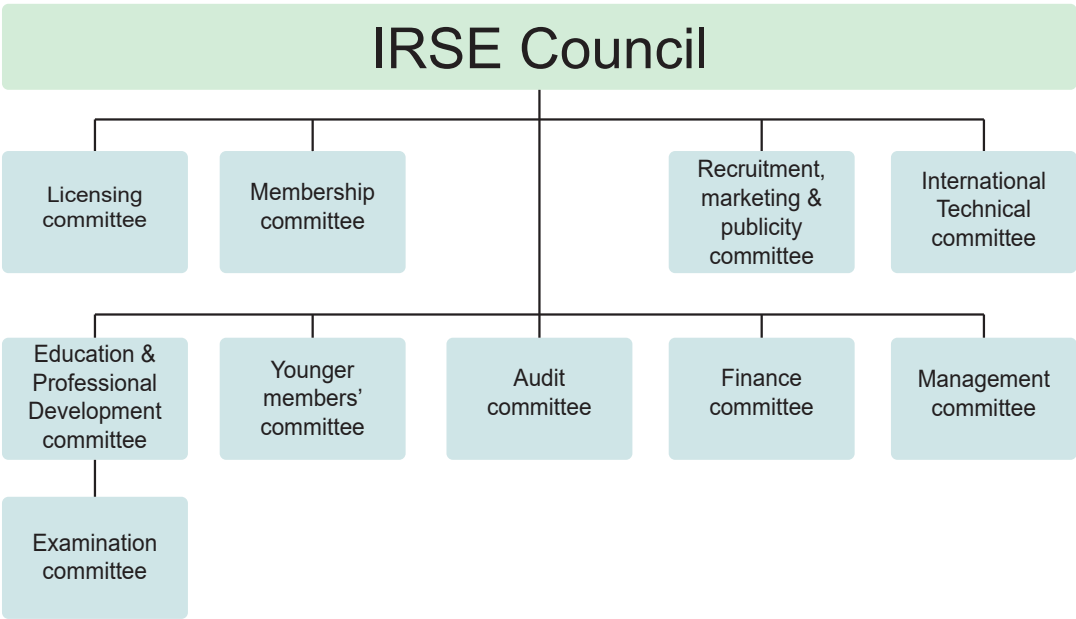
The Audit Committee normally performs two audits per annum. Each audit results in a report, which is presented to the Chair of that Committee and subsequently the Council, which uses the recommendations to improve the management of the Institution's affairs for public benefit and for the benefit of its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

IRSE Enterprises

IRSE Enterprises Ltd is the trading company wholly owned by the Institution. The trading company handles a number of activities which are associated with but outside the direct scope of the charity. The Directors of the company appointed for the year April 2020 to April 2021 were:

- Chair (Immediate Past President): George Clark.
- President: Daniel Woodland.
- Senior Vice President: Ian Bridges.
- Junior Vice-President: Andy Knight.
- Council representative: Steve Boshier.
- IRSE Treasurer: Andrew Smith.
- Company Secretary (CEO): Blane Judd.

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



Sections

The IRSE Sections around the world exist by authority of the IRSE Council, and they operate in accordance with a set of Articles of Association (or Byelaws) that have been approved by Council. At the end of 2020 there were 23 sections in total. 15 Sections outside the UK in various parts of the world (Australasia, China, France, Hong Kong, India, Indonesia, Ireland, Japan, Malaysia,

Netherlands, North America, Singapore, Southern Africa, Swiss, Thailand) and six of which are UK-based. The North America Section includes the USA, Canada and Mexico. The Ireland Section includes both Northern Ireland and the Republic of Ireland.

Two other Sections also exist – the Younger Members' Section and the Minor Railways' Section. These are not geographically based, although their

activities are predominantly within the UK. Some geographical Sections also have younger members' groups.

Each Section has an organising Committee, with elected officers for key roles. Information about the activities of the Sections is provided elsewhere in this report.

Professional development

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

To do this, we have Judith Ward, our Director of Operations, the Education and Professional Development Committee and the Examination Committee.

IRSE Professional Examination

The IRSE professional examination is a Masters-level academic qualification which tests knowledge and understanding of railway systems with a particular emphasis on safety. A new module was introduced in October 2020, the Certificate in Railway Control Engineering Fundamentals, which covers all aspects of railway control engineering at a foundation level and is a stand-alone qualification.

To pass the full exam, to be known in future as the Advanced Diploma in Railway Control Engineering, candidates must pass four modules including a compulsory module on safety systems.

Passing the IRSE exam is one route to obtain either Associate Member or Member of the IRSE and it can 'top up' engineering or technology qualifications for professional registration with UK's Engineering Council. An accredited Bachelor's degree with honours plus IRSE exam may demonstrate knowledge and understanding for Chartered Engineer applicants and an accredited Higher National Diploma / Foundation Degree plus IRSE exam may demonstrate knowledge and understanding for Incorporated Engineer applicants.

Many volunteers run exam study groups, the independent exam forum website and support the Younger Members' exam workshops to provide support for prospective examination candidates.

To enable our exam candidates to sit the exam in 2020, Education and Professional Development Committee agreed to hold the exam remotely for the first time in the Institution's history, with 286 candidates sitting the exam on 3 October. This was an increase in the number of candidates, the majority of whom were sitting the new Certificate in Railway Control Engineering Fundamentals (module A). The quality of answers from candidates was similar to 2019, with the overall percentage of those achieving pass grade or higher was 57%. Candidates sat the exam across the globe, covering 16 geographic sections and several countries not covered by sections.

October 2020 was the final time candidates could sit numbered modules. From October 2021, four mandatory modules covering the whole syllabus to the same high standards will be available, the successful completion of which will be known as Advanced Diploma in Railway Control Engineering.

Continuing Professional Development (CPD)

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

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

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

Certified courses

The IRSE offers a process by which training providers can have their courses assessed and certificated by the IRSE.

This year ASAP Mobility Sdn (Malaysia), Signet Solutions (UK) and PM Training and Assessing (UK) gained IRSE certification for their courses covering railway signalling and telecommunications.

Other training providers are in the process of having their signalling and telecommunications courses assessed.

Professional Registration

The IRSE is licensed by the UK's Engineering Council to register suitably qualified members as Chartered Engineer (CEng), Incorporated Engineer (IEng) and Engineering Technician (EngTech).

The requirements for these are defined by the Engineering Council for knowledge, understanding, competence, relevant work experience and commitment. Brief definitions are that: Engineering Technicians apply proven techniques and procedures to practical problems; Incorporated Engineers maintain and manage applications of current and developing technology; Chartered Engineers develop solutions to engineering problems using new or existing technologies and/or have technical accountability for complex systems with significant levels of risk.

Apprenticeships

IRSE are End Point Assessment Organisation (EPAO) for two English apprenticeships: Rail Engineering Design Technician (Level 3) and Rail Engineering Technician (Level 3).

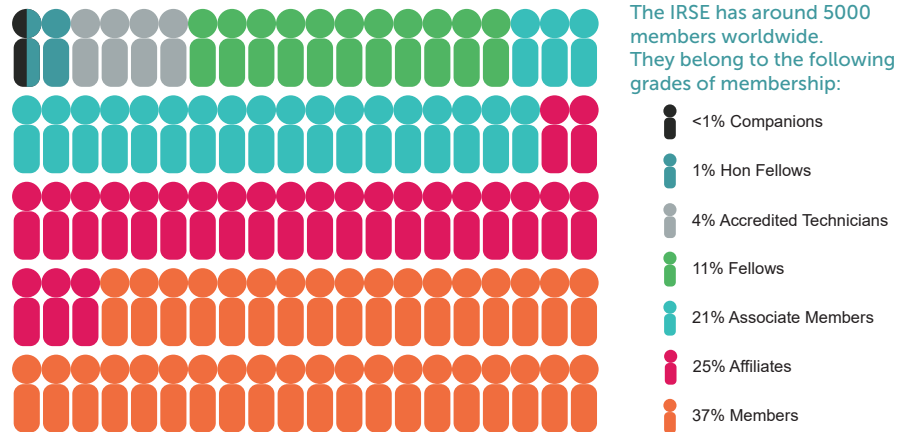
Membership and Registration

Remote working due to the COVID-19 issues has been both a challenge and an opportunity for the Membership and Registration activity of the IRSE. With the ingenuity and flexibility of both staff and volunteers we have succeeded in continuing to effectively process applications for both membership and professional registration.

From late March the Membership Committee has been meeting online to assess applications for IRSE membership and Engineering Council registration and deal with procedural and policy matters. There were 305 successful membership applications, 130 for corporate graded and 175 for non-corporate grades, there have also been 72 members who have transferred to a different grade of membership.

The total number of members has remained static over the last year, with 4,918 members on 31 December 2020.

During 2020 the IRSE has also supported 29 engineers to achieve professional registration with Engineering Council, the UK regulatory body for the engineering profession – 13 Chartered Engineers (CEng), 2 Incorporated Engineers (IEng) and 14 Engineering Technicians (EngTech).



We have been continuing to encourage our membership to engage with us electronically by email and through the IRSE website which has been vital during 2020 with the continued disruption caused by the COVID-19 pandemic. We are still hoping to pursue the development of a fully automated online application process for membership but the progress of this has not been possible over the last year.

The Institution was sad to report the deaths of the following members during 2020: Brian Foster, Denys Dyson, Paul Hepworth, Christopher Mitchell, Vivian Brown, Timothy Howard, Michael Hynd, Yoshio Ishihara, Stephen Harris, Walter Cooper, Paul Coulson, John Franklin, Michael Horne, Richard Stokes, Ray Weedon, Kevin Boyd, Derek Brown, David Norton and Ian Page.

Licensing

The IRSE Licensing Scheme continued to provide assurance for the competence of individuals to carry out technical safety critical or safety-related work on rail control systems throughout 2020. The Licensing Team was impacted by various factors relating to COVID-19 including staff working from home, a lack of access to the office and working with a slightly reduced team. Despite this, the team continued to deliver and the Scheme continues to provide a cross-industry accepted benchmark of competence for personnel.

Competence standards are reviewed at least five yearly and during 2020 nine licence standards were reviewed. Briefing notes were also published on a range of topics including:

- Revisions to 1.4.230 Signalling Maintainer and Fault Finder competence standard.
- Updates to 1.2, Signalling Installation Suite of Licences.
- Updates to the Licensing Standard, and a number of Licensing Procedures.

- Revisions to the Engineering Manager and Senior Engineering Manager suite of licences.
- Coronavirus (COVID-19) restrictions: extension to licence validity.

During the first half of 2020 the Scheme was managed by an interim Licensing Registrar, David Weedon, who stepped down from the role in November. Sarah Loutfi joined the Institution as the new Licensing Registrar in July working under the direction of the Licensing Committee, chaired by Colin Porter.

The Licensing Team was joined in December 2020 by a further Licensing Officer to assist with the processing of applications and will soon be joined by a Licensing Co-ordinator, providing an admin support function, a new role for the team.

During the year, a total of 1076 licences were issued, slightly lower than previous years.

There has been a significant impact of the COVID-19 situation on the number of

licence applications received and issued. A six month extension to the validity of licences was agreed at the beginning of the lockdown period, and that has had an effect.

There are currently c.5816 active licence holders, which represents a slow decrease in the total no of licences held c.6800 at December 2019).

For operations within the UK, the Licensing Scheme continues to hold accreditation by the United Kingdom Accreditation Service against the competence standard for the certification of persons: ISO17024:2012, with four yearly re-accreditation successfully achieved during 2018.

IRSE Assessing Agents are approved and appointed for the purposes of performing assessments of candidates for licences, and they are an essential part of the Licensing Scheme. The number of approved assessing agencies remains at 26, with one new agency and one ceasing to operate during the year.

Awards

The IRSE makes several awards each year. The majority of these are to recognise, reward and encourage the professional development of engineers, particularly those in the earlier stages of their careers. The purpose behind this is not simply to

assist their career development, but to promote high standards of engineering excellence, thereby contributing to the public benefit objectives of the Institution.

Frank Hewlett Bequest and Alan Fisher Memorial Fund

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

In normal times the income from the two funds is used predominantly to provide a number of travelling bursaries for younger members from all over the world to support their attendance at major IRSE events. For 2020, as a result of the pandemic, the funds paid for free places to be made available to younger members to on the virtual Rail Automation Seminar, run jointly by the IRSE, IET, IMechE and PWI. In total 32 places were provided to members from India, UK, Indonesia, Canada, Egypt, UAE, Australia, Nigeria, Hong Kong, South Africa and the Netherlands.

Thorrowgood Scholarship

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

The award is made to a candidate who has excelled in the IRSE professional examination and comprises an engraved medallion and funding for a study tour of railway signalling installations or signalling manufacturing facilities.

For the 2020 award no candidates achieved the necessary criteria in the 2019 examination.

Dell Award

The Dell award is made annually under a bequest of the late Robert Dell OBE (Past President). It is awarded to a member of the Institution employed by London Underground (or its successor bodies) for achievement of a high standard of skill in the science and application of railway signalling. The award takes the form of a plaque with a uniquely designed shield with an engraved plate being added each year with the recipient's name.

No award was made in 2020.

IRSE-Signet Award

Jonathan Farrell

The IRSE-Signet award is the most recent of awards, introduced in 2016 and sponsored by Signet Solutions. This Award is given annually to the person who obtains the highest marks in any single module of the IRSE Examination.

The Award takes the form of the Signet logo 'person' on a small plinth, engraved with the name and year of the winner, and bearing the IRSE's logo. The Award also comprises funding for the winner to attend the IRSE Convention.

This year's IRSE-Signet Award was presented to Jonathan Farrell of Irish Rail for achieving 90% in module 1 (safety of railway signalling and communications).

IRSE Merit Award

David Came, Trevor Foulkes and Mark Glover

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

In 2020 Merit awards were awarded to David Came MIRSE, Trevor Foulkes FIRSE and Mark Glover FIRSE.

David Came was recognised for his continuous work and support for the IRSE Plymouth Section, from inauguration to the 50th Anniversary. Trevor Foulkes played an important role

in establishing the new London and South East section which he now chairs. He has been a good contributor to the Institution for many years, presenting a number of papers particularly on telecoms topics and supporting the IRSE exam review and development of the revised arrangements.

Since late 2014 Mark Glover has undertaken the production of key Institution publications. In all his work, Mark demonstrates a high level of commitment and workmanship, and the IRSE has benefited hugely from the professional image that his work portrays.

Presidential programme

As a result of the COVID-19 pandemic, after March 2020 no group gatherings could be held. The AGM was cancelled and IRSE history was made when incoming president Dr Daniel Woodland was the first to deliver his presidential address virtually.

Our President up to April 2020 was George Clark. His theme for 2020 was 'Delivering Change' and his series of presidential events looked at ways in which challenges faced by change could be addressed. His final three presidential programme events were: 'Delivering change – the race against obsolescence' presented by Wim Coenraad in Holland in January, in February Nicola Furness and Michel Ruesen presented their paper on 'Future reference CCS architecture' in London and in March Steve Allday presented 'Delivering metro travel' in Sydney.

President Dr Daniel Woodland then faced a completely different challenge; how to carry out traditional presidential duties in the time of COVID-19.

Whilst extremely disappointed he would not be able to travel internationally to visit sections, he worked hard to deliver a full presidential programme on his theme of the 'Challenges of change in complex command, control and signalling systems' virtually. In addition to this programme of lectures, he was also the instigator of the first highly successful joint revenue-generating seminar between the IRSE, IET, IMechE and PWI. This online Automated Railway seminar

held across two sessions on 1 September and 8 October, delivered 17 expert presentations to a global audience of over 200 attendees.

He also took part in the first ever online Rail Broadcast Week hosted by the Railway Gazette in September and was a panellist in the 'ERTMS & ETCS: The future of railway signalling' conference held in December.

Three Presidential Programme webinars were presented between June 2020 and December 2020, all followed by an interactive question and answer session. In June, Professor Yuji Hirao presented 'The forefront of system safety and its application to railway signalling'. Tom Jansen, delivered 'The crossover between rail and autonomous road vehicles' in October and in November Professor Rod Muttram presented 'Cross acceptance of systems and equipment developed under different standards frameworks'. Nicholas Wrobel, presented his paper on 'Testing modern electronic/software systems' in December.

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



About the presenter

- Consider myself as primarily a systems engineer
- Now over 50 years experience in 4 industries where safety is a priority
 - Nuclear
 - Material processing
 - Defence
 - Railways – the last 26 years
- Director level positions in Railtrack and VP at Bombardier
- Fellow of the Royal Academy of Engineering, the IET and the IRSE
- IRSE Council Member and member of the International Technical Committee (ITC)



IRSE ///



Presidential Lecture Series 2020-2021

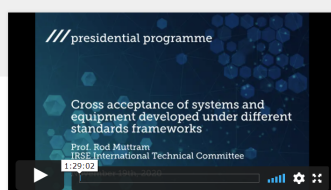
A collection of the IRSE Presidential papers delivered during the Presidential term of Dr Daniel Woodland IRSE.



Techniques at the forefront of sy...

The IRSE

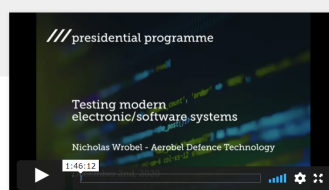
Dr Yuji Hirao from the Department of System Safety



Cross acceptance of Systems & ...

The IRSE

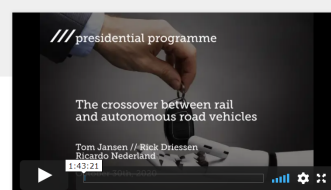
Prof Rod Muttram of IRSE's International Technical



Nicholas Wrobel with Q&A

The IRSE

In the fourth in the series of presidential lectures: testing



The crossover between rail and ...

The IRSE

Tom Jansen and Nick Driessen of Ricardo Rail present the

Section activities

In addition to the Presidential Programme, every year there is a programme of lectures, seminars and technical visits organised by the Institution's 22 sections across the globe. Our sections are in Australasia, China, France, Hong Kong, India, Indonesia, Ireland, Japan, Malaysia, Netherlands, North America, Singapore, Switzerland, Thailand, and Southern Africa. Within the UK, sections cover London & South East, Midland & North Western, Plymouth, Scottish, Western, York and Minor Railways.

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

In 2020 sections were unable to meet face-to-face for the majority of the year. Some adapted and provided virtual meetings and others were unable to provide these opportunities

due to technical difficulties and the workload of the volunteers. Paul Darlington (Chair Midland & North Western) and Trevor Foulkes (Chair London & South East) produced a guide for sections organising and running virtual meetings and many of the sections who ran these have reported record numbers of attendees. Several technical presentations were recorded and can be found on IRSE's Vimeo channel [irse.info/vimeo](https://vimeo.com/irse).

The Council wishes to record its thanks to the officers, committee members and all others involved in the operation of the local sections, for the excellent work they undertake in organising technical meetings and other events particularly in this challenging year. Council also very much appreciates the help and support given by many companies in facilitating and supporting the events organised by the sections all over the world. Charles Page continues his excellent work in the role of Local Section Coordinator, supporting the sections.

Younger Members

2020 marked the spirited relaunch of the IRSE Younger Members Section chaired by Aaron Sawyer. This section exists to ensure that the activities of the Institution are relevant to the professional development of younger and less experienced members.

The expansion of the committee, and the revised energy imparted by its members, has enabled the section to grow in strength and significantly increase the benefits offered to the community. The section focused on five key areas for development: major events, attract & expand, digital initiatives, support development and sustain & improve.

Under these focus areas the section delivered on an array of existing and new initiatives with an agile shift to online events. The highlights included:

- Preparation for major events including a flagship competition and accident investigation weekend.
- The 'IRSE Super Train Challenge: A Journey Around the World' and associated online STEM webinar. The event followed the semi-fictional character Prerna the Great Inventor and her quest to build a Super Train.
- International outreach where the section worked closely with younger members around the world to facilitate future collaboration and increase diversity within our committee.
- A newly automated mentoring scheme that connects mentors with mentees in a simple self-managed system to be released in 2021, alongside improvements to the 'Maintain your Competency' system.
- A 12-week IRSE Cyber Academy course bringing together developing engineers within the field of railway cyber security.
- And of course, our continued support for the IRSE Exam through study events and over 24 hours of recorded material.

With the strength of the Younger Members section ever growing, there are now over 20 volunteers dedicated to bringing increased benefits our community. We welcome members from around the world to share in this experience and thank everyone who has supported the section in realising its ambitions.

International Technical Committee

The IRSE's International Technical Committee (ITC) has 23 fully participating and 11 corresponding members from many parts of the world, including Japan, the UK, Netherlands, Germany, Switzerland, Belgium, Finland, France, Australia, Spain, Singapore and Canada. The ITC's primary purpose is to provide thought leadership and disseminate learning on strategic or technical topics relevant to train control and communications systems in the railway environment, thereby providing value not only to IRSE members but to the wider rail industry. Its particular strength lies in its international membership at senior level, enabling engineering principles and practices from a diverse range of countries to be brought to bear upon the subjects that the ITC debates.

During the year, the ITC held four meetings. Due to COVID-19 measures all four were held as video conference meetings. The ITC experienced video conference meetings effective however live interaction in this international setting is essential. After lockdown the ITC will hold its meetings in a mix of video conferencing and live meetings. This will have also a positive effect on our carbon-footprint. The ITC produced six papers, all of which have been published in IRSE News, three of them were given as presidential papers. All ITC papers can be found on the IRSE website. The meetings are hosted by members in their country and minutes are produced for each meeting.

The ITC is aligned with the IRSE strategy. From this year the ITC has decided to keep in touch with the younger membership by having a Younger Member official position on the committee – the first Younger Member to join is Robin Lee. The ITC also focused on Safety – issues of cross-acceptance and standards as well as requirements management and system integration. The Junior Vice President and Senior Vice President are members of the ITC so that they can influence the choice of topics to be discussed, to align with the presidential theme. Papers in the pipeline also include Signalling Power Supplies and the Effectiveness of Security Measures.

London office and personnel

The Institution leases a small suite of offices on the 4th floor of the Institution of Mechanical Engineers, 1 Birdcage Walk, London, UK, from where the centrally organised activities of the Institution are managed – membership, licensing, events administration and financial administration.

The COVID-19 pandemic has meant that the offices have not been accessible since March 2020. As a result, all staff have had to make the transition to working from home. The Council and many members have on numerous occasions praised the efforts of the staff in maintaining a high level of professional service despite this significant disturbance to work patterns. It became apparent that there was a need to restructure in order to meet the differing demand of a distributed workforce and Council have overseen the work done by the Chief Executive and senior staff to effect these changes.

Chief Executive

The Chief Executive and General Secretary of the Institution is Blane Judd, a Chartered Engineer and Fellow of the Institution of Engineering and Technology. He is responsible for directing and managing the resources of the Institution in order to implement the decisions of Council in an efficient manner and in compliance with UK company and charity law. He is accountable to the Council. He also provides the focal point of contact for other Institutions and external organisations, including the UK's Engineering Council and the Royal

Academy of Engineering, government agencies, the chief officers of other professional bodies, and the scientific, engineering and technology community. He is also responsible for ensuring compliance with the requirements of the Institution's Articles of Association, Companies House, the Charities Commission and relevant legislation.

Office team

The office team comprises:

- Polly Whyte,
Head of Membership and Registration
- Hilary Cohen,
Executive Assistant
- Judith Ward,
Director of Operations (part-time)
- Sarah Loutfi,
Licensing Registrar
- Karen Boyd,
Deputy Licensing Registrar
- Roger Button,
Licensing Assistant
- Caterina Indolenti,
Membership and
Registration Administrator
- Sophie Hunter,
Membership and Registration
Assistant (fixed term contract)
- Hannah Mueller,
Finance Assistant (part-time)
- Swaathy Bhaskaran,
Licensing Assistant (part-time)

October 2020 saw the departure of two members of the team – Anja Laitinen, after eight years with the IRSE and Laura Freeborn at the end of her temporary contract.

We also received the shock news that Hilary Cohen had been taken seriously ill and would be absent from work for some time. As many will know Hilary, who has been with the IRSE for more than ten years, is a key member of staff and is engaged in a number of member facing activities. We have appointed Deepka Kharaud to provide temporary cover for her position.

Contract support

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

Marketing and Communication activities have been operated externally by Lindsay Jones of LJPR Ltd. Lindsay is a qualified journalist with a MSc in public relations and runs her own PR consultancy. She is successfully promoting the Institution to a much wider International stakeholder group. We are also receiving excellent support from Howard Elwyn-Jones of Prettybright on a wide range of social media activity, which includes the much-improved e-bulletin and video livestreaming of events.

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

Debbie Bailey, is the Institution's HR Manager. She is a Chartered Member of the CIPD and runs her own HR consultancy business. Debbie has provided HR services to the staff of the IRSE for more than eight years and has been much involved this year in supporting the staff through the pandemic and in particular the transition to remote working.

Annual General Meeting

The IRSE's intended 107th Annual General Meeting, which was to be chaired by the retiring President, George Clark, was initially postponed until July 2020 due to the COVID-19 pandemic, in accordance with the Memorandum and Articles of Association. It was hoped that by July the situation would have been sufficiently controlled to allow a normal AGM to take place. As the year progressed it became apparent, prior to the July date, that International lockdown restrictions would not allow a meeting to be held in person. After considerations of a number of options it was resolved by Council that there would be no AGM in 2020. All ordinary business was concluded by correspondence and it was resolved to appoint HPH Chartered Accountants for 2020.

The membership received copies of the Annual Report for 2019 (published on 1 April 2020), and there being no comments or questions received through correspondence this report was adopted.

The ballot for the election of members to Council had resulted in Harvinder Bhatia (UK), Gordon Lam (Hong Kong), Clive Roberts (UK), Rob Cooke (Singapore) and Firas Al-Tahan (N America) joining Council.

Grateful thanks go to Pierre-Damien Jourdain, Cassandra Gash and Lynsey Hunter all of whom retired from Council.

IRSE Council

IRSE Council 2020-2021	
President	Daniel Woodland
Vice Presidents	Ian Bridges, Andy Knight
Members of Council from the class of Fellow	Peter Allan, Ian J Allison, Harvinder Bhatia ,Steve Boshier, Bogdan Godziejewski, Yuji Hirao, Gordon Lam, Rod Muttram, Jane Power, Clive Roberts
Members of Council from the class of Member	Firas Al-Tahan, Rob Burkhardt, Rob Cooke, Martin Fenner, Ryan Gould, Paul McSharry
Members of Council from the class of Associate Member	Xiaolu Rao, Keith Upton
Co-opted Past Presidents	George Clark, Markus Montigel, Peter Symons
Chief Executive	Blane Judd
Treasurer	Andrew Smith

IT systems

The three major IT components that support the Institution's operations are the Membership and Licensing database, the website, and the London office IT systems.

The decision to migrate our office software systems to a more secure cloud-based server facility, could not have been taken at a better time. We could not have known that by the first quarter of 2020 we would be locked out of the offices and hence access to any IT-based systems located there.

After many years of support from Mike Tyrrell who single-handedly kept our old telephony system working, a decision to change the obsolete equipment was made in the first quarter of 2020. The initial discussions were to install a similar but more modern private automatic branch exchange (PABX). The lockdown however, made us rethink that decision and complete 'softphone' voice over internet protocol (VoIP) was adopted. This has facilitated us being able to make and receive calls while working from home, or on mobiles without interruption of service. The VoIP system also allows us to manage calls remotely from the office system, giving us a greater flexibility and improved communication service to members.

We have now had a year of operating with the new website which again has been extremely helpful in allowing us to maintain a high standard of service for the membership. The inclusion of video content has seen a significant increase in the number of visits to the site. Members are also able to use the site to update information, previously managed manually by staff in the office. Throughout 2021 there are plans to increase the functionality of the site in line with our vision to be accessible 24/7/365 wherever there is an internet connection.

Just after lockdown occurred, we acquired additional licenses for the online conferencing tool, GoToMeeting (GTM), which we had been using for many of the IRSE virtual meetings. Some of these licenses were offered free by LogMeIn, the company that owns GTM, as part of a support package for charities. We have been able to distribute these licenses to the sections that wanted to be able to run virtual meetings. As a result, all of the meetings that IRSE hold, both as part of its normal operational activities and with volunteers, have seen a large increase in membership engagement. We intend to continue to offer this service even once lockdown has been lifted.

The combination of GTM and Microsoft Teams has meant we have reached more of the membership that we have been able to achieve in the past.

You will read elsewhere in this report that we held IRSE examination online for the first time this year, through necessity. The platform we used, Moodle, has a lot of additional functionality which we will be looking to exploit as we become more familiar with its capabilities. The aim is to increase the educational offerings under the Knowledge, Skills and Behaviours initiative, started by Markus Montigel in his presidential year, using Moodle at the foundation for this development.

We cannot express our gratitude more strongly, to all those who work for or with the Institution, including the volunteer network. Their ability to adapt so well to the challenges that we have faced as a result of the pandemic has been a tremendous help. Hopefully 2021 will bring a better year and see us able to use much of what we have learnt during lockdown for the benefit of the membership, wherever they are in the world.

Publications and communications

Publications and communications

The global pandemic has impacted on every aspect of our lives. Sometimes out of necessity comes innovation, and this has certainly been the case for the IRSE.

Towards the end of George Clark's presidency, we successfully trialled the webinar format for his November presidential programme event. This learning was to prove invaluable in the months to come.

As it became clear that face to face meetings would not be possible for the foreseeable future, HQ staff, members and volunteers all stepped up to devise robust ways to keep the Institution running as normally as possible in the 'virtual' world. Section meetings were held via GoToMeeting or Zoom platforms and the presidential programme was delivered with outstanding success by GoTo Webinar. In all cases, a far higher number of members attended the events virtually than ever before from all over the world.

For the first time in the Institution's history, a paid-for joint online seminar on Automated Railway was held in partnership with the IET, IMechE and PWI. Not only did this event generate much needed revenue for the Institution but it was watched internationally by over 200 people.

We were able to build on the work carried out since 2018 to upgrade and improve our digital communications and as a result our digital platforms came into their own enabling us to keep members informed via frequent e-bulletins and enhanced content on www.irse.org.

IRSE News

IRSE News is published monthly, its purpose being primarily to inform IRSE members worldwide about industry news, technical developments, and the work and activities of the IRSE and its Sections. Papers that comprise the presidential programme are published in IRSE News, together with a wide range of other internationally sourced educational papers and articles. We'd like to extend our thanks to the dedicated and hard-working editorial production team and committee led by Managing Editor Paul Darlington for another excellent year.

Proceedings

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

Website

The website provides details of Institution events, Sections, information about the governance and operation of the IRSE, material for members taking the IRSE professional examination, how to become a member, as well as a wealth of information relating to professional development. Members

(and registered non-members) can update contact details, book events, order publications, and pay their subscriptions online. This year almost 72 000 visitors from 137 countries viewed more than a million pages at www.irse.org.

Video

During 2020 the number of videos available on the IRSE website increased significantly as we uploaded content including presidential events, section meetings and study guides. As a result in the past 12 months we saw a 1700% increase in video views and more than 3000% increase in audience size. IRSE videos received over 15 000 views.

E-Communications

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

Social Media

The Institution has a social media presence on LinkedIn, Facebook and Twitter which play a key role in promoting our activities and signposting our content. Key events, presentations and topical news stories are posted on all these feeds on a regular basis to help keep members informed and raise the profile of the Institution amongst the wider railway industry.

LinkedIn has seen a 90% increase in engagement in the last 12 months, boasting almost 7000 followers. On average, IRSE posts on LinkedIn which linked to content were clicked over 58 times each (7400 clicks), while over 55% of our tweets were re-shared by other Twitter users. Link clicks on Twitter are up over 700% on 2019, while on Facebook, links to IRSE content were clicked 1600 times.

Rail Industry media

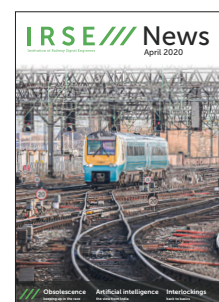
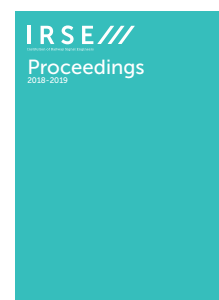
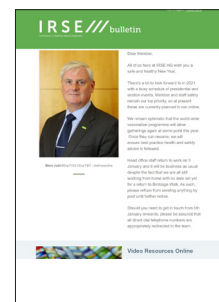
During this year we have developed our relationship with more key railway media. Until the lockdown, Modern Railway Magazine had included selected section events in their events section, and presidential events have been promoted in the online Railbusinessdaily.com e-zine.

Publications

The IRSE publishes a range of books on railway train control and communications systems, which provide a useful source of educational material for those relatively new to the profession, as well as providing a valuable record of the development of signalling. Extensive work continues to edit and modernise the Metro Signalling Handbook.

Library

Sadly, the IRSE Library which is housed in our London offices has been closed this year due to the pandemic. The building at Birdcage Walk which we share with several other professional engineering institutions has remained closed with all staff working from home.



Collaboration

The IRSE has formal and informal working relationships with a number of organisations in the UK and with organisations in other parts of the world. In China and South East Asia in particular, the IRSE's sections are forging closer links with other engineering and educational organisations, and with governments.

The Industry Partnership Scheme has been slow to get off the ground mainly due to the inability to engage with senior leaders during the COVID-19 lockdown period. That said, some dialogue with employers has started to highlight the areas that would be of interest and benefit to Industry. It is expected that as the restrictions on face-to-face engagement are lifted, more work will be able to be done to move this initiative forward.

An important element of our strategy, is to strengthen our engagement with external bodies, including rail industry companies and other relevant organisations. The Institution enjoys good working relationships and support from many companies, but our ambition is to grow this further. As a result, the

development of the Future Integrated Rail Think Tank (FIRTT), a collaboration with WSP, KPMG, the Rail Delivery Group and IRSE, has focused on several key areas of railway operation, to debate key issues. The first two of these were held this year and the outputs were published on the IRSE website.

This is the second of the IRSE two-year term as chair of the Rail Engineers Forum (REF). The REF (theref.org.uk) is made up of representatives from the Professional Engineering Institutions who have a rail interest e.g., IMechE, IET, ICE, PWI, IRO, INCOSE, CILT, RCEA and the Young Railway Professionals. The chair, Andrew Simmons, a former President of the IRSE, continues to work with HQ to help focus on REF's aim, to harmonise the various strengths of the constituent Institutions to support the railway community. In normal times this would encompass conferences, seminars, lectures, training, information services, publications and statements of policy to Government and other regulatory bodies. This year has mainly focused on maintaining links across the sector.

Regular meetings are taking place with the UK's Railway Industry Association (RIA) to ensure that where possible the two bodies are working closer together to promote the principle of professional employees working in professional businesses. This working relationship is helping the IRSE and RIA identify where we can make a difference.

A closer relationship with the Royal Academy of Engineering and Engineering UK is helping us to gain better traction with activities focusing on encouraging young people into careers in science, technology, engineering and mathematics as a career opportunity. We are able to gain a better exposure working with these bodies than if we used our own smaller resources.

The UK's Engineering Council is responsible for the regulation of engineers, particularly in the UK. The IRSE is a licensed body of the Engineering Council and is thus licensed to register Chartered Engineers, Incorporated Engineers and Engineering Technicians. We work closely with them to maintain standards of engineering excellence.

Finances

The financial results are shown on pages 16 to 20. They are extracted from the consolidated accounts for the IRSE and its wholly owned trading subsidiary, IRSE Enterprises Limited. The term 'Group' at the top of a set of tables refers to the two companies combined, and 'Charity' to the IRSE alone. As far as possible, these extracted results use the titles and the format of the consolidated accounts.

Probably the headline figure from the 2020 financial results is the Total Charity Funds in the first table on page 16. Despite the outbreak of COVID-19 and its global consequences, the Total Charity Funds have increased by £186,750. This increase is entirely due to a significant increase in value of the investments, in the form of shares, shown in Note 1 on page 18. Our activities during the year made a loss which is not unexpected, given two major fundraising activities, the annual dinner and convention, did not take place, so IRSE Enterprises did not make a surplus to donate to the IRSE.

For part of 2020 because our activities were forcibly reduced by the pandemic we were able to furlough some members of staff under the UK Government's

furlough scheme although as we introduced innovative new ways to deliver the service to our Members, by the end of the year all employees were back working as normal. During the year we took on two new members of staff, both of whom required training in order to take on their roles. However, as we have a very small workforce, to suddenly, if only temporarily, expand our expenses to cover them would have required a sudden, significant increase in income. We could have increased subscriptions or licence fees significantly, only to put them back down again for 2021, but we identified some of our reserves as being saved to cover for eventualities like this. As a consequence, during the year there was a transfer from investments to cover these additional costs.

An issue that has come to our attention can be seen by comparing Notes 10 and 12. Note 10 includes a figure which is the total income from our main activities whilst Note 12 is the cost of running the charity. It can be seen that for the last two years the charity's costs have been higher than the income. Historically this has been the case, but the surplus from IRSE Enterprises has topped up

the income to cover the difference, and commonly led to a net surplus. However, in 2020, clearly, this didn't happen although additional unexpected income was realised through the Institution's first ever and highly successful paid-for online seminar held jointly between the IRSE, IET, PWI and IMechE. In addition, the introduction of the new Module A Exam Certificate in Railway Control Engineering Fundamentals created a surge in Exam income for 2020. We face a similar situation for 2021 as COVID-19 restrictions prevent us once again from holding either the annual dinner or a traditional convention. Whilst it is to be hoped these events will reappear in the IRSE's calendar as soon as possible, it has exposed a potential challenge for the future, especially if it continues to prove difficult to organise big events for several years. As a consequence work is currently underway considering how to increase the Charity's income. Naturally, given that most is from subscriptions, it is this area that is being particularly addressed. There are no conclusions so far, so they will have no impact on 2021, but will need to be included in the budget for 2022.

Consolidated accounts (extract)

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS CONSOLIDATED BALANCE SHEET AS AT 31st DECEMBER 2020

	Notes	Consolidated 2020 £	Consolidated 2019 £	Charity 2020 £	Charity 2019 £
Fixed Assets					
Tangible assets		19,558	31,227	10,395	16,871
Investments	1	2,055,844	1,812,394	1,488,776	1,342,570
		2,075,402	1,843,621	1,499,171	1,359,441
Current Assets					
Stocks	3	48,862	45,110	42,416	36,076
Debtors	4	207,530	194,705	290,623	269,580
Investments	5	209,668	209,205	209,668	209,205
Cash in hand		238,466	338,188	69,062	108,013
		704,526	787,208	611,769	622,874
Creditors: amounts falling due within one year	6	(422,469)	(438,934)	(228,440)	237,003
Net current assets / (Liabilities)		282,057	348,274	383,329	385,871
Total assets less current liabilities		2,357,459	2,191,895	1,882,500	1,745,312
Creditors: amount falling due after more than one year	7	(237,697)	(258,883)	-	-
Net assets		2,119,762	1,933,012	1,882,500	1,745,312
Funds	2				
Unrestricted funds		2,083,971	1,896,893	1,846,709	1,709,193
Restricted funds		35,791	36,119	35,791	36,119
Total charity funds		2,119,762	1,933,012	1,882,500	1,745,312

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS CONSOLIDATED CASH FLOW STATEMENT AS AT 31st DECEMBER 2020

	2020 £	2019 £
Net cash (used in) operating activities	(124,790)	(78,758)
Cash flow from investing activities:		
Purchase of tangible fixed assets	(5,784)	(44,793)
Purchase of fixed asset investments	(237,983)	(231,680)
Sale of fixed asset investments	237,082	193,471
Interest received	1,825	2,534
Dividends received	29,928	36,371
Net cash provided by / (used in) investing activities	25,068	(44,097)
Change in cash and cash equivalents in the year	(99,722)	(122,855)
Cash and cash equivalents at start of year	338,188	461,043
Cash and cash equivalents at end of year	238,466	338,188

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS
CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES AND INCOME AND EXPENDITURE
ACCOUNT FOR THE YEAR ENDED 31st DECEMBER 2020

	Notes	Unrestricted £	Restricted £	Total 2020 £	Total 2019 £
INCOME AND ENDOWMENTS FROM:					
Charitable activities:					
Donations and legacies	9	19,092	-	19,092	41,708
Other trading activities:					
Non-ancillary trading income	10	354,592	-	354,592	425,921
Other activities	10	480,916	-	480,916	448,263
Investments:					
Investment Income	11	31,685	68	31,753	38,905
Total Income		886,285	68	886,353	954,797
EXPENDITURE ON:					
Raising Funds	12				
Other activities		3,857	-	3,857	8,567
Investment		8,008	-	8,008	7,865
Non-ancillary trading		422,322	-	422,322	438,884
		434,187	-	434,187	455,316
Charitable activities	12				
Awards		16,195	-	16,195	24,529
Promoting best practice		481,557	-	481,557	534,779
		497,752		497,752	559,308
Total Expenditure		931,939	-	931,939	1,014,624
Net Expenditure before (loss) / gain in investments		(45,654)	68	(45,586)	(59,827)
Net (loss) / gain on investments		232,732	(396)	232,336	280,451
NET INCOME / (EXPENDITURE)		187,078	(328)	186,750	220,624
RECONCILIATION OF FUNDS					
Total funds brought forward		1,896,893	36,119	1,933,012	1,712,388
TOTAL FUNDS CARRIED FORWARD		2,083,971	35,791	2,119,762	1,933,012

ANNUAL MEMBERS' REPORT WITH SUPPLEMENTARY MATERIAL

The tables set out on pages 16 to 20 are extracted from the full audited accounts of the Institution for the year ended 31 December 2020. They constitute supplementary material to this Annual Members' Report. Section 426A of the Companies Act 2006 requires the following statements to be made in respect of the supplementary material:

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

A P Smith
Treasurer

Approved by the Trustees on 11 March 2021.

D Woodland
President
Director and Trustee

I Bridges
Vice-President
Director and Trustee

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS
NOTES TO THE CONSOLIDATED ACCOUNTS
FOR THE YEAR ENDED 31st DECEMBER 2020

1 Fixed Asset Investments (Group)

	Equities £	Government Securities £	Total £
Market value			
At 1 January 2020	1,602,145	210,249	1,812,394
Additions	237,983	-	237,983
Disposals	(211,545)	(25,537)	(237,082)
Revaluations	233,790	8,759	242,549
At 31 December 2020	1,862,373	193,471	2,055,844

2 Movement in Funds (Group)

	At 1.1.20 £	Net movement in funds £	At 31.12.20 £
<u>Designated funds</u>			
Scholarship fund	77,128	940	78,068
Alan Fisher / Frank Hewlett Fund	407,071	18,250	425,321
General Development	307,000	-	307,000
Future ASPECT Conference	10,000	-	10,000
International Convention	27,500	-	27,500
Textbook Preparation	7,500	-	7,500
General Fund - Unrestricted Fund	856,485	118,328	974,813
IRSE Enterprises - Non-charitable Trading Fund	204,209	49,560	253,769
	1,896,893	187,078	2,083,971
<u>Restricted funds</u>			
Dell Bequest	23,432	(305)	23,127
Thorrowgood Bequest	12,687	(23)	12,664
TOTAL FUNDS	36,119	(328)	35,791

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

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

	<u>Share capital and reserves</u>	<u>Profit for year</u>
IRSE Enterprises Limited	£241,676	£49,590

3 Stock	Consolidated 2020 £	Consolidated 2019 £	Charity 2020 £	Charity 2019 £
Stock	48,862	45,110	42,416	36,076

4 Debtors	£	£	£	£
Trade debtors	122,910	58,801	-	-
Other debtors	12,017	9,707	12,017	9,707
Pre-payments and accrued income	6,422	78,555	-	-
VAT	66,181	47,642	53,571	35,995
Amounts owed by group undertakings	-	-	225,035	223,878
	207,530	194,705	290,623	269,580

5 Current Asset Investments	£	£	£	£
National Savings	209,668	209,205	209,205	209,205
	209,668	209,205	209,205	209,205

6 Creditors: amounts falling due within one year	£	£	£	£
Trade creditors	28,984	38,981	18,093	28,520
Deferred income and accruals	200,644	196,505	177,332	176,262
Other taxes and social security costs	-	-	-	-
Other creditors	192,841	203,448	33,015	32,221
	422,469	438,934	228,440	237,003

7	Creditors: amounts falling due after one year	Consolidated 2020 £	Consolidated 2019 £	Charity 2020 £	Charity 2019 £
	Deferred income	237,697	258,883	-	-

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

8	Activities of IRSE Enterprises	2020 £	2019 £
	<u>Turnover</u>		
	Donations	4	(10)
	Proceeds - Conventions and Conferences	784	15,559
	Proceeds - Dinners	-	51,466
	Proceeds - Technical Visits and Seminars	13,008	35,453
	Licensing - Licence Fees Received	205,404	194,321
	Licensing - Audit Fees	45,042	56,022
	Licensing - Assessing Agents Fees	82,306	62,564
	Licensing - Technical Publications	8,044	10,546
		354,592	425,921
	<u>Cost of sales</u>		
	Costs - Conventions and Conferences	1,812	4,801
	Costs - Dinners	(2,653)	31,285
	Costs - Technical Visits and Seminars	13,929	35,354
	Costs - Young Members' Seminars and Visits	-	1,104
	Licensing - Logbooks Opening Stock	9,034	4,721
	Licensing - Engineer's fees	14,503	14,081
	Licensing - IRSE Administration Charges	162,753	122,032
	Licensing - Audit Engineers	48,195	58,825
	Licensing - Accreditation	5,385	10,980
	Licensing - Logbooks Closing Stock	(6,444)	(9,034)
		246,514	274,149
	GROSS PROFIT	108,078	151,773
	<u>Other income</u>		
	Dividends receivable	6,105	6,413
	Bank interest receivable	119	367
		6,224	6,780
		114,302	158,553
	<u>Expenditure</u>		
	IRSE Admin Charges	48,561	18,990
	Telephone	6,322	7,033
	Post and Stationery	2,447	6,441
	Officers' expenses	-	-
	Accommodation and Refreshments	675	3,584
	Computer costs	33,598	34,522
	Sundry expenses	2,910	2,975
	Licensing - Treasurer's, Chief Executive's and Registrar's Fees	73,201	71,500
	Logbook Purchases	-	9,025
	Investment Manager's Fees	3,694	3,421
	Auditor's remuneration	2,000	4,000
	Exchange rate variance	(2)	7
		173,406	161,498
	<u>Finance costs</u>		
	Licensing - Bank charges	2,402	3,238
		(61,506)	(6,183)
	<u>Gain / Loss on revaluation of assets</u>		
	Gain on revaluation of investments	111,066	77,292
	NET PROFIT	49,560	71,109

9	Donations and Legacies (Group)				2020	2019
					£	£
	Donations				19,092	41,708
10	Other Trading Activities (Group)				£	£
	Subscriptions				407,702	404,989
	Professional Reviews				3,350	915
	Advertising				12,555	9,075
	Booklets and text books				18,730	7,138
	IRSE ties, badges & cufflinks				26	26
	Examination Fees and materials				38,553	25,413
	Proceeds from members' lunch				-	707
	Consultancy Income				-	-
	IRSE Income				480,916	448,263
	Trading income:					
	Turnover of trading subsidiary - Note 8				354,592	425,921
11	Investment income (Group)					
	Equities and government stocks				23,824	29,958
	Interest receivable				1,705	2,167
	IRSE Enterprises Ltd				6,224	6,780
					31,753	38,905
12	Analysis of Expenditure	Staff Costs	Depreciation	Other	2020	2019
		£	£	£	£	£
	Raising Funds					
	Other Activities	1,494	93	2,270	3,857	8,567
	Investment	-	-	8,008	8,008	7,865
	Non-ancillary trading - Note 8	126,654	8,170	287,498	422,322	438,884
	Total raising funds	128,148	8,263	297,776	434,187	455,316
	Charitable Activities					
	Awards	5,977	371	9,847	16,195	24,529
	Promoting best practice	141,955	8,818	330,784	481,557	534,779
	Total charitable activities	147,932	9,189	340,631	497,752	559,308
	Total Expenditure	276,080	17,452	638,407	931,939	1,014,624
13	IRSE Charitable Expenditure				£	£
	Raising donations and legacies					
	Fund raising dinners				-	4,190
	Consultancy				-	-
	Charitable activities					
	Proceeding: editing and printing				4,028	4,517
	Newsletter: editing and printing				98,249	94,728
	Booklets and textbooks				5,628	5,773
	IRSE ties, cufflinks and badges				-	1,295
	Prizes				39	1,111
	Awards				767	7,020
	Activities funded by country subscription supplements				5,974	8,821
	Professional review costs				1,203	2,682
	Support costs					
	Staff costs				151,739	191,176
	Office rent and services				18,524	20,202
	Fees and honoraria				74,017	71,070
	Membership database				-	8,420
	Other administrative costs				128,160	127,100
	Investment manager's fees				8,008	7,865
	Fixtures and fittings				9,282	15,770
	Governance costs					
	Auditor's remuneration				4,000	4,000
	Total Expenditure				509,618	575,740

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

(Charity number: 1046999)

ANNUAL REPORT AND FINANCIAL STATEMENTS

for the year ended

31 December 2020

HPH
Chartered Accountants
54 Bootham
York
YO30 7XZ

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS
ANNUAL REPORT AND FINANCIAL STATEMENTS

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THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT **FOR THE YEAR ENDED 31 DECEMBER 2020**

The trustees, who are also directors of the charity for the purposes of the Companies Act 2006, present their report with the financial statements of the charity for the year ended 31 December 2020.

The Charity is a Public Benefit Entity.

The Financial Statements comply with the Charities Act 2011, the Companies Act 2006, the Memorandum and Articles of Association, and the relevant version of the Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102).

STRUCTURE, GOVERNANCE AND MANAGEMENT

The Institution is a Company Limited by Guarantee and governed by its Memorandum and Articles of Association, last amended on 27 April 2018. Trustees are members of the Institution and elected by the membership following their proposal by members or the governing Council of the Institution.

The Institution is managed by its Council, which is headed by the President, assisted by the Senior and Junior Vice Presidents. The Council constitutes committees to assist in the operation of the Institution as it sees fit. Currently, for the general management of the Institution there is a Management Committee, consisting of the President, Vice Presidents, one or more past Presidents, a number of ordinary members of Council, along with the Chief Executive and Treasurer, and Finance Committee, consisting of the President and Vice Presidents, the previous President, the Chief Executive and Treasurer and one ordinary member of Council.

There is no formal training of trustees, but they are periodically provided with the current version of the Charity Commission document 'Charities and Investment Matters: A Guide for Trustees'. Exceptionally, in connection with these accounts, they have also been provided with information regarding the possible impact of COVID-19 on them. Formally, all decisions related to the operation of the Institution are made by the Council. Often, these decisions are based on recommendations from subsidiary committees, particularly Finance and Management. Staff involvement is only related to low-value day to day purchases for the efficient operation of the Institution.

Staff salaries are agreed by Finance Committee on the recommendation of the Chief Executive. A small number of senior management are contracted to the Institution. Their remuneration is likewise agreed by Finance Committee on the Chief Executive's recommendation, with the exception of the Chief Executive, where the remuneration is at the discretion of the Trustees on Finance Committee. The benchmark taken for proposals is generally based on the ruling CPI as published by the Government in October.

The Institution's operating subsidiary is IRSE Enterprises. Its managing board has the Treasurer, President, Vice Presidents, immediate past President, and a Council representative as directors. The Chief Executive is Secretary.

OBJECTIVES AND ACTIVITIES

Public Benefit

The Institution's objects and principal activities continue to be the advancement of the science and practice of signalling and railway telecommunications for the public benefit by the promotion of research, the collection and publication of educational material and the holding of conferences, seminars and meetings, the maintenance of high standards of practice and professional care amongst those working within the industry and the promotion of improved safety standards for the protection of the general public. The trustees have complied with the duty in section 17 of the Charities Act 2011 to have due regard to public benefit guidance published by the Charity Commission.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT **FOR THE YEAR ENDED 31 DECEMBER 2020**

OBJECTIVES AND ACTIVITIES - continued

Custodian Trustee Disclosures

No assets were held by any trustee or by the Institution on behalf of any other charity.

Regular Activities

The Institution's main fund raises money by way of subscriptions, joining fees and donations. The Institution issues a magazine to its members 11 times a year, containing papers, articles and other information pursuant to the Institution's objects. It also sells technical papers and books it publishes itself or buys for re-sale.

The Institution normally organises a number of technical meetings, conferences, seminars and dinners, for some of which it makes a charge. These provide a forum for discussion and the transfer of knowledge. To open up the access to these events some of them are filmed and made available at the time and subsequently through an on-line video link. The COVID-19 pandemic meant from March meetings and seminars were organised using internet-based meeting software and no in-person events took place, including dinners and conferences.

The Licensing scheme, run through the subsidiary IRSE Enterprises, provides accreditation to individuals and organisations within the industry after having complied with certain laid-down standards. Various fees are charged in connection with this. Licences issued are for a 5-year period and therefore one-fifth of the income is credited each year to the Income and Expenditure account, the balance being carried forward as a liability in the Balance Sheet. Following the initial COVID-19 outbreak, a 6-month grace period on licence renewals was introduced. This has now expired but meant there was a significant reduction of licence income for 6 months.

Whilst no formal criteria are applied to measure the success or otherwise of all charged events, there is an expectation they will, at least, break even, whilst for free events a visibly full venue is considered a success. During COVID 19 these measures have been adjusted as a full venue is unacceptable as a measure in a virtual environment. Instead, success has been measured by comparison of online attendance, both live and post event, with equivalent face to face attendance seen previously. It is noted attendance has exceeded expectation and engaged a wider geographical spread, assisting in promoting the charitable objects. In the case of the Institution's exam, the criterion is a suitably high pass-rate.

The Institution is a fully nominated Body of the Engineering Council licensed to register Chartered Engineers, Incorporated Engineers and Engineering Technicians.

GRANT-MAKING

Bursaries and prizes are made available for some events, in particular conventions and conferences. Bursaries are allocated based on an application form and interview by senior members of the Institution. Prizes are based on documented criteria, some of which depend on suitable success in the Institution's exam.

VOLUNTEERS

Volunteers provide considerable assistance in the operation of the Institution, both in its local sections and technical societies, where the objects mirror those of the Institution itself, and centrally, to provide a source of expert input and background assistance. This applies, particularly, in the operation of the Institution's professional exam and the production of the Institution's magazine IRSE News.

SOCIAL INVESTMENT

No financial social investment is undertaken, but the high-level object regarding the maintenance of high standards and the promotion of safety standards is directed towards the protection of the general public whilst on or near railways.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT **FOR THE YEAR ENDED 31 DECEMBER 2020**

FUNDRAISING

No fundraising activities are undertaken by the Institution.

ACHIEVEMENTS AND PERFORMANCE

The outbreak of the COVID-19 pandemic significantly affected the ability of the IRSE to organise its events as normal. This had a considerable impact on the finances of the Institution during 2020 as the budget was based on their contribution of the overall income. One success, though was the transfer of the Institution's Exam to an on-line platform, allowing all except Module 2 to go ahead as usual. The planned programme of lectures (provided through on-line platforms) was supplemented by two 'webinars' which have suggested that this communication medium may prove more successful than in-person events.

Beyond the events discussed above, there are no specific fundraising activities. No expenditure has been incurred to raise that income, beyond that involved in the organisation of the events themselves.

FINANCIAL REVIEW

The results of the Institution are set out in the Consolidated Statement of Financial Activities and Income and Expenditure Account which may be found on page 11.

The net deficit of the group for the year before fair value adjustments to the carrying value of investments was £45,586 (2019: £59,827) and total funds carried forward are now £2,119,762 (2019: £1,933,012). The closing funds comprised of £35,791 relating to restricted funds (2019: £36,119), £855,389 relating to unrestricted designated funds (2019: £836,199) and £1,228,582 relating to unrestricted general funds (2019: £1,060,694).

The annual budgets are normally based on the status quo. During 2020 two additional people were employed, one with a view to replacing a current employee moving towards retirement and the other to take on a senior role temporarily being covered by an experienced volunteer. The costs associated with these activities were considered 'development' and covered by transfers from reserves.

As in previous years, the accounts of each of the individual funds of the Institution, which are listed below, have been prepared and approved by the Trustees.

The Trustees' Report and Accounts set out in the following pages include the following:

Restricted funds:

- Robert Dell bequest
- Thorrowood Scholarship bequest

Unrestricted funds:

- General
- IRSE Main fund

Designated

- Scholarship fund
- Fisher / Hewlett fund
- General development fund
- Future Conventions fund
- International conferences fund
- Textbook preparation fund
- Unrealised investments revaluation reserves.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT **FOR THE YEAR ENDED 31 DECEMBER 2020**

INVESTMENTS

Investment policy and objectives

Under the Memorandum and Articles of Association the charity trustees have the power to invest the assets of the Institution in such a manner, as may from time to time be considered desirable. The Trustees take advice from their investment managers, Rathbones. Dividends received are immediately reinvested.

KEY RISKS AND UNCERTAINTIES DISCLOSURE

A Risk Register is held by the Chief Executive and regularly reviewed by Management Committee. Significant risks for the long-term health of the Institution may be summarised as:

- Loss of membership and membership income;
- Loss of key staff including contractors, given the size of the organisation;
- Loss of support for the Licensing Scheme;
- Claims against the Licensing Scheme following an incident on a railway;
- Long-term loss of IT systems;
- Members' personal data loss;
- Financial failure of a major event.

PLANS FOR FUTURE PERIODS

It is hoped that the planned 2020 Convention to be held in Toronto, can be rearranged in 2021, but this will depend on the progress of the COVID-19 pandemic. The same will apply to other events that might normally occur during the year. It is currently a working assumption that events proposed for 2022 will be able to go ahead.

The impact of the loss of events on the finances of the Institution initiated a review of the subscription rates towards the end of 2020 with a view to rebalancing the balance of income between the charity and IRSE Enterprises.

The work to revise / update / republish the Institutions' publications, starting with the Metro textbook, has been underway during the year, but the planned re-publication will not happen until 2021.

PENSION LIABILITIES

The Institution's pension scheme is a defined contribution scheme through an external provider and there are no liabilities arising to the Institution.

RESERVES

The Institution has a Reserves Policy in accordance with the Charity Commission's requirements. This is reviewed annually by Council. The current values of the reserves are detailed in these accounts. The value of the Hewlett / Fisher fund has been reduced to cover the recent costs of providing the bursaries for recent Conventions and conferences. The General fund will be used to refund the costs of the renewal of the Institution's website during the next financial year. The planned return to a modest surplus will help to replenish this, along with movements in the stock market.

Funds in Deficit and Going Concern

No funds are currently in deficit. There is no current reason to believe that the Institution is unable to continue as a going concern.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT **FOR THE YEAR ENDED 31 DECEMBER 2020**

REFERENCE AND ADMINISTRATIVE DETAILS

Registered name of the Charity

The Institution of Railway Signal Engineers

Registered Company number

0125685 (England and Wales)

Registered Charity numbers

1046999

Principle address and registered office

4TH Floor, 1 Birdcage Walk

Westminster

London

SW1H 9JJ

Trustees and Directors

The Trustees and Directors who served during the year were:

P A Allan

I J Allison

S W Boshier

I Bridges

R E Burkhardt

G E Clark

M R Fenner

B Godziejewski

R C Gould

Y Hirao

A Knight

P H J McSharry

M Montigel

R Muttram

J E Power

X Rao

P Symons

K Upton

D N Woodland

H S Bhatia (Appointed 23 April 2020)

R L Cooke (Appointed 23 April 2020)

G B S Lam (Appointed 23 April 2020)

C Roberts (Appointed 23 April 2020)

F Al-Tahan (Appointed 23 April 2020)

Resigned from the Board:

C K Gash (Resigned 23 April 2020)

L M Hunter (Resigned 23 April 2020)

P-D Jourdain (Resigned 23 April 2020)

C R Page (Resigned 23 April 2020)

Company Secretary

B Judd

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT
FOR THE YEAR ENDED 31 DECEMBER 2020

REFERENCE AND ADMINISTRATIVE DETAILS - continued

Chief Executive Officer

B Judd

Names and addresses of advisers:

Auditor

HPH,Chartered Accountants
54 Bootham
York
YO30 7XZ

Bankers

National Westminster Bank Plc
Clapham Common Branch
145 Clapham High Street
London
SW4 7SZ

Solicitors

Tozers LLP
10 St. Pauls Road
Newton Abbot
Devon
TQ12 4PR

Investment managers

Rathbone Investment Management
8 Finsbury Circus
London
EC2M 7AZ

Key Management Personnel

B Judd – Chief Executive Officer
A Smith – Treasurer
D Bailey – HR Advisor

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

TRUSTEES' ANNUAL REPORT **FOR THE YEAR ENDED 31 DECEMBER 2020**

STATEMENT OF TRUSTEES RESPONSIBILITIES

The Trustees (who are also the Directors of The Institution of Railway Signal Engineers for the purposes of Company Law) are responsible for preparing the Report of the Trustees and the Financial Statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice), including Financial Reporting Standard 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland".

Company Law requires the Trustees to prepare Financial Statements for each financial period which give a true and fair view of the state of affairs of the Charitable Company and of the incoming resources and application of resources, including the income and expenditure, of the Charitable Company for that period. In preparing those Financial Statements, the Trustees are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in the Charity SORP;
- make judgements and estimates that are reasonable and prudent;
- prepare the Financial Statements on the going concern basis unless it is inappropriate to presume that the Charitable Company will continue in business.

The Trustees are responsible for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the Charitable Company and to enable them to ensure that the Financial Statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the Charitable Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

In so far as the Trustees are aware:

- there is no relevant audit information of which the Charitable Company's auditors are unaware; and
- the Trustees have taken all steps that they ought to have taken to make themselves aware of any relevant audit information and to establish that the Auditors are aware of that information.

AUDITOR

The auditor, HPH is appointed under section 487(1) of the Companies Act 2006.

Approved by order of the board of trustees on 11 March 2021 and signed on its behalf by:

D N Woodland
President and Trustee

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF
THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**

OPINION

We have audited the financial statements of The Institution of Railway Signal Engineers (the 'charitable company') for the year ended 31 December 2020, which comprise the Statement of Financial Activities, the Balance Sheet and the related notes, including significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including Financial Reporting Standard 102 'The Financial Reporting Standard applicable in the UK and Republic of Ireland' (United Kingdom Generally Accepted Accounting Practice).

In our opinion the financial statements:

- give a true and fair view of the state of the group's and the charitable company's affairs as at 31 December 2020 and of the group's incoming resources and application of resources for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Companies Act 2006.

BASIS OF OPINION

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the charitable company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the United Kingdom, including the Financial Reporting Council's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

CONCLUSIONS RELATING TO GOING CONCERN

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

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

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

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF
THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**

OTHER INFORMATION

The trustees/directors are responsible for the other information contained within the annual report. The other information comprises the information included in the Annual Report, other than the financial statements and our Auditor's report thereon. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

OPINION ON OTHER MATTERS PRESCRIBED BY THE COMPANIES ACT 2006

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the Trustees' report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the Trustees' report has been prepared in accordance with applicable legal requirements.

MATTERS ON WHICH WE ARE REQUIRED TO REPORT BY EXCEPTION

In the light of the knowledge and understanding of the charitable company and its environment obtained in the course of the audit, we have not identified material misstatements in the Trustees' report.

We have nothing to report in respect of the following matters in relation to which the Companies Act 2006 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept, or returns adequate for our audit have not been received from branches not visited by us; or
- the financial statements are not in agreement with the accounting records and returns; or
- certain disclosures of directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

RESPONSIBILITIES OF DIRECTORS

As explained more fully in the Trustees' responsibilities statement on page 7, the trustees are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the trustees determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

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

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF
THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS**

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

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

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

We considered the opportunities and incentives that may exist within the organisation for fraud and identified the greatest potential for fraud in the following areas: timing of recognition of commercial income, posting of unusual journals along with complex transactions and manipulating the charitable company's key performance indicators to meet targets. We discussed these risks with client management, designed audit procedures to test the timing of commercial revenue, tested a sample of journals to confirm they were appropriate and reviewed areas of judgement for indicators of management bias to address these risks.

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

USE OF OUR REPORT

This report is made solely to the charitable company's members in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the charitable company's members those matters we are required to state to them in an Auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the charitable company and the charitable company's members for our audit work, for this report, or for the opinions we have formed.

.....
Robert Woolley (Senior Statutory Auditor)

For and on behalf of HPH, Statutory Auditor

54 Bootham
York
YO30 7XZ

15 March 2021

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES
AND INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED 31 DECEMBER 2020

	Note	Unrestricted Funds £	Restricted Funds £	Total 2020 £	Total 2019 £
Income and endowments from:					
Charitable activities					
Donations and legacies	4	19,092	-	19,092	41,708
Other trading activities					
Non-ancillary trading income	5	354,592	-	354,592	425,921
Other activities	5	480,916	-	480,916	448,263
Investments					
Investment income	6	31,685	68	31,753	38,905
Total income		£ 886,285	£ 68	£ 886,353	£ 954,797
Expenditure on:					
Raising funds	7				
Other activities		3,857	-	3,857	8,567
Investment		8,008	-	8,008	7,865
Non-ancillary trading		422,322	-	422,322	438,884
		434,187	-	434,187	455,316
Charitable activities	7				
Awards		16,195	-	16,195	24,529
Promoting best practice		481,557	-	481,557	534,779
		497,752	-	497,752	559,308
Total expenditure		£ 931,939	£ -	£ 931,939	£ 1,014,624
Net (expenditure) / income before gain / (loss) on investments		(45,654)	68	(45,586)	(59,827)
Net gain / (loss) on investments	13	232,732	(396)	232,336	280,451
Net income / (expenditure) for the year		187,078	(328)	186,750	220,624
Reconciliation of funds:					
Total funds brought forward		1,896,893	36,119	1,933,012	1,712,388
Total funds carried forward		£ 2,083,971	£ 35,791	£ 2,119,762	£ 1,933,012

The notes on pages 14 to 25 form part of these financial statements.

Income and net movement in funds derive wholly from continuing operations.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

CONSOLIDATED BALANCE SHEET

AS AT 31 DECEMBER 2020

Registration number: 0125685

		Consolidated		Charity only	
	Note	2020	2019	2020	2019
		£	£	£	£
Fixed assets:					
Tangible fixed assets	12	19,558	31,227	10,395	16,871
Investments	13	2,055,844	1,812,394	1,488,776	1,342,570
<i>Total fixed assets</i>		2,075,402	1,843,621	1,499,171	1,359,441
Current assets:					
Stocks	14	48,862	45,110	42,416	36,076
Debtors	15	207,530	194,705	290,623	269,580
Investments	16	209,668	209,205	209,668	209,205
Cash at bank and in hand	26	238,466	338,188	69,062	108,013
<i>Total current assets</i>		704,526	787,208	611,769	622,874
Liabilities:					
Creditors: amounts falling due within one year	17	422,469	438,934	228,440	237,003
<i>Net current assets</i>		282,057	348,274	383,329	385,871
<i>Total assets less current liabilities</i>		2,357,459	2,191,895	1,882,500	1,745,312
Creditors: amounts falling due after more than one year	18	237,697	258,883	-	-
Total net assets		£ 2,119,762	£ 1,933,012	£ 1,882,500	£ 1,745,312
The funds of the charity:	19				
Unrestricted funds	20	2,083,971	1,896,893	1,846,709	1,709,193
Restricted funds	21	35,791	36,119	35,791	36,119
Total charity funds		£ 2,119,762	£ 1,933,012	£ 1,882,500	£ 1,745,312

The financial statements were approved by the Board of Trustees on 11 March 2021 and were signed on its behalf

D N Woodland
President and Trustee

I Bridges
Vice President and Trustee

The notes on pages 14 to 25 form part of these financial statements.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

CONSOLIDATED CASH FLOW STATEMENT
FOR THE YEAR ENDED 31 DECEMBER 2020

	Note	2020	2019
		£	£
Net cash used in operating activities	25	(124,790)	(78,758)
Cash flow from investing activities:			
Purchase of tangible fixed assets		(5,784)	(44,793)
Purchase of fixed asset investments		(237,983)	(231,680)
Sale of fixed asset investments		237,082	193,471
Interest received		1,825	2,534
Dividends received		29,928	36,371
Net cash provided by / (used in) investing activities		25,068	(44,097)
Change in cash and cash equivalents in the year	27	(99,722)	(122,855)
Cash and cash equivalents at beginning of the year		338,188	461,043
Cash and cash equivalents at end of the year	26	£238,466	£338,188

The notes on pages 14 to 25 form part of these financial statements.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS **FOR THE YEAR ENDED 31 DECEMBER 2020**

1 ACCOUNTING POLICIES

Legal entity

The Institution of Railway Signal Engineers is regulated by the Charities Commission (1046999), limited by guarantee and is registered in England and Wales. The address of the registered office and principal place of business is 4th Floor, 1 Birdcage Walk, Westminster, London, SW1H 9JJ.

In the event of the charity being wound up, the liability in respect of the guarantee is limited to £1 per member of the charity.

The charity constitutes a public benefit entity as defined by FRS 102.

Basis of preparation

The financial statements have been prepared in accordance with the relevant version of the Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102), the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS102), the Charities Act 2011 and the Companies Act 2006.

The Institution of Railway Signal Engineers meets the definition of a public benefit entity under FRS102. Assets and liabilities are initially recognised at historical cost or transaction value unless otherwise stated in the relevant accounting policy note(s).

The consolidated accounts include the results of Institution of Railway Signal Engineers and IRSE Enterprises Limited, which are consolidated on a line by line basis. In accordance with section 408 of the Companies Act 2006, no separate Statement of Financial Activities (SOFA) or Cash Flow has been presented for the Charity alone.

Going concern

As described in the Trustees' Annual Report, special consideration has been given to the COVID-19 pandemic. The Trustees/Directors have prepared financial projections, taking into consideration the current economic climate and its potential impact on the sources of income and planned expenditure. They have a reasonable expectation that adequate financial resources are available to enable the Charitable Company to continue in operational existence for the foreseeable future, and have adequate contingency plans in the event that income streams are reduced. Consequently the financial statements have been prepared on the basis that the Charitable Company is a going concern.

Income

All income is recognised in the Statement of Financial Activities once the charity has entitlement to the funds, it is probable that the income will be received and the amount can be measured reliably.

For donations to be recognised, if not received before the year end, the charity will have been notified of the amounts and settlement date in writing.

Fixed asset gifts in kind are recognised when receivable and are included at fair value. They are not deferred over the life of the asset.

Investment income is earned through holding assets for investment purposes such as shares and property. It includes dividends, interest and rent, included on a receivable basis.

Revenue in the trading subsidiary is recognised to the extent that it is probable that the economic benefits will flow to the company and the revenue can be reliably measured. Revenue is measured as the fair value of the consideration receivable, excluding discounts, rebates, value added tax and other sales taxes. The company has no long term contracts or on-going projects.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS **FOR THE YEAR ENDED 31 DECEMBER 2020**

1 ACCOUNTING POLICIES (continued)

Expenditure and irrecoverable VAT

Expenditure is accrued as soon as a liability is considered probable, discounted to present value for longer-term liabilities. Expenditure attributable to more than one cost category is apportioned to them on the basis of the estimated amount attributable to each activity in the year, either by reference to staff time or the use made of the underlying assets, as appropriate. Expenses are shown net of VAT with the irrecoverable element included within direct costs.

Raising funds includes all expenditure incurred by the charity to raise funds for its charitable purposes and includes costs of fundraising activities, events and non-charitable trading.

Governance costs represent those costs attributable to the management of the charity's assets, organisational administration and compliance with constitutional and statutory requirements.

Support costs are those costs that assist the work of the charity but do not directly represent charitable activities and include office costs and governance costs, including payroll costs. They are incurred directly in support of expenditure on the objectives of the charity. Where support costs cannot be directly attributed to particular headings they have been allocated to costs of raising funds and expenditure on charitable activities on a basis consistent with use of the resources.

Tangible fixed assets

Tangible fixed assets are included in the financial statements at their historical cost. Depreciation is calculated to write off the cost of fixed assets over their expected useful lives on a straight line basis. The rates used are as follows:

Fixtures and fittings	20% per annum straight line
IT and software	33% per annum straight line

Stocks

Stocks are stated at the lower of cost and net realisable value, after making due allowance for obsolete and slow moving stock.

Fund accounting

General funds - These are funds which can be used in accordance with the charity's charitable objectives at the discretion of the board.

Designated funds - these comprise unrestricted funds that have been set aside by the trustees for particular purposes. The aim and use of each designated fund is set out in the notes to the financial statements.

Restricted funds - These are subject to specific restrictive conditions imposed by the donors of funds received for specific purposes and projects.

Financial instruments

The charity only has financial assets and financial liabilities of a kind that qualify as basic financial instruments. Basic financial instruments are initially recognised at transaction value and subsequently measured at their settlement value with the exception of bank loans which are subsequently measured at amortised cost using the effective interest method.

Cash at bank and in hand

Cash at bank and cash in hand includes cash and any short term deposit accounts with a maturity of three months or less from the date of opening.

Other financial assets

Other financial assets are initially measured at fair value, which is normally the transaction price. Such assets are subsequently carried at fair value and the changes in fair value are recognised in the Statement of Financial Activities, except investments that are not publicly traded and whose fair values cannot be measured reliably are measured at cost less impairment.

Debtors

Trade and other debtors are recognised at the settlement amount due after any trade discount offered. Prepayments are valued at the amount prepaid net of any trade discounts due.

Investments

The investment portfolios have been valued at market value at 31 December 2020. The Statement of Financial Activities includes the net gains and losses on investments arising on revaluation at the year end and on disposals throughout the year. Realised gains and losses on sales of investments are calculated as the difference between the sale proceeds and opening market value. Unrealised gains and losses represent the movement between market values.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS **FOR THE YEAR ENDED 31 DECEMBER 2020**

1 ACCOUNTING POLICIES (continued)

Other financial instruments

All other financial instruments are initially recognised at fair value, which is normally the transaction price. Other financial instruments are subsequently measured at fair value with any changes in the fair value recorded in the Statement of Financial Activities.

Creditors and provisions

Creditors and provisions are recognised where the charity has a present obligation resulting from a past event that will probably result in the transfer of funds to a third party and the amount due to settle the obligation can be measured or estimated reliably. Creditors and provisions are normally recognised at their settlement amount after allowing for any trade discounts due.

Operating leases

Rentals payable under operating leases are charged in the Statement of Financial Activities on a straight line basis over the lease term.

Foreign currencies

Assets and liabilities in foreign currencies are translated into sterling at the rates of exchange ruling at the balance sheet date. Transactions in foreign currencies are translated into sterling at the rate of exchange ruling at the date of transaction. Exchange differences are taken into account in arriving at the operating result.

Pension costs and other post-retirement benefits

The charitable company operates a defined contribution pension scheme. Contributions payable to the charitable company's pension scheme are charged to the Statement of Financial Activities in the period to which they relate.

Significant judgements and estimates

In the application of the group's accounting policies, the directors are required to make judgements, estimates and assumptions in areas where this information is not readily available from other sources. In particular the directors use judgment in assessing the carrying amount of assets and liabilities. The estimates and assumptions are based on the historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised where the revision affects only that period, or in the period of the revision and future periods where the revision affects both current and future periods.

Investments

Investments are included on the Balance Sheet and are stated at market value as at the balance sheet date. Gains and losses on disposal and revaluations of investments are charged or credited to the Statement of Financial Activities.

2 TAXATION

As a registered charity, The Institute of Railway Signal Engineers is exempt from the tax on income falling within sections 466 to 493 of the Corporation Tax Act 2010 to the extent that this is applied to its charitable objects. No tax charges have arisen in the Company.

3 OPERATING SURPLUS

The surplus for the year is stated after charging:

Depreciation

Auditor's remuneration

2020	2019
£	£
17,453	22,948
6,000	8,000
<u> </u>	<u> </u>

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2020

4 CHARITABLE ACTIVITIES - DONATIONS AND LEGACIES

	2020	2019
	£	£
Donations	£ 19,092	£ 41,708

All donations related to unrestricted funds.

5 OTHER TRADING ACTIVITIES

	2020	2019
	£	£
Other activities		
Subscriptions	407,702	404,989
Professional reviews	3,350	915
Advertising	12,555	9,075
Booklets & textbooks	18,730	7,138
IRSE ties, cufflinks and badges	26	26
Examination fees and materials	38,553	25,413
Proceeds from members' lunch	-	707
	<u>480,916</u>	<u>448,263</u>

All other activities relate to unrestricted funds.

Trading income

IRSE Enterprises Limited	<u>354,592</u>	<u>425,921</u>
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6 INVESTMENT INCOME

	2020	2019
	£	£
Equities & Government stocks	23,824	29,958
Interest receivable	1,705	2,167
IRSE Enterprises Limited	6,224	6,780
	<u>£ 31,753</u>	<u>£ 38,905</u>

£68 of investment income relates to restricted funds (2019: £61).

7 ANALYSIS OF EXPENDITURE

	Staff costs	Other	Depreciation	2020	2019
	£	£	£	£	£
Raising funds					
Other activities	1,494	2,270	93	3,857	8,567
Investment	-	8,008	-	8,008	7,865
Non-ancillary trading	126,654	287,498	8,170	422,322	438,884
Total raising funds	<u>128,148</u>	<u>297,776</u>	<u>8,263</u>	<u>434,187</u>	<u>455,316</u>
Charitable activities					
Awards	5,977	9,847	371	16,195	24,529
Promoting best practice	141,955	330,784	8,818	481,557	534,779
Total charitable activities	<u>147,932</u>	<u>340,631</u>	<u>9,189</u>	<u>497,752</u>	<u>559,308</u>
Total Expenditure	<u>£ 276,080</u>	<u>£ 638,407</u>	<u>£ 17,452</u>	<u>£ 931,939</u>	<u>£ 1,014,624</u>

All raising funds expenditure relates to unrestricted funds.

£nil of charitable activities expenditure relates to restricted funds (2019: £300).

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2020

8 GOVERNANCE COSTS

	2020	2019
	£	£
Auditors' remuneration	£ 6,000	£ 8,000

All governance costs relate to unrestricted expenditure.

9 AUDITOR'S REMUNERATION

Amounts payable to the auditor for statutory audit services of the group are £6,000 (2019 - £8,000) and of the charity are £4,000 (2019 - £4,000).

10 TRUSTEE REMUNERATION AND BENEFITS

Trustees' travel expenses totalling £2,030 were reimbursed to 2 Trustees during the year. In 2019 Trustees' travel expenses totalling £2,551 were reimbursed to 2 Trustees.

11 STAFF COSTS

	2020	2019
	£	£
Wages and salaries	237,796	256,872
Social security costs	20,095	15,665
Defined contribution pension costs	18,189	18,200
	<u>£ 276,080</u>	<u>£ 290,737</u>

The average number of employees during the year was as follows:

	2020	2019
Administration	<u>10</u>	<u>10</u>

There are no employees who received total employee benefits (excluding employer pension costs) of more than £60,000 (2019 - None).

The key management personnel of the charitable company, comprise the Trustees and Chief Executive Officer as disclosed on page 6. The total amount of employee benefits (including employer pension contributions) received by key management personnel for their services to the charitable company was nil (2019: nil). The total amount paid to the key management personnel in respect of their services totalled £80,729 (2019: £79,278).

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2020

12 TANGIBLE FIXED ASSETS - GROUP

**Fixtures and
fittings
£**

Cost:

At 1 January 2020

322,896

Additions

5,784

Disposals

-

At 31 December 2020

328,680

Depreciation:

At 1 January 2020

291,669

Charge for the year

17,453

Re-classification

-

At 31 December 2020

309,122

Net book values:

31 December 2020

£ 19,558

31 December 2019

£ 31,227

All of the tangible fixed assets relate to unrestricted funds.

TANGIBLE FIXED ASSETS - CHARITY

**Fixtures and
fittings
£**

Cost:

At 1 January 2020

295,907

Additions

2,808

Disposals

-

At 31 December 2020

298,715

Depreciation:

At 1 January 2020

279,036

Charge for the year

9,284

Re-classification

-

At 31 December 2020

288,320

Net book values:

31 December 2020

£ 10,395

31 December 2019

£ 16,871

All of the tangible fixed assets relate to unrestricted funds.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS **FOR THE YEAR ENDED 31 DECEMBER 2020**

13 FIXED ASSET INVESTMENTS - GROUP

	Equities £	Government securities £	Total £
Market value			
At 1 January 2020	1,602,145	210,249	1,812,394
Additions	237,983	-	237,983
Disposals	(211,545)	(25,537)	(237,082)
Revaluation	233,790	8,759	242,549
At 31 December 2020	<u>£ 1,862,373</u>	<u>£ 193,471</u>	<u>£ 2,055,844</u>

£35,666 of investments relates to restricted funds (2019: £36,062).

£396 of losses on investments relates to restricted funds (2019: £329).

FIXED ASSET INVESTMENTS - CHARITY

	Subsidiary company £	Equities £	Government securities £	Total £
Market value				
At 1 January 2020	4,415	1,173,504	164,651	1,342,570
Additions	-	137,854	-	137,854
Disposals	-	(88,580)	(25,537)	(114,117)
Revaluation	-	115,686	6,783	122,469
At 31 December 2020	<u>£ 4,415</u>	<u>£ 1,338,464</u>	<u>£ 145,897</u>	<u>£ 1,488,776</u>

£35,666 of investments relates to restricted funds (2019: £36,062).

£396 of losses on investments relates to restricted funds (2019: £329).

The charitable company's investments at the balance sheet date in the share capital of companies include the following:

IRSE Enterprises Limited

Registered office: 4th Floor, 1 Birdcage Walk, Westminster, London, SW1H 9JJ

Nature of business: Administration & finance support for parent

	% holding
Class of share:	
Ordinary	100

	2020 £	2019 £
Aggregate capital and reserves	241,676	192,116
Profit / (loss) for the year	<u>49,560</u>	<u>71,109</u>

No donation (2019: £nil) was made from the company to the charity in the year due to the fact that the company did not make a taxable profit.

14 STOCKS - GROUP

	2020 £	2019 £
Stocks	<u>£ 48,862</u>	<u>£ 45,110</u>

STOCKS - CHARITY

	2020 £	2019 £
Stocks	<u>£ 42,416</u>	<u>£ 36,076</u>

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2020

15 DEBTORS

	Consolidated		Charity	
	2020	2019	2020	2019
	£	£	£	£
Trade debtors	122,910	58,801	-	-
Other debtors	12,017	9,707	12,017	9,707
Prepayments and accrued income	6,422	78,555	-	-
VAT	66,181	47,642	53,571	35,995
Amounts owed by group undertakings	-	-	225,035	223,878
	<u>£ 207,530</u>	<u>£ 194,705</u>	<u>£ 290,623</u>	<u>£ 269,580</u>

All debtors relate to unrestricted funds.

16 CURRENT ASSET INVESTMENTS - GROUP

	2020	2019
	£	£
National Savings	<u>£ 209,668</u>	<u>£ 209,205</u>

All debtors relate to unrestricted funds.

17 CREDITORS: amounts falling due within one year

	Consolidated		Charity	
	2020	2019	2020	2019
	£	£	£	£
Trade creditors	28,984	38,981	18,093	28,520
Accruals and deferred income	200,644	196,505	177,332	176,262
Taxation and social security	-	-	-	-
Other creditors	192,841	203,448	33,015	32,221
	<u>£ 422,469</u>	<u>£ 438,934</u>	<u>£ 228,440</u>	<u>£ 237,003</u>

All creditors relate to unrestricted funds.

18 CREDITORS: amounts falling due after more than one year - GROUP

	2020	2019
	£	£
Other creditors	<u>£ 237,697</u>	<u>£ 258,883</u>

Representing the proportion of licence fees received in advance, which will be credited to income after more than one year.

19 ANALYSIS OF NET ASSETS BETWEEN FUNDS

	Tangible fixed assets	Investments	Net current (liabilities)/ assets	Long term liabilities	Total 2020
	£	£	£	£	£
Unrestricted funds	10,395	1,448,695	383,205	-	1,842,295
Restricted funds	-	35,666	125	-	35,791
Total Charity Funds	<u>10,395</u>	<u>1,484,361</u>	<u>383,330</u>	<u>-</u>	<u>1,878,086</u>
IRSE Enterprises Limited	<u>9,163</u>	<u>571,483</u>	<u>(101,273)</u>	<u>(237,697)</u>	<u>241,676</u>
Total for the group	<u>£ 19,558</u>	<u>£ 2,055,844</u>	<u>£ 282,057</u>	<u>£ (237,697)</u>	<u>£ 2,119,762</u>

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

**NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2020**

19 ANALYSIS OF NET ASSETS BETWEEN FUNDS - continued

2019 comparatives

	Tangible fixed assets £	Investments £	Net current (liabilities)/ assets £	Long term liabilities £	Total 2019 £
Unrestricted funds	16,871	1,302,093	385,813	-	1,704,777
Restricted funds	-	36,062	57	-	36,119
Total Charity Funds	16,871	1,338,155	385,870	-	1,740,896
IRSE Enterprises Limited	14,356	474,239	(37,596)	(258,883)	192,116
Total for the group	£ 31,227	£ 1,812,394	£ 348,274	£ (258,883)	£ 1,933,012

20 UNRESTRICTED FUNDS

	Balance at 01/01/2020 £	Income £	Expenditure £	Gains on investments £	Transfers £	Balance at 31/12/2020 £
Designated funds						
Scholarship	77,128	940	-	-	-	78,068
Alan Fisher memorial / Frank Hewlett Bequest	407,071	19,017	(767)	-	-	425,321
General Development	307,000	-	-	-	-	307,000
Future ASPECT Conference	10,000	-	-	-	-	10,000
International conventions	27,500	-	-	-	-	27,500
Textbook Preparation	7,500	-	-	-	-	7,500
	836,199	19,957	(767)	-	-	855,389
Unrestricted funds						
General Fund	856,485	505,512	(508,850)	121,666	-	974,813
Charity	1,692,684	525,469	(509,617)	121,666	-	1,830,202
Non charitable trading funds	204,209	360,816	(422,322)	111,066	-	253,769
Total for the group	£ 1,896,893	£ 886,285	£ (931,939)	£ 232,732	£ -	£ 2,083,971

2019 comparatives

	Balance at 01/01/2019 £	Income £	Expenditure £	Gains on investments £	Transfers £	Balance at 31/12/2019 £
Designated funds						
Scholarship	76,232	896	-	-	-	77,128
Alan Fisher memorial / Frank Hewlett Bequest	423,017	40,774	(6,720)	-	(50,000)	407,071
General Development	307,000	-	-	-	-	307,000
Future ASPECT Conference	10,000	-	-	-	-	10,000
International conventions	27,500	-	-	-	-	27,500
Textbook Preparation	7,500	-	-	-	-	7,500
	851,249	41,670	(6,720)	-	(50,000)	836,199
Unrestricted funds						
General Fund	691,352	480,365	(568,720)	203,488	50,000	856,485
Charity	1,542,601	522,035	(575,440)	203,488	-	1,692,684
Non charitable trading funds	133,100	432,701	(438,884)	77,292	-	204,209
Total for the group	£ 1,675,701	£ 954,736	£ (1,014,324)	£ 280,780	£ -	£ 1,896,893

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2020

21 RESTRICTED FUNDS	Balance at 01/01/2020	Income	Expenditure	Losses on investments	Balance at 31/12/2020
	£	£	£	£	£
Restricted funds					
Dell Bequest	23,432	-	-	(305)	23,127
Thorrowgood Bequest	12,687	68	-	(91)	12,664
	<u>£ 36,119</u>	<u>£ 68</u>	<u>£ -</u>	<u>£ (396)</u>	<u>£ 35,791</u>
 <i>2019 comparatives</i>					
	Balance at 01/01/2019	Income	Expenditure	Losses on investments	Balance at 31/12/2019
	£	£	£	£	£
Restricted funds					
Dell Bequest	23,985	-	(300)	(253)	23,432
Thorrowgood Bequest	12,702	61	-	(76)	12,687
	<u>£ 36,687</u>	<u>£ 61</u>	<u>£ (300)</u>	<u>£ (329)</u>	<u>£ 36,119</u>

Dell Bequest

The Dell Award is made annually under a bequest of the late Robert Dell OBE (Past President). It is awarded to a member of the Institution employed by London Underground Ltd (or its successor bodies) for achievement of a high standard in the science and application of railway signalling. The award consists of a plaque with a uniquely designed shield, engraved with the recipient's name together with a cheque.

Thorrowgood Bequest

The Thorrowgood Scholarship is awarded annually to a candidate who has excelled in the IRSE's Professional Examination. The award, which is presented at the Institution's AGM in the April following the examination, comprises the Thorrowgood Scholarship Medallion and a cheque.

22 OPERATING LEASE COMMITMENTS

As at 31 December 2020 the charitable company had future minimum lease payments under non-cancellable operating leases as follows:

	2020	2019
	£	£
Within one year	10,291	41,164
Between one and five years	-	10,291
	<u>£ 10,291</u>	<u>£ 51,455</u>

23 RELATED PARTIES

Other than those detailed in notes 10 and 11, there were no other related parties in the year.

24 ULTIMATE CONTROLLING PARTY

There is no ultimate controlling party. The charity is managed by its board of trustees. The liability of each of the charity's trustees is limited to £1.

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2020

25 RECONCILIATION OF NET INCOME TO NET CASH FLOW FROM OPERATING ACTIVITIES		2020 £	2019 £	
Net income for the reporting period		186,750	220,624	
Depreciation of tangible Fixed Assets		17,453	22,948	
Gains on Investments		(242,549)	(280,451)	
Interest received		(1,825)	(2,534)	
Dividends received		(29,928)	(36,371)	
(Increase) / decrease in Stocks		(3,752)	1,736	
Increase decrease in Debtors		(12,825)	(18,356)	
Increase in Current Asset Investments		(463)	(1,498)	
(Decrease) / increase in Creditors		(37,651)	15,144	
Net cash used in operating activities		£ (124,790)	£ (78,758)	
26 ANALYSIS OF CASH AND CASH EQUIVALENTS - GROUP		2020 £	2019 £	
Cash at bank and in hand		238,466	338,188	
Total cash and cash equivalents		£ 238,466	£ 338,188	
ANALYSIS OF CASH AND CASH EQUIVALENTS - CHARITY		2020 £	2019 £	
Cash at bank and in hand		69,062	108,013	
Total cash and cash equivalents		£ 69,062	£ 108,013	
27 ANALYSIS OF CHANGES IN NET DEBT		At 01/01/2020 £	Cash-flows £	At 31/12/2020 £
Cash		338,188	(99,722)	238,466
			(99,722)	
		338,188	(99,722)	238,466

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2020

28 COMPARATIVE CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES AND INCOME AND EXPENDITURE ACCOUNT

	Unrestricted Funds 2019 £	Restricted Funds 2019 £	Total 2019 £	Total 2018 £
Income and endowments from:				
Charitable activities				
Donations and legacies	41,708	-	41,708	1,763
Other trading activities				
Non-ancillary trading income	425,921	-	425,921	590,739
Other activities	448,263	-	448,263	452,035
Investments				
Investment income	38,844	61	38,905	37,102
Total income	<u>£ 954,736</u>	<u>£ 61</u>	<u>£ 954,797</u>	<u>£ 1,081,639</u>
Expenditure on:				
Raising funds				
Other activities	8,567	-	8,567	9,714
Investment	7,865	-	7,865	8,067
Non-ancillary trading	438,884	-	438,884	562,274
	<u>455,316</u>	<u>-</u>	<u>455,316</u>	<u>580,055</u>
Charitable activities				
Awards	24,229	300	24,529	32,102
Promoting best practice	534,779	-	534,779	557,098
	<u>559,008</u>	<u>300</u>	<u>559,308</u>	<u>589,200</u>
Total expenditure	<u>£ 1,014,324</u>	<u>£ 300</u>	<u>£ 1,014,624</u>	<u>£ 1,169,255</u>
Net (expenditure) before gain / (loss) on investment	(59,588)	(239)	(59,827)	(87,616)
Net gain / (loss) on investments	280,780	(329)	280,451	(118,978)
Net income / (expenditure) for the year	221,192	(568)	220,624	(206,594)
Reconciliation of funds:				
Total funds brought forward	1,675,701	36,687	1,712,388	1,918,982
Total funds carried forward	<u>£ 1,896,893</u>	<u>£ 36,119</u>	<u>£ 1,933,012</u>	<u>£ 1,712,388</u>

The following pages do not form part of the statutory financial statements
and contain unaudited information

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

**DETAILED STATEMENT OF FINANCIAL ACTIVITIES
FOR THE YEAR ENDED 31 DECEMBER 2020**

	2020		2019	
Income	£	£	£	£
Donations and legacies				
Donations	19,092		41,708	
<i>Total donations and legacies</i>		19,092		41,708
Other trading activities				
Advertising	12,555		9,075	
Booklets & textbooks	18,730		7,138	
IRSE ties, cufflinks & badges	26		26	
Examination fees & materials	38,553		25,413	
Subscriptions	407,704		404,989	
Professional reviews	3,350		915	
Proceeds from functions	-		707	
<i>Total other trading activities</i>		480,918		448,263
Investments				
Equities & government stocks	23,824		29,958	
Interest receivable	1,705		2,167	
<i>Total income from investments</i>		25,529		32,125
Total income		525,539		522,096
Expenditure				
Raising donations and legacies				
Fund raising dinners	-		4,190	
<i>Total raisings donation and legacies</i>		-		4,190
Charitable activities				
Proceedings: editing & printing	4,028		4,517	
Newsletter: editing & printing	98,249		94,728	
Booklets & textbooks	5,628		5,773	
IRSE ties, cufflinks & badges	-		1,295	
Prizes	39		1,111	
Awards	767		7,020	
Activities funded by country subscription supplements	5,974		8,821	
Professional Review Costs	1,203		2,682	
	115,888		125,947	
<i>Carried forward</i>	<i>115,888</i>		<i>125,947</i>	

THE INSTITUTION OF RAILWAY SIGNAL ENGINEERS

DETAILED STATEMENT OF FINANCIAL ACTIVITIES
FOR THE YEAR ENDED 31 DECEMBER 2020

	2020		2019	
	£	£	£	£
Charitable activities - continued				
<i>Brought forward</i>	115,888		125,947	
Support costs				
Wages	131,525		168,825	
Social security	9,402		7,244	
Pension	8,499		10,310	
Staff training	2,313		4,797	
Office rent & services	18,524		20,202	
Fees & honoraria	74,017		71,070	
Membership database project	-		8,420	
Other administrative costs	128,160		127,100	
Investment manager's fees	8,008		7,865	
Fixtures and fittings	9,282		15,770	
	<hr/>		<hr/>	
<i>Total support costs</i>	389,730		441,603	
Governance costs				
Auditors' remuneration	4,000		4,000	
	<hr/>		<hr/>	
<i>Total expenditure on charitable activities</i>		509,618		571,550
		<hr/>		<hr/>
Total expenditure		509,618		575,740
		<hr/>		<hr/>
Net income / (expenditure) before gains and losses		15,921		(53,644)
Gains on fixed asset investments		121,269		203,159
		<hr/>		<hr/>
Net Charity income		137,190		149,515
Profit arising IRSE Enterprises Limited		49,560		71,109
		<hr/>		<hr/>
Net income		£ 186,750		£ 220,624