

AN COIMISIÚN UM RIALÁIL IARNRÓID
COMMISSION FOR RAILWAY REGULATION

ANNUAL REPORT 2022



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REPORT OF THE COMMISSIONER



To Minister Eamon Ryan,
Minister for Transport

Minister,

The Commission for Railway Regulation (CRR) is pleased to submit its annual report for 2022.

The first months of 2022 saw the removal of Government COVID-19 restrictions and the beginning of a return to pre COVID-19 regulatory engagement. New ways of working and the use of IT platforms that facilitated our continued engagement with regulated entities and stakeholders during COVID-19 have now been integrated into our work streams. These will continue to be a central part of our work processes. In 2022, the Commission introduced a blended work policy and procedure in line with the Government's Blended Working Policy Framework. I again acknowledge the professionalism and continued dedication of the Commission's staff that enabled the CRR to fulfil its functions as we transitioned away from the restrictions in place at the start of the year and I extend my thanks to each member of the CRR staff and acknowledge their continuing commitment, and hard work throughout the year.

The CRR prepared a detailed programme of work for 2022 to ensure that it covered the full scope of its responsibility and its functions as detailed in Section 3 on the Role of the Commission of this report.

The CRR undertook extensive work in the areas relevant to the continued safe operation of the railway and tramway networks in the State. This included safety management system conformity assessment, authorisation to place in service, train driver licencing as well as the ongoing supervision and enforcement to ensure compliance. We also fulfilled our regulatory functions including the licensing of undertakings, monitoring of the Infrastructure Managers Multi Annual Contract (IMMAC) with the Minister, and the review of the Iarnród Éireann (IÉ) Network Statement.

In relation to the national rail systems, the CRR issued 23 letters of acceptance under its authorisation to place in service (APIS) function which related to subsystems, infrastructure, signalling and rolling stock. These included concept stage on DART+ Coastal North and Coastal South, detail design on the 22000 B2 intermediate cars as well as heritage locomotives.

A renewed safety authorisation was issued to IÉ-IM following completion of the CRR assessment of their SMS application. Both IÉ-RU and RSIE have indicated their intention to have the CRR perform their assessment for their single safety certificates in 2023 and pre-engagement commenced in 2022 on this assessment.

All train drivers are required under EU legislation to hold a valid licence to operate a train on the network. Train driver's licences are issued by the CRR and in 2022, 49 new licences were issued.

The CRR developed its 2022 supervision programme with a balance of activities including audits, inspection, post occurrence activity and safety performance meetings. These activities are directed at all the entities we regulate based on their risk profile. Our overall approach has been and continues to be based on support, advice, encouragement and when necessary, enforcement.

Three audits were concluded in 2022 and a further seven audits have commenced.

Those concluded addressed the training and competence of train drivers, Iarnród Éireann – Railway Undertaking (IÉ-RU), the management of civil engineering structures and staff competence, Iarnród Éireann – Infrastructure Manager (IÉ-IM) and management of change, Rhomberg Sersa Ireland (RSIE).

Audits completed identified 1 major non-compliance, 22 minor non-compliances and a further 28 instances where action was required.

A further 57 inspections were concluded in 2022. These identified four major non-compliances, which is of note, and eleven minor non-compliances. There were a further 63 instances where the CRR required action to be taken by the regulated entity in areas where there was the potential for non-compliance to arise unless such action was taken, or improvements were made.

In 2022, CRR inspectors requested a total of 7 Improvement Plans in accordance with section 76 of the Railway Safety Act (RSA) 2005 from sector organisations. In all cases where the regulated entities are required to take corrective actions the closure of these is monitored by the CRR.

The CRR received three investigation reports from the Railway Accident Investigation Unit (RAIU) in 2022. These reports contained a total of 16 safety recommendations. Safety recommendations made by the RAIU are typically directed at the railway organisation(s) concerned but are addressed to the CRR as the responsible authority for the oversight of their implementation.

In 2022, the CRR received 28 representations raising safety concerns in relation to the rail sector. Six of these related to safety of infrastructure, eight related to the safety of rolling stock and fourteen related to the safety of train operations. In addition to these 28 representations, 20 requests for information were received from other regulatory bodies/agencies. All representations receive a high degree of priority.

The required annual safety reports from the railway organisations covering 2021 were submitted to the CRR in 2022. The CRR's Safety Performance Report for 2021 is based on these submissions and was published in December and is now available on our website. The safety related data that is presently available for 2022 is provided within this annual report. While this will be augmented by the full safety data for 2022, the overall safety performance of the Irish heavy railway sector continued to be broadly positive in 2022, when compared to previous years and European statistics.

The CRR as the Regulatory Body continued its review of the IÉ-IM 2022 Network Statement. It is noted that a number of outstanding actions from the previous year's review have now been closed.

Under the IMMAC 2020-2024, the CRR fulfilled all of its duties in line with the contract requirements. As the Independent Monitoring Body for the IMMAC between IÉ-IM and the Minister for Transport, the CRR reported on a quarterly and annual basis on the performance indicators within the contract. No persistent failure to perform findings were made by the CRR.

The oversight and performance delivery agreements 2021-2024 between the CRR and the Department of Transport (DoT) were reviewed and amended in line with the requirements of the Code of Practice for Governance of State Bodies (CPGSB). The CRR provided the required performance delivery report on a quarterly basis to the Department.

The total funding for the functions of the CRR in 2022 was €2.583m. The CRR receives most of its annual funding through the levy that it places on the entities that are subject to regulation, this amounted to €1.25m in 2022. The annual funding through Grant in Aid from the DoT was €0.73m. The levy is allocated based on the level of activity the CRR undertake with each regulated entity to fulfil its functions. In line with the change in work processes during COVID-19 the CRR had increased reserves, part of which it used to reduce the levy on regulated entities in 2022. Additional fees are also charged for some of our statutory activities such as Designated Bodies (DeBo) recognition and train driver licencing.

To ensure an understanding and awareness of the continued development of the legal and technical framework governing the operation of the European Rail Network, the CRR were active participants in over 50 meetings chaired by the European Commission, DG-MOVE and the European Railway Agency (ERA).

The CRR ensures that it meets the requirement of the CPGSB. The Comprehensive Report to the Minister, required by the Code of Practice, is included in Section 10 of this annual report.

The CRR has Department sanction for 17 staff and at the end of 2022 following a successful recruitment campaign the CRR had for the first time in several years a full complement of staff.

The current operational environment for the CRR is, and will continue to be, one that is challenging. It is evident from this report that many of the Government's planned initiatives for the development of the national rail transport system have commenced and require extensive CRR engagement under APIS. In addition, the new cycle of conformity assessment based on the transposed EU Directives has begun to impact on that statutory function. The role and functions of the CRR has resulted in new activity in 2022, associated with the Dursey cablecar as well as new engagement with novel use of older rail infrastructure through velorail.

We will continue to meet all these challenges and ensure the CRR, as the National Safety Authority and Railway Regulator, continues to work with the sector and stakeholders, to ensure safe and sustainable rail transport that meets the needs of our society.

Brian Higginson

Commissioner

ORGANISATIONAL STRUCTURE AND ROLE



Management team and organisational structure



Brian Higginson
Commissioner



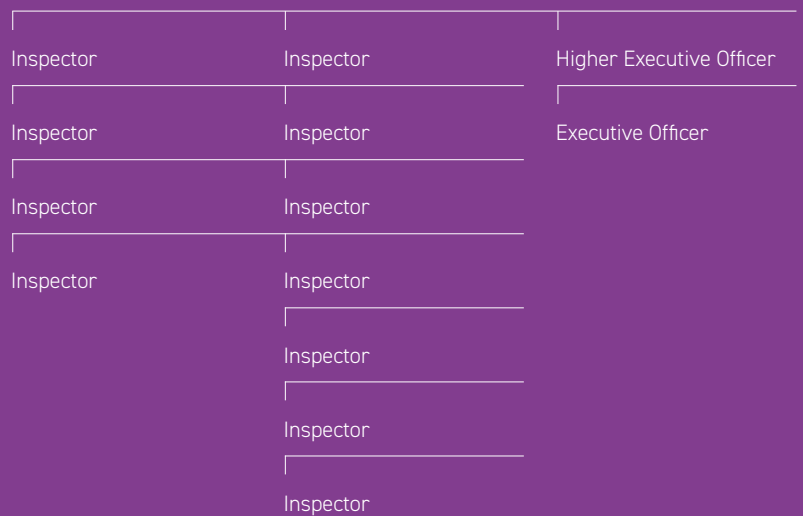
Mary Molloy
Principal Inspector
Authorisation to Place in
Service and Conformity
Assessment



Anthony Byrne
Principal Inspector
Compliance Supervision
and Enforcement



Caitriona Keenahan
Head of Corporate
Governance and
Regulation



Role of the Commission for Railway Regulation (CRR)

The CRR was established on 1st January 2006 under the provisions of the Railway Safety Act (RSA) 2005. Since it was established, its range of functions based on both national and European legislation has continually expanded. An overview of the current functions of the CRR and the legislative framework underpinning these is provided below.

The CRR's primary areas of responsibility under legislation relate to heavy rail, light rail, and cableways. Heavy rail refers to the IÉ-IM network and the Railway Undertakings that operate on it. Heavy rail is regulated both through the RSA 2005 and EU legislation. Light rail refers to the Dublin Light Rail System (LUAS) and is regulated through the RSA 2005. Cableways are regulated through transposed EU legislation.

In addition, the CRR also has a role in relation to heritage railways and velorail.

Under the RSA 2005 the CRR has three principal functions, (a) to foster and encourage railway safety, (b) to enforce this Act and any other legislation relating to railway safety, and (c) to investigate and report on railway accidents and incidents for the purposes of determining compliance with safety management systems (SMS) and safety targets.

Heavy and light rail

Commission

The RSA 2005 (as amended) established the Railway Safety Commission (now the CRR). The Act gave three principal functions, as indicated above, relating to rail systems and the powers to fulfil these functions including the use of supervision and enforcement.

In relation to the enforcement of the Act for heavy rail, it should be noted that the issuing of safety certificates and the majority of authorisation for fixed installations and vehicles is covered by European legislation (see below). For light rail, the CRR assesses the SMS and issues safety certificates required for operation. In addition, the assessment of and acceptance of new works and rolling stock is also undertaken under the 2005 Act.

Heavy rail

National Safety Authority (NSA)

SI 476 EU (Railway Safety) Regulations 2020 gives effect to Council Directive (EU) 2016/798 (Railway Safety Directive) and under this the CRR is established as the national safety authority in the State. This is for the purpose of ensuring compliance with the Directive and these Regulations, including safety certification and authorisation, maintenance of vehicles, supervision and enforcement.

SI 477 EU (Interoperability of the Rail System) Regulations 2020 gives effect to Council Directive (EU) 2016/797 (Interoperability Directive) and under this the CRR is established as the national safety authority competent for the railway system in the State for the purposes of the Directive and these Regulations including correct implementation of Technical Specification for Interoperability (TSI), placing on the market interoperability constituents and mobile subsystems, authorisation for placing in service fixed installations, upkeep of the national vehicle register, and supervision and enforcement.

Certification bodies for Entities in Charge of Maintenance (ECM)

SI 476 2020 gives effect to Council Directive (EU) 2016/798 (Railway Safety Directive) and sets out the legal framework for ECMs. Regulation (EU) 2019/779 lays down the detailed provisions on a system of certification for ECMs pursuant to Directive (EU) 2016/798. ECM certification may be performed by an accredited or recognised body or by the safety authority.

Regulatory body

SI 249 EU (Regulation of Railways) Regulations 2015 (as amended by SI 398 2020) gives effect to Council Directive EU 2012/34 as amended by EU 2016/2370 on a single European railway area. This established the CRR as the regulatory body for the purpose of appeals or complaints relating to infrastructure capacity, access charges, the network statement and monitoring competition.

Independent monitoring body

The legislative framework for the Regulatory Body function above also established the CRR as the Independent Monitoring Body for the purpose of monitoring the contractual agreement between Iarnród Éireann Infrastructure Manager and the Minister for Transport as the competent authority, including monitoring the performance of the Infrastructure Manager, arbitrate in the event of dispute, approval of the performance monitoring system, and report to the Minister on its monitoring of performance.

Licensing authority

The legislative framework for the Regulatory Body function above also established the CRR as the licencing authority for the purpose of assessment of licence applications and the issuing of licences to railway undertakings.

Competent authority

SI 399 EU (Train Driver Certification) Regulations 2010 gives effect to Council Directive 2007/59/EC on the certification of train drivers operating locomotives and trains on the railway system in the Community established the CRR as the competent authority for the purpose of assessment of licence applications and the issuing of licences to train drivers, and the recognition of train driver training and examination centres.

SI 651 EC (Transport of Dangerous Goods By Rail) Regulations 2010 (as amended) gives effect to Council Directive 2008/68/EC (as amended) on the inland transport of dangerous goods established the CRR as the competent authority for the purposes of ensuring compliance with Regulations concerning the International Carriage of Dangerous Goods by Rail (RID).

Recognition body

SI 477 2020 gives effect to Council Directive (EU) 2016/797 (Interoperability Directive) and under this the CRR is since October 2020 established as the organisation responsible for the recognition of DeBos in the State.

Cableways

Authorising body

SI 543 EU (Cableway Installations) Regulations 2020 gives effect to Regulation (EU) 2016/424 on cableway installations and established the CRR as the body in the State for authorising construction and entry into service of cableway installations or their modification.

Market surveillance authority

SI 543 of 2020 gives effect to Regulation (EU) 2016/424 of the European Parliament and established the CRR as the market surveillance authority for cableway subsystems and components.

Rail entities subject to regulation

The following entities were subject to regulation by the CRR in 2022:

- Iarnród Éireann – Infrastructure Manager (IÉ-IM)
- Iarnród Éireann – Railway Undertaking (IÉ-RU)
- Transdev (LUAS operator) – Railway Organisation
- Rhomberg Sersa Ireland Limited (RSIE)– Railway Undertaking
- Translink Northern Ireland Railways (NIR) – Railway Undertaking
- Transport Infrastructure Ireland (TII) – Railway Organisation
- Bórd na Mona (BNM)
- Railway Preservation Society of Ireland (RPSI) – Railway Undertaking
- Heritage Railways (Appendix E).

Passenger numbers

Since COVID-19 restrictions were lifted in early 2022 there has been a steady and marked increase in passenger numbers. IÉ have advised of 35.84 million passenger journeys, while Transdev have advised of 38.67 million passenger journeys in the year. On a quarter 4 comparison on passenger numbers between 2021 and 2022, both IÉ-RU and Transdev have seen a 67% increase.

STRATEGY OF THE COMMISSION FOR RAILWAY REGULATION



The CRR developed its sixth Statement of Strategy (2021 – 2024) under the RSA 2005 in 2021. It has been developed in consultation with stakeholders and staff.

In the time frame for this Strategy, actions to drive the policy decisions taken by Government, such as those relating to sustainability and reduced carbon emissions will be actively progressing. The development of the rail transport system, recognising the important role that it plays in quality of life, economic activity, and the environment is challenging but of clear importance.

The CRR is conscious of advancing railway safety, the maintenance and further development of high performing and sustainable railway systems and ensuring fair access to the Irish conventional railway network through regulation, monitoring, encouragement, and promotion.

Strategy 2021-2024

Mission

The CRR is committed to advancing railway safety, through effective regulation, and by fostering and encouraging the continuous improvement in safety management by railway organisations. It advocates the participation of all stakeholders in the further development of Ireland's rail sector so that it is a safe and efficient mode of transport that benefits our society.

Vision

Safe and sustainable railways that provide efficient and convenient transport for society.

Values

– **Integrity**

We have moral courage, are honest and responsible in our approach

– **Respect**

We respect each other and our stakeholders

– **Independence**

Our decision making is transparent and free from bias and influence

– **Excellence**

We are diligent, professional and strive for continuous improvement.

Strategic priorities

Priority: rail safety

Regulate and promote the continuous improvement of safety performance by railway organisations.

Priority: railway regulation

Effective regulation and monitoring of the Infrastructure Manager in relation to its funding of and expenditure on asset management and network access.

Priority: support to government

To support government public transport policy initiatives directed at the needs of society by ensuring their safe implementation through effective and efficient regulation.

Priority: communication with stakeholders

Promote awareness and understanding of current and emerging risks and developments in national and European railway legislation and guidance.

Priority: our organisation

Be a high performing organisation delivering quality and value in what we do.

REPORT OF PRINCIPAL INSPECTOR AUTHORISATION TO PLACE IN SERVICE AND CONFORMITY ASSESSMENT



Authorisation to Place in Service (APIS)

The requirement for the CRR to perform Authorisation to Place in Service on railway systems is based on EU and National Legislation. The main EU legal requirements are, the Interoperability Directive (EU) 2016/797, the Railway Safety Directive (EU) 2016/798, Commission Implementing Regulation (EU) 2018/545 establishing practical arrangements for vehicle authorisation and the common safety method for risk evaluation and assessment EU/402/2013. National requirements are governed by the RSA 2005 as amended. EU and national requirements apply to the heavy rail system while only national requirements apply to the LUAS light rail system.

Meeting the essential requirements as outlined in (EU) 2016/797 Annex III is a pre-requisite for APIS. CRR requirements are underpinned by EN 50126 – railway applications – the specification and demonstration of reliability, availability, maintainability, and safety. This is managed through the system life cycle known as the V-cycle. The V-cycle contains twelve phases: i) Concept, ii) System Definition and Application Conditions, iii) Risk Analysis, iv) Specification of System Requirements, v) Apportionment of System Requirements, vi) Design and Implementation, vii) Manufacture, viii) Integration, ix) System Validation, x) System Acceptance, xi) Operation and Maintenance and xii) De-commission. The CRR guidance RSC-G-009 and RSC-G-032 are designed around the V-cycle and have six Stages. These are:

Stage 1

Concept (V-cycle i)

Stage 2

Preliminary Design (V-cycle ii and iii)

Stage 3

Detailed Design (V-cycle iv, v, vi and vii)

Stage 4

Testing (V-cycle viii and ix)

Stage 5

Interim Operation (V-cycle x, xi and xii)*

Stage 6

Service Operation (V-cycle x, xi and xii)

*Stage 5 Interim Operation is a stage where the safety of a system has been proven for operation but not all evidence of the stipulated requirements and associated administrative paperwork is available.

Following review of an application for APIS and provided that the application is complete and valid the CRR will issue a letter of acceptance for that application. In 2022, twenty-three letters of acceptance were issued as part of the APIS process and details of these are provided below.

APIS – Infrastructure

DART+ programme

The DART+ Programme comprises a series of projects that will create an integrated rail network for Dublin, expanding the heavy rail electrified commuter network from the existing c.50km to c.150km.

DART+ Coastal North involves the extension of electrification from Malahide to Drogheda. Following an application from IÉ, a stage 1 – Concept letter of acceptance was issued in February.

DART+ Coastal South involves an upgrade to the electrified line between Dublin Connolly and Greystones. The upgrade will include removal of existing level crossings, addressing constraints to support increased train frequency and additional turnback facilities. Following an application from IE, a stage 1 – Concept letter of acceptance was issued in March.

DART+ West covers the line to Maynooth and includes city centre enhancements. IÉ made a stage 2 – Preliminary Design application in November. The CRR expect to respond to this application in the first quarter of 2023.

LUAS Cross City (LCC)

LCC had been operating on a Stage 5 letter of acceptance with conditions since December 2017. The long-term management strategy for the Phibsborough heritage walls as part of Luas Cross City (LCC) was finalised by Transport Infrastructure Ireland in April 2022. In May 2022, a stage 6 – Service Operation letter of acceptance was issued to TDLR the LUAS operator by the CRR. The long-term management strategy which will remain in place for the duration of LCC operations entails a number of risk control measures for the Phibsborough heritage walls.

Bridges/platforms/stations

In 2022, the CRR issued eight letters of acceptance to IÉ-IM in relation to new bridges, platforms and stations projects following review of their applications.

These projects are:

Letters of acceptance for stage 3 – Detailed Design as follows:

- New overbridge as part of the Maynooth Eastern Ring Road
- New pedestrian overbridge at Little Island Station.

Letters of acceptance for stage 5 – Interim Operation as follows:

- New pedestrian overbridge at Ennis Station
- New overbridge as part of the Dunkettle Interchange
- New station with pedestrian overbridge at Pelletstown on the Dublin to Maynooth line.

Letter of acceptance for stage 6 – Service Operation as follows:

- New overbridge west of Athlone station as part of the Dublin to Galway cycleway project
- New overbridge as part of the Dunkettle interchange
- New pedestrian overbridge as part of the Dunkettle interchange.

APIS – Signalling and telecommunications

Iarnród Éireann Global System for Mobile Communications – Railway (GSM-R)

This project comprises the replacement of the current analogue radio system which is used to provide direct communications between train drivers and controlling signalmen/regulators with GSM-R. Phase 1 which covers the DART fleet and DART infrastructure was authorised in 2019.

Phase 2 fixed installations (trackside) covers the Northern line, Sligo line, Rosslare line and the greater Dublin Area. In February 2022, the CRR issued a stage 4 – Testing letter of acceptance for fixed installations for Phase 2 following its review of the IÉ-IM submission which was made in December 2021. In July 2022, the CRR issued a stage 3 – Detailed Design letter of acceptance for the on-board system for all vehicles following review of the IÉ-RU submission received.

Iarnród Éireann Train Protection System (TPS) – ETCS Level 1 (Class A)

In 2022, IÉ-IM determined that the installation of a generic European ETCS Level 1 (Class A) signaling system was the preferred solution for the future networkwide signaling system. The TPS project was therefore further reviewed with a particular focus on:

- Publication of a set of Irish Railway Standards to set parameters for ETCS Level 1 signaling system to be implemented in the State
- Integration of the design solution into the existing railway network
- Fine tuning that design solution. This will be achieved through installation of ETCS Level 1 on the Howth Branch as a representative small section of the network
- Developing a design solution for the track from Greystones through Dublin, Drogheda, Dundalk and on to the Border point with the Northern Irish network.

Geashill and Portlaoise 2022 signalling investment schemes

A stage 1 – Concept APIS application was made to the CRR by the IÉ-IM for the renewal of the interlocking and train detection system at Geashill on the Athlone branch in May; a stage 1 – Concept letter of acceptance was issued in the same month. In November, a stage 5 – Interim Operation letter of acceptance was issued following an updated application (stages 2-5) by the IÉ-IM.

Similar to Geashill, a stage 1 – Concept APIS application was made to the CRR by the IÉ-IM for the renewal of the interlocking and train detection system at Portlaoise in July; a stage 1 – Concept letter of acceptance was issued later that month. In October a stage 5 – Interim Operation letter of acceptance was issued following an updated application (stages 2-5) by the IÉ-IM.

APIS – Rolling stock

Iarnród Éireann – additional class 22000 intercity diesel multiple units (ICDMU)

The Class 22000 Intercity DMU (ICDMU) fleet entered service between 2007 and 2012. In 2019, IÉ-RU entered into an agreement with Hyundai-Rotem to supply 41 additional intermediate vehicles known as the 'B2' cars with a provision to extend this up to 101 vehicles by 2026. The current Intercity DMU B1 cars were built to UIC Codes, railway group standards and European standards and are therefore not TSI compliant.

The new B2 cars are based on the design of the existing B1 car and are being adapted to include necessary engineering changes brought about by legal obligations concerning exhaust emissions and providing suitable alternatives for obsolete or unavailable equipment and material. There will also be internal modifications to increase the passenger capacity.

During 2022, IÉ-RU finalised their submission to the CRR for non-application of TSIs under Article 7(4) of Directive (EU) 2016/797 and Regulation 7 SI 477 of 2020 not to apply Commission Regulation (EU) No 1302/2014 (LOC&PAS TSI) and Commission Regulation (EU) No 1303/2014 (SRT TSI) to IÉ-RU Class 22000 ICDMU – 'B2' intermediate cars. The reason for the request was that the application of the TSIs would cause delay and additional cost to the vehicles entering service. To justify this non-application, the CRR had to review and accept the IÉ-RU submission for each relevant TSI parameter explaining how the alternative provisions proposed by them meet the essential requirements of Directive (EU) 2016/797, including safety, to a similar extent as required by the TSIs. After the CRR concluded its review of the submission, the application was forwarded to the European Commission. The European Commission then reviewed the application, and an Implementing Decision (EU) 2022/856R was made by the European Commission granting the non-application in May 2022.

IÉ-RU submitted its stage 3 – Detailed Design application for the B2 cars to the CRR and following review the CRR issued a stage 3 – Detailed Design letter of acceptance in August 2022.

New DART carriages

In 2021, IÉ-RU and Alstom concluded a framework agreement allowing for up to 750 new DART carriages to be ordered over a ten-year period. An initial order for 95 carriages comprising six sets of five-carriage electric trains and thirteen sets of five-carriage battery-electric trains was placed.

The new trains will prioritise independent access with a low-height floor at the doorways offering unassisted access from suitable platforms. The units will also improve facilities for families and for cyclists. The trains will deliver off-wire operation through the incorporation of battery-electric technology, enabling new services and new capacity to be provided in the greater Dublin area.

It is noteworthy that the authorising entity for this new rolling stock will be the ERA as allowed for under Directive (EU) 2016/797 and Regulation 7 SI 477 of 2020 and this will be the first time that an Irish Railway Undertaking has engaged with the ERA as allowed under the Directive. IÉ-RU expect to make their pre-engagement submission to the ERA in Q1 of 2023. The CRR as the national safety authority will have the responsibility for assessment of the carriages for their area of use.

In December 2022, a further order for an additional eighteen sets of five-carriage battery-electric trains was placed.

Heritage railways

Cavan and Leitrim Railway

A stage 6 – Service Operation letter of acceptance was issued in May, to the Cavan and Leitrim Railway for their Avonside Steam narrow gauge locomotive No. 1547 originally manufactured in Bristol in 1908, and commonly referred to as 'Nancy'.

Connemara Railway

The Midland Great Western Railway engaged with the CRR in late 2020 to understand the legal requirements for operations of a heritage railway. During 2021, the railway began laying track on the former trackbed of the Midland and Great Western Railway Clifden branch line. The Railway, known as the Connemara Railway, is based at Maam Cross in Galway.

In November 2022, following applications from the Connemara Railway, the CRR issued acceptance for:

- 400m of 914mm track gauge railway infrastructure including one platform
- One Deutz diesel locomotive LM194 also known as No.7
- Two railway carriages with numbers 3 and 4
- Their Safety Management Certificate.

VeloRail

VeloRail (or Rail Biking) is an outdoor leisure and recreational tourism activity. It consists of pedal powered passenger carts (railbikes) that travel along a closed railway line. Due to the nature of railbikes and the associated infrastructure, they fall within the definitions under the RSA 2005 and therefore within the scope of the CRR for acceptance. There are two velo rails currently under development in Ireland as outlined below.

The approval process for VeloRail will involve an assessment of the infrastructure as per guideline CRR-G-034, an assessment of the railbikes as per guidelines CRR-G-055 and assessment of the SMS for the velorail operation as per guideline RSC-G-022.

Velo Kiltimagh

Following an application in Q2 the CRR issued a stage 6 – Operation Letter of Acceptance for the Railbikes to IRD Kiltimagh CLG, a community organisation based in Kiltimagh. Engagement is ongoing between the CRR and IRD Kiltimagh with regard to the assessment of the infrastructure application and the assessment of their SMS application. It is anticipated that the system will be operational in 2023.

Velo Bórd na Mona

The CRR also had contact with BNM who are looking at the possibility of developing a Velorail amenity at Lough Boora discovery park.

The full list of letters of acceptance issued by the CRR in 2022 is provided in Appendix A.

Irish Railway Standards (IRSs)

Irish Railway Standards (IRSs) contain good industry practice and/or National Rules (NRs) on technology specific to the Irish railway system, which is not otherwise contained in national or international standards or legislation. IRSs may within their scope be used as an acceptable national means of compliance. IRSs are developed and maintained with the involvement of all relevant stakeholders. IRSs are published by the CRR on its website on behalf of the Irish railway industry (<https://www.crr.ie/publications/irish-railway-standards/>). Where a NR is identified within an IRS, prior to publishing, that IRS containing NRs is submitted to the ERA for their examination and upon agreement of the NR(s), is published on the Reference Document Database (RDD) (<https://rdd.era.europa.eu/rdd/>) and/or Single Rules Database (SRD) (<https://srd.era.europa.eu/home>).

Three new or amended IRSs were published in 2022.

- IRS-304-A: Requirements for Class A ETCS CCO Systems and for RU and IM Operating Rules in the Republic of Ireland
- IRS-305-A: Requirements for Class A ETCS CCT Systems and for IM Operating Rules in the Republic of Ireland (trackside)
- IRS-204-A: Requirements for analogue Ground-Train Cab Radio for IE (Republic of Ireland) network based on UIC 751-3 specification.

Guidelines

CRR-G-006, Guideline for the design of railway infrastructure and rolling stock – section 5 Level Crossings was extensively reviewed and updated. The updates included better alignment with IÉ-IM standards and the traffic signs manual and reference to the new Decision Support System being deployed at specific level crossings by IÉ-IM.

CRR-G-053, Guidance for CRR Recognition of DeBos was updated to issue B in April. The update addressed a section on fees, Certificate and Statement numbering and the national DeBo identifier.

Designation of designated bodies

In accordance with S.I. 477 of 2020 Regulation 16(3), the CRR designate the bodies responsible for carrying out the verification procedure in respect of national rules, these bodies are called DeBos. In designating such applicants, the CRR use the recognition process, and this is explained in guideline CRR-G-053. This is a new responsibility assigned to the CRR and the first six applications were reviewed and assessed in 2022 with the six applicants being designated. DeBos are listed on the CRR website (<https://www.crr.ie/safety-regulation/designated-bodies/>).

Entity in Charge of Maintenance (ECM)

ECM certification is in accordance with Commission Implementing Regulation (EU) 2019/779. The system of certification provides evidence of responsibility and traceability of the maintenance undertaken on vehicles. It sets out a certification process that ensures a transparent and structured management system for maintenance functions described in article 14(3) of Directive (EU) 2016/798.

As an ECM certification body, the CRR can provide certification and surveillance. The CRR was not required to undertake any ECM activity during 2022.

Cableways

The CRR is the Competent Authority for cableways under SI 543 EU (Cableway Installations) Regulations 2020 . Its functions include authorising the construction of a new cableway and also the authorisation of its subsequent entry into service or authorisation of significant modifications to an existing cableway.

In 2022, the CRR received a submission for a Stage 1 authorisation from Cork County Council for major maintenance works, considered a significant modification, for the existing Dursey Island Cableway. These works will remove the non-application of SI 543 to Dursey as a historic installation for the purposes of Article 2(2)(b) of the Directive. The CRR will continue to engage with Cork County Council on this project and the necessary authorisations.

Safety management system conformity assessment

Conformity Assessment of Safety Management Systems (SMS) is carried out in compliance with the Railway Safety Directive (EU) 2016/798 and the RSA 2005 as amended. The specific criteria for assessing conformity are detailed in EU Regulation (EU) 2018/762 establishing common safety methods on SMS requirements.

A renewed safety authorisation was issued to IÉ-IM in March 2022 following completion of the CRR assessment of their SMS application.

Safety certificates can be issued for up to five years and the current IÉ-RU safety certificate will expire in March 2023. The 2023 application by IE-RU will be the first application to be submitted through the ERA One Stop Shop (OSS) for a single safety certificate. The single safety certificate has replaced the safety certificate which issued under the old legislation. The railway undertaking may choose, through the OSS, the ERA or the CRR (NSA in the Member State) as the authority responsible for assessing and issuing the single safety certificate. The applicant has this choice when they operate in one Member State only.

IÉ-RU have indicated that it is their intention to have the assessment carried out by the CRR as the national safety authority responsible for Ireland. Therefore, in the second half of 2022 IÉ-RU commenced engagement with the CRR on its single safety certificate application. By year end, the assessment was more than 75% complete and the CRR expect to issue the single safety certificate in March 2023.

RSIE have also chosen the CRR as the authority responsible for assessing and issuing the single safety certificate. At the end of November, they commenced engagement on the submission of their single safety certificate application.

National rules to operations TSI

The ERA has informed the CRR that the National Rules (NR's) submitted in July 2020 have not yet had their review completed. The CRR will await a response from the ERA on the current national rules submitted, before progressing further with new draft national rules allowed for in TSI-OPE (EU) 2019/773 Appendix I.

Train driver licensing

All train drivers are required under EU legislation to hold a valid licence to operate a train on the network. Licences are issued subject to the drivers meeting requirements set down in European legislation namely: minimum age, basic education, medical examination, occupational psychological fitness, and general professional competence. All licence applications are assessed by the CRR against these criteria.

Based on applications received in 2022, the CRR issued 49 train driver licences. Two of these 49 were replacement licences, there were no licences revoked.

Train driver licences have a validity of 10 years; however, drivers are subject to continuing medical examinations and competency assessment by the Railway Undertaking.

Prescribed body

Under the Planning and Development Act 2001-2020 the CRR is a prescribed body where a development may impact on a railway for heavy rail. This includes railway level crossings, under and over bridges, developments that are in proximity to the railway or have potential to impact on its structural integrity or endangering or interfering with the safe operation of the railway. This applies both during and after construction. In 2022, the CRR provided observations on 23 of the planning applications it received as a prescribed body.

REPORT OF PRINCIPAL INSPECTOR COMPLIANCE SUPERVISION AND ENFORCEMENT



2022 saw a resumption of almost all Supervision activities following the curtailment of some activities in the preceding two years owing to the COVID-19 pandemic and associated restrictions. The only aspect of supervision not resumed in 2022 was CRR Inspectors travelling in train cabs. This activity is planned to recommence in 2023. Our methods of working have, as indicated in recent annual reports, changed, with more of a hybrid approach adopted, i.e., a mix of in-person activities undertaken together with virtual/online tools used for some activities. A total of 267 supervision related activities commenced in 2022 and by year end 221 were completed with the remainder not fully complete and carried over to 2023.

Supervision and enforcement

Supervision of railway organisations is a key activity of the CRR associated with its principal function of enforcing legislation relating to railway safety. It is the CRR's role to supervise the continued application and effectiveness of SMSs that have been issued to railway organisations through conformity assessment (S.I. 476 2020) or acceptance by the Commission (RSA 2005). The CRR carry out supervision through frequent interaction with the railway organisations, in line with their assessed exposure to risk. CRR inspectors undertake SMS audits and inspections of assets, processes, and procedures. We also meet periodically with company executives to review their organisations safety performance. These activities are done with the purpose of checking that the railway organisations are implementing their SMS and that the implementation is effective in managing risk.

The CRR uses a variety of sources of information to inform it of the overall performance of each railway organisation and the overall safety profile of the sector. This analysis is captured in the supervision strategy. The level of supervision for a railway organisation in any year is dictated by this strategy as well as previous supervision findings, reviewing safety performance indicators such as the type and number of occurrences (accidents, incidents, and dangerous events) they had in the preceding year(s), the number of complaints received against the railway organisation, if safety recommendations have been made by the RAIU etc. Annual supervision plans are prepared which detail the planned activity for each railway organisation that is proportionate to the size of their business and the level of risk associated with their operation.

We employ the ERA principles for supervision, including proportionality, consistency, and transparency together with our own gathered knowledge and understanding of each railway organisation to effectively supervise those we regulate.

Supervision activity may identify issues that need attention. Where issues arise, an inspector may form an opinion that an action is required by the railway organisation. The CRR categorises these outcomes depending on the risk they present, and actions may be agreed with or directed to the railway organisations and their implementation tracked.

The CRR use the following classification system for these outcomes:

Major Non-Compliance (MaNC): an area of non-compliance with an internal standard, an applicable external standard, or legislation that is evidence of a system failure.

Minor Non-Compliance (miNC): an area of non-compliance with an internal standards, an applicable external standard, or legislation that is evidence of a sporadic lapse in implementation of a system or deviation from a system.

Action Required (AR): an area where potential exists for a non-compliance to occur unless remedial action is taken, or improvement is made, an isolated error that requires correction, or some other issue where, in the opinion of the auditor action is necessary.

Scope for improvement (SFI): an area highlighted where, in the opinion of the Auditor, system or business improvement can be achieved by the company. Typically, this is phrased as a recommendation, the merits and implementation of which should be decided by the audited organisation.

Good Practice (GP): an area highlighted which, in the opinion of the Auditor, is good practice within the industry.

Audit Trail (AT): an area that the auditor believes should have further attention, either by inclusion in the programme for future audits (but not necessarily an external audit item) or by some other means.

The following presents an overview of the CRR's supervision activity for 2022.

Compliance auditing (pro-active supervision)

During 2022, the CRR commenced the audits listed in the following table:

Table 1
Audits commenced by the CRR in 2022

Railway organisation	Title of audit	Conducted
RSIE	Management of change	March 2022
TDLR	TDLR SMS audit - accident investigation	April 2022
IE-IM	Possession management and management of contractors (RRVs)	June 2022
IE-RU	CME management of fleet risk registers	August 2022
IE-RU	Management of safety information	August 2022
TDLR	Management of fleet maintenance	September 2022
TDLR	Internal auditing	October 2022
IE-IM	Accident investigation and emergency preparedness	November 2022

Table 2
Audits concluded in 2022

Railway organisation	Title of audit	MaNC	miNC	AR	SFI	GP	AT
IE-RU	Training and competence of train drivers	1	14	14	11	4	2
IE-IM	Managing of civil engineering structure and staff competence – Civil Engineering Dept	0	4	9	5	2	5
RSIE	Management of change	0	4	5	4	0	2
Total		1	22	28	20	6	9

As indicated in table 2, three audits were concluded in 2022. One each on RSIE, IE-IM and IE-RU. The further seven audits commenced in 2022 are at different stages of progression with three having been issued to the relevant railway organisation for comment.

Each of the audits that are either 'concluded' or 'out for comment' have produced outcomes to address findings that in the opinion of the CRR inspector require action on behalf of the railway organisation. CRR inspectors maintain engagement with the relevant railway organisations to ensure that any actions required are progressed.

Three audits on IE-RU and IE-IM commenced in 2021 and concluded in 2022. These identified a significant number of outcomes and the CRR Inspector who conducted the audit on IE-RU formed an opinion that there was associated risk to the safety of persons and accordingly requested 2 Improvement Plans in accordance with section 76 of the RSA 2005. Actions have already been taken to address a number of these and further work is ongoing to address the remainder.

The audit on RSIE, the track infrastructure maintenance contractor commenced and was concluded in 2022. Four minor non-compliances and 5 Actions Required were identified in this audit. These were in relation to the management of change. Again, the CRR Inspector requested an Improvement Plan to address areas of risk. RSIE submitted an Improvement Plan advising the CRR of several actions taken/planned to address the identified issues and this was accepted by the CRR Inspector.

Inspections

In 2022, the CRR commenced a total of 58 Inspections across all railway organisations. These inspections range from more limited 1-day inspections of assets to more detailed 15-day plus inspections. Broadly these included looking at:

- Railway assets including rolling stock, stations, level crossings and other structures, e.g., bridges and earthwork structures
- The overhaul of a historic steam locomotive
- The management of rail freight
- Train wheelset management
- Training and competence
- The inspection and management of waybeam railway bridges.

The inspections identified a number of major and minor non-compliances with legislation and/or the railway organisations approved SMS. In such cases the lead inspector considered if there was a risk to the safety of persons. In one instance it was the opinion of the inspector that there was such a risk and therefore an Improvement Plan, in accordance with section 76 of the RSA 2005 was requested.

This related to the granting of concessions (extensions/derogations) against a safety critical task (train wheel measurement). An Improvement Plan was submitted and accepted by the Inspector. Actions were then promptly taken by the railway organisation to address this issue.

In all other cases where non-compliance was identified, the railway organisations submitted Action Plan's outlining the steps that would be taken to address them. It should be noted that these identified non-compliances were not considered likely by the Inspector to pose a risk to the safety of persons, rather they were considered more related to the railway organisations SMS documentation.

The railway organisations concerned are implementing agreed corrective and preventative actions from these inspections.

In 2022, CRR Inspectors concluded a total of 57 Inspections across the railway organisations it regulates. Of these 57, 14 were started in 2021 but concluded in 2022 meaning a total of 43 Inspections that commenced in 2022 were concluded in the same year.

The full range of outcomes from the inspections concluded in 2022 against each of the railway organisations are detailed below.

Table 3
Inspections concluded and outcomes made in 2022

Railway organisation	No. of inspections	No. of inspections with outcomes	Outcomes					
			MaNC	miNC	AR	SFI	GP	AT
IE-IM	23	9	1	1	10	10	0	6
IE-RU	10	8	0	4	9	14	1	3
RSIE	3	3	3	2	5	4	0	2
RPSI	5	4	0	0	18	10	0	5
NIR	0	0	0	0	0	0	0	0
TDLR	9	4	0	3	8	8	1	6
BNM	0	0	0	0	0	0	0	0
Heritage	7	6	0	1	13	27	1	8
Total	57	34	4	11	63	73	3	30

Post Occurrence Activity (reactive supervision to accidents or incidents)

In 2022, the CRR received 63 formal notifications relating to accidents, incidents or dangerous occurrences and mobilised to a number of these in the days following the occurrence to inspect the site/rolling stock involved. A total of 45 related to the IÉ network, 16 occurred on the LUAS network, 1 involved issues on rolling stock operated by RSIE and 1 involved a heritage railway.

Tragically, in 2022 there were nine fatal occurrences on the national railways. Eight of these occurred on the IÉ network. The circumstances of six of these fatalities would indicate potential self-harm. In the case of the remaining two, one was due to trespass/misadventure with the other occurrence not being due to a rail movement accident, but rather a fall onto the railway from a height. There was also one fatal accident occurring on the Dublin LUAS due to trespass/misadventure.

There was also one further attempt at self-harm on the IÉ network but fortunately the person suffered only minor injury.

Of concern were a further two occurrences, involving IÉ employees, that under slightly different circumstances could have resulted in loss of life or life changing injuries, these included:

- A member of IÉ Track Engineering staff was struck by a Road Rail Vehicle (RRV) during track engineering works, 6th July 2022
- A member of IÉ Civil Engineering department suffered facial injuries and a broken arm when they fell and came in contact with a tractor that was engaged in hedge cutting, 30th November 2022.

The former has been investigated and a report issued with actions being taken to address recommendations made. In the case of the latter, this remains under investigation for the purposes of determining compliance with the SMS.

There were two other notable events in 2022 which resulted in the self-evacuations of trains onto the IÉ network. These were following a music event at Malahide on the 20th June 2022 and during the Bray Air Show on the 24th July 2022.

In the case of the Malahide occurrence there was a power outage in the overhead line power supply resulting in a DART Train becoming stranded. After ~15 minutes a door was pulled open, and the train driver reported to Control that they could see two men walking back along the track towards Malahide.

In the Bray occurrence a more significant self-evacuation took place. When one DART train was detained at a signal passengers commenced a self-evacuation. The two trains immediately behind were then effectively stranded and passengers also started to self-evacuate.

On the Dublin LUAS, there was also a dangerous occurrence on the 25th October 2022 in which there was a current return circuit failure on a tram that was operating on the Red Line from Connolly to Tallaght. A live cable was protruding from a tram that could have come into contact with pedestrians or cyclists.

In 2022, the CRR implemented its revised post occurrence activity process. All incidents notified to the CRR are subject to initial assessment on a weekly basis where any further actions required are confirmed. If it is considered that there is unlikely to be a SMS compliance issue, or where investigation will not provide further learning, then the CRR will not conduct an investigation but will ensure that the railway organisations themselves complete the statutory investigation they are required to carry out within six months. This process resulted in 40 notified incidents receiving further investigation, by the CRR, to verify the railway organisations compliance with its approved SMS. In any instance where safety was deemed to be at risk, the CRR sought the necessary assurances that mitigation measures had been put in place by the relevant organisation.

The CRR also has regard to any investigations being initiated by the RAIU. The RAIU conducts its own independent investigations of accidents/incidents to determine their cause. The RAIU issued three investigation reports in 2022.

In 2022, CRR inspectors concluded a total of 63 Post Occurrence Reviews across the railway organisations it regulates. Of these, 10 were started in 2021 but concluded in 2022.

These resulted in outcomes which are indicated in the table below based on railway organisation and category of outcome.

Table 4
Post Occurrence Activity and outcomes 2022

Railway organisation	No. of POAs	No. of POAs with outcomes	MaNC	miNC	AR	SFI	GP	AT
IE-IM	27	4	0	2	7	3	0	1
IE-RU	21	4	0	0	3	0	0	4
TDLR	13	2	0	0	3	0	0	0
RSIE	1	0	0	0	0	0	0	0
DLR	1	0	0	0	0	0	0	0
Total	63	10	0	2	13	3	0	5

Enforcement

Part 7 of the RSA 2005 provides the CRR with powers of enforcement. These powers range from requesting an Improvement Plan, where an activity may involve a risk to the safety of persons, to serving an Improvement Notice for a contravention of the provisions of the RSA 2005 or a Prohibition Notice where an activity may involve an immediate and substantial risk to the safety of persons. The CRR also has the power in extreme cases to revoke a Safety Authorisation or Safety Certification or make an application to the High Court to seek an order for restriction or prohibition of operations.

The CRR aims to work with railway organisations and seek voluntary compliance rather than immediately engage in enforcement action. Its inspectors endeavour to be proportionate in their response to findings and failings which is in line with European practice. However, on occasion, circumstances may be such that there is a risk to the safety of persons. Where this is the case then it is normal for CRR inspectors to request an Improvement Plan in accordance with section 76 of the RSA 2005. In 2022, CRR inspectors requested a total of 7 Improvement Plans from railway organisations. A summary of these is presented below.

Improvement Plans requested in accordance with Section 76 of the RSA 2005

- 1 Improvement Plan was requested from Transdev (LUAS) following a Depot Inspection
- 1 Improvement Plan was requested from IÉ-RU following an audit of IÉ's management of train driver training and competence
- 2 Improvement Plans were requested from IÉ-IM following notifiable occurrences:
 - Train Collision with Stressing Equipment (accident occurrence 27.08.2022)
 - RRV Overturning at Fairview Depot (accident occurrence 28.11.2021)
- 1 Improvement Plan was requested from a Heritage Railway following an inspection of their operation
- 2 Improvement Plans were requested from RSIE following:
 - An audit on their management of change
 - A possession Inspection involving rolling stock examination.

Improvement Notices served in accordance with Section 77 of the RSA 2005

No new notices were served in 2022, however, an extension of time was granted to an existing Improvement Notice served on IÉ-RU, relating to their Drugs and Alcohol policy. IÉ-RU have taken some action, however, what is outstanding is a legislative change that currently rests with the DoT to progress.

Prohibition Notices served in accordance with Section 78 of the RSA 2005

No prohibition notices were served in 2022.

Implementation of audit, inspection, and post occurrence inspection outcomes

In the course of supervision activities, CRR inspectors form opinions based on evidence that lead to findings which can in turn lead to recommendations (outcomes). Where this is the case the relevant railway organisation is advised of the outcome. The implementation of actions by the railway organisation to address these outcomes is monitored by the CRR. In 2022, inspectors issued a total of 144 outcomes (non-compliance and action required), where the CRR inspectors track their implementation. Of these, 40 were non-compliances with either a legislative or SMS requirement, the remaining 104 were raised by inspectors when they considered preventative action to be necessary. The status of all outcomes is shown in Table 8 Appendix C.

RAIU safety recommendations

The RAIU has the function of carrying out investigations of accidents and incidents that occur on the heavy, light, heritage and industrial (only at public interfaces) railways in Ireland. The purpose of its investigations is to establish cause and not apportion blame. Its reports make safety recommendations which are intended to ensure the avoidance of similar accidents/incidents in the future.

Based on the evidence of its investigations, safety recommendations may be made by the RAIU. These are typically directed at the railway organisation or other third party who may have had a responsibility under legislation. In addition, its recommendations are addressed to the CRR as the responsible national safety authority. The CRR thereafter have a responsibility for the oversight of the implementation of the safety recommendations by the entity to which they have been directed. The status of current safety recommendations issued by the RAIU is detailed in Table 9 Appendix C.

In 2022, the RAIU issued 3 investigation reports resulting in 16 safety recommendations being addressed to the CRR. These were duly considered and the CRR directed these to the relevant railway organisations or entity best placed to respond to the safety recommendation.

Carriage of dangerous goods by rail

The CRR is the competent authority under Statutory Instrument (SI) 651 (as amended) clause 4(1) EC (Transport of Dangerous Goods by Rail) Regulations 2010.

The CRR continues to ensure provision of an examination and certification service for dangerous goods safety advisors (DGSA). This service is contracted to the Chartered Institute of Logistics and Transport (CILT) and the contract for this service was renewed in 2022.

Rhomberg Sersa Ireland (RSIE)

RSIE completed their third full year of operation in 2022, having taken over the On-Track-Machine (OTM) fleet maintenance & operation contract on behalf of IÉ-IM in July 2019.

CRR Inspectors met with company executives on three occasions in 2022 at which their safety performance was reviewed. Safety initiatives and other continuous improvement tasks were also discussed at these meetings.

RSIE had one notifiable incident in 2022. This was following what was determined to be a relatively low risk SPAD event in which there was an unauthorised movement out of a possession by an OTM. There were no reported injuries as a result of this occurrence.

In addition to the audit undertaken on RSIE in 2022, the CRR also undertook 4 inspections in 2022. These were:

- An inspection of Rolling Stock maintenance/examination documentation (Rail Wheels)
- An inspection of an Engineering Possession in which RSIE were working
- An inspection of RSIE's internal auditing and self-checking
- An inspection of RSIEs Control Room management.

These resulted in a range of outcomes including 5 non-compliances that required prompt action by RSIE. All non-compliance outcomes which require action in a specific timeline have either been addressed or are well advanced. All other outcomes (5 Actions Required) are being actively tracked by CRR inspectors.

Bórd na Móna (BNM)

BNM own and operate an industrial railway used for the transport of peat. The CRR supervise BNM where their railway infrastructure interfaces with public roads, i.e., at level crossings and bridges over/under the railway.

As previously reported, BNM's milled peat operations continue to wind down and consequently their level of operation is reducing. Nonetheless, BNM safety performance was subject to review by the CRR.

The CRR were not notified of any occurrence involving the BNM network and given their operation is diminishing no inspections or audits took place in 2022. The CRR did meet with the BNM Safety team to review their safety performance, and all appeared in order.

Heritage railways

The CRR monitors the operations of a small number of self-contained heritage railways. In 2022, the following heritage railways were subject to supervision, given they recommenced operation post the COVID pandemic and the restrictions this placed on heritage railway operations.

- Cavan and Leitrim Railway, Dromod, Co Leitrim
- Diffin Lake Railway, Oakfield, Raphoe, Co Donegal
- Finntown & Glenties Railway, Co Donegal
- Irish Steam Preservation Society, Stradbally, Co Laois
- Listowel Lartigue Monorail, Co Kerry
- Waterford & Suir Valley Railway (W&SVR) Kilmeaden Co Waterford.

Site inspections were undertaken at which CRR Inspectors inspected assets, observed operations, and met with staff to review their compliance with their approved SMSs. A small number of outcomes (2 Actions Required, 1 assigned to the Listowel Lartigue Monorail and 1 assigned to the Waterford & Suir Valley Railway) were generated and they have been closed or are well advanced.

Railway Preservation Society of Ireland (RPSI)

The RPSI is the only heritage railway to operate on the IÉ-IM network and as a consequence is subject to a higher level of supervision than the standalone heritage railways. The RPSI operations commenced again in 2022 following 2 years of non-operation owing to the COVID-19 pandemic and associated restrictions.

The CRR undertook 5 inspections on the RPSI in 2022. These were.

- An inspection of locomotive maintenance facilities
- An inspection of a diesel locomotive restoration project
- An inspection of the first passenger carrying service to operate following 2 years of non-operation
- An inspection of the Seabreeze Trip – Rolling stock and general operations
- An inspection of a Santa special Trip – Rolling stock and general operations/crowd management etc.

18 outcomes were made. Those outcomes which require action in a specific timeline have either been addressed or are well advanced.

Industry alerts

The CRR receive railway sector safety alerts from both the ERA and the RAIU. In 2022, two safety alerts were received from the ERA.

The first of these related to extreme effects of thermal overload in special cases of freight operations. Specifically, it was raising concerns about a particular type of brake block used on some European mainland freight wagons. This information was shared with IÉ-RU and NIR who advised the CRR that they did not have any of this type of freight wagon.

The second related to an ERA Taskforce report prepared following the Great Belt Bridge Accident & Incident (2nd January 2019), in which a passenger train collided with a semi-trailer (on a passing freight train) that had moved in high-wind due to unsecure locking and fouled the adjacent line. There was a second similar incident in January 2021.

Several key points were high-lighted to IÉ including the importance of:

- Secure loading of freight;
- Vigilance relating to crosswind safety/stability of rolling stock; and
- Reliable king-pin locking (secure rolling stock fastenings).

Representations

In 2022, the CRR received 48 representations relating to a range of heavy and light rail infrastructure and operational matters.

Of the 48 representations received, 20 were requests for information and were received from other regulatory bodies/agencies rather than complaints about services or safety concerns. Of the remaining 28, 6 related to safety of infrastructure, 8 related to the safety of rolling stock and 14 related to the safety of train operations.

In relation to safety of infrastructure representations, half of these related to noise and/or vibration issues. In relation to safety of rolling stock, people had concerns regarding the noise of trains, indications of corrosion on the DART fleet and tram maintenance.

Almost half of the representations received in the category of 'train operation' were in relation to IÉ and related to the Bray Air Show management of rail services to and from the event.

Information requests from other regulatory bodies included 'train driver performance tracking and training' and 'level crossing safety'.

The CRR gives a high degree of attention to any representation concerning railway safety made by railway staff, railway passengers, members of the public, or others. As indicated in 2022, only a limited number had potential safety implications. All of these have been followed up through inspection and direct engagement with the relevant railway organisations.

See Appendix D figure 9 for trends in representations.

Safety performance

In addition to on-site activities such as inspections and audits, CRR Inspectors meet with company executives from the railway organisations that are supervised. Central to this engagement is the continuous review of the safety performance of the railway organisation. Several safety performance indicators such as collisions, derailments, fires on rolling stock, SPADs, infrastructure failures/defects, etc., are subject to review and are recognised indicators of safety performance. In 2022, 4 safety performance review meetings were held with IÉ-IM, IÉ-RU, and Transdev. Additionally, a separate meeting took place with Transdev 'Engineering' given Transdev now operate and maintain the LUAS trams and infrastructure. Three such meetings were held in 2022. Three meetings were also held with RSIE, two meetings with NIR, one with BNM and one with the RPSI.

At these meetings, the railway organisations are subject to review by the CRR and are required to demonstrate how they are effectively managing safety and risk associated with their operations. Moreover, the railway organisations must provide details of its own internal audits and investigations after accidents and incidents together with plans and actions taken to prevent reoccurrences or bring about process improvements.

In an operational context the number of SPAD occurrences increased by 50% on the IÉ rail network (8 in 2021 v 12 in 2022). Similarly, there was an increase in the number of collisions with animals on the line (46 in 2021 v 59 in 2022). This increase was mainly due to increased collision with deer. The number of train derailments was the same as in 2021 with all 4 occurrences being in IÉ sidings.

There was one serious dangerous occurrence in 2022 that involved the collision of a Road Rail Vehicle (RRV) with a member of IÉ staff. The member of staff only sustained minor injuries, but there was the potential for the consequences to be more severe. Unlike 2021, there were no occurrences notified to the CRR that would indicate a violation of rules, which is welcomed. That said Inspectors will, whenever possible, promote safe working and the importance of adhering to rules and procedures.

Overall, the safety performance of the Irish heavy railway sector was assessed as positive in 2022, both when compared against previous years and European statistics, cognisant that passenger numbers are not yet back to pre-pandemic levels.

In a European context, Ireland's safety performance is good. However, we must be cognisant of the fact that the small size of the IÉ-IM network means that this statistic must be viewed with caution as even a small number of accidents would have a significant effect on this standing.

Nevertheless, Ireland has consistently been among the member states that have the lowest fatality rates. It should also be noted that there have been no passenger fatalities in Ireland during this period and the fatalities that have been reported are a result of trespass/misadventure by persons.

Separately, the CRR publishes its annual statistical report providing a more detailed analysis of railway safety performance in Ireland. This report for 2022, as with the previous reports, will be published later in the year to facilitate receipt of complete validated year data from all railway organisations. The Safety Performance Report of 2021 was compiled in 2022 and is available on the CRR website (https://www.crr.ie/assets/files/pdf/safety_performance_report_2021_final.pdf).

Some of the safety performance data for railway organisations available at the time of publication of this annual report are presented in Appendix D.

NSA monitoring

As reported in our annual reports published in 2020 and 2021 the CRR were audited in late 2020 as part of a three-year audit cycle of all member state NSAs by the ERA. This audit evaluated how the NSA was performing its functions relating to railway safety and was concluded in mid-2021 with the publication of the ERA's findings. While the main finding stated that the CRR is established and organised in a manner that allows the authority to perform supervision activities and to manage the competences of its staff, it did identify a number of deficiencies that required attention.

The CRR has continued to address the ERA's recommendations (3 deficiencies) and most of the actions that the CRR had identified to the ERA in our related action plan have been completed.

The CRR were informed in mid-2022 that it would not be audited in 2023. This audit will now take place in 2024.

Memorandum of understanding

In 2022, the CRR agreed a memorandum of understanding with the Department of Infrastructure Northern Ireland as the National Safety Authorities (NSAs) in Ireland and Northern Ireland. It establishes the principles for effective liaison, communication, and co-operation between these parties so that supervision activity on the railways on the island of Ireland can be undertaken in a thorough and co-ordinated way, ultimately contributing to the safe operation of the railway service.

REPORT OF HEAD OF CORPORATE GOVERNANCE



Corporate governance and administration

The CRR is compliant with the CPGSB, as published by the Department of Public Expenditure and Reform.

Finance

Funding for the CRR is provided in part by a Safety Levy on the various railway organisations and in part by an Exchequer Grant.

In addition, the CRR may charge a fee for a range of its activities, specifically:

Fees charged for DeBo recognition – S.I. No. 176/2021 – European Union (Interoperability of the Rail System) (Designated Bodies) (Fees) Regulations.

Fees charged to the ERA as the national safety authority where the ERA is the assessment body for single safety certificate or vehicle authorisation – Regulation EU 2018/764 as amended by Regulation EU 2021/1903.

Fees charged for the authorising of construction and entry into service of cableway installations or their modification – SI 543 EU (Cableway Installations) Regulations 2020.

Fees charged for the issuing or renewal of train driver licences – SI 399 EU (Train Driver Certification) Regulations 2010.

The CRR, with the consent of the Minister for Transport and the Minister for Finance, may make regulations imposing a levy on railway organisations. The Regulations for 2022 were contained in Statutory Instrument No.194 2022. The application of funds by the CRR is illustrated below:

Table 5
Application of funds by the CRR

	2022 (€ million)	2021 (€ million)
Budget	2.583**	2.465
Exchequer Grant	0.730	0.728
Levy Requirement	1.25	1.619
Operating costs	*	2.322
Surplus	*	0.143

* Full accounts for 2022 are subject to audit by the Comptroller and Auditor General.

** Note the difference between the 2022 Budget and the Exchequer Grant and Levy was covered by DeBo and Train Driver Licence fees and CRR reserve funds.

The CRR annual audited accounts are published on our website separately to this report.

Total CRR staff remuneration

Employee Salary breakdown.

Table 6
Employee salary breakdown

Salary pay scale range		Number of employees	
From	To	2022	2021
€60,000	€69,999	3	6
€70,000	€79,999	8	4
€80,000	€89,999	0	0
€90,000	€99,999	0	0
€100,000	€109,999	-	2
€110,000	€119,999	3	1
€120,000	€129,999	-	-
€130,000	€139,999	-	-
€140,000	€149,999	-	-
€150,000	€159,999	1	1

A breakdown of total employee remuneration over €60,000, in increments of €10,000 is disclosed as required by DPER circular 13/2014.

In 2022, the Commissioners remuneration was €159,513.

Irish language commitment

The CRR is committed to implementing the relevant parts of the Official Languages Act 2003 (as amended 2021). CRR signage and stationery are currently in both Irish and English. Our Annual Report, Financial Statement and Statement of Strategy are all available in Irish on our website.

Freedom of Information (Fol)

The CRR is included among the organisations listed under the Freedom of Information Act 2014 and is committed to conforming to the principles of this Act. In 2022, there were three Fol requests received, one of which was granted which related to a request for representations made to the CRR by members of the public/stakeholders about rail safety issues or concerns during 2021. Both of the other two requests were withdrawn. Details of information previously released by the CRR under Fol can be viewed on the Fol Disclosure Log on our website (<https://www.crr.ie/corporate-governance/>).

Customer charter

The Customer Service Charter is available on the CRR's website. This charter describes the level of service a customer can expect to receive from the CRR.

Annual energy efficiency reporting

In 2022, the CRR reported the organisations energy performance in 2021 to the Sustainable Energy Authority of Ireland (SEAI) as required under EU regulations. In 2021, the CRR worked towards improving public sector energy efficiency and have shown an energy saving of 63% since the baseline to 2019. The CRR will continue to report its performance and fulfil its legal obligation to report energy data.

In 2022, the CRR had an energy audit conducted in line with the EAS requirements and engages regularly with both the DoT and the SEAI in relation to the CRR Climate Action Roadmap.

CRR governance arrangements with the Department of Transport (DoT)

The CRR has in place the required oversight agreement and performance delivery agreement in line with the CPGSB. Both agreements which were renewed in 2021 were subject to review and update with the DoT in 2022. Based on these agreements the CRR and the DoT met formally on a quarterly basis to keep each party advised on relevant developments in the areas of corporate governance, transport policy and legislation. In 2022, CRR provided the DoT with its quarterly and annual performance delivery report as per the performance delivery agreement.

Railway Safety Advisory Council

Members of the Railway Safety Advisory Council (RSAC) were appointed by the Minister in 2019 in line with Part 8 of the RSA 2005 for a period of 3 years. In quarter 4 of 2022, a new council was appointed by the Minister, including the reappointment of the Chairman. The Council held its first meeting in November 2022. The functioning of the Council continued to be assisted by the CRR through the provision of facilities, including the provision of a virtual meeting platform to facilitate meetings and administrative support. No recommendations were made to the CRR by the Council in 2022.

Report under the Protected Disclosures Act 2014

Under the Protected Disclosures Act 2014, every public body is required to publish a report on the number of protected disclosures made to the public body in the preceding year and the action taken (if any) in response to the protected disclosures. In 2022, the Head of Administration in the CRR, as the prescribed person under the Protected Disclosures Act 2014, did not receive any protected disclosures from parties external to or within the Commission.

Data protection

During 2022, the CRR continued to keep up to date its policies, systems, and procedures, to ensure compliance with the requirements of data protection legislation. In 2022, the CRR did not receive any data protection requests.

Section 42 Irish Human Rights and Equality Commission Act 2014

Consistent with our core values, the CRR is committed to meeting our obligations under the Human Rights and Equality Commission Act, 2014. Section 42 of that Act establishes a positive duty on public bodies to promote equality, prevent discrimination and protect the human rights of all those with whom they engage, staff, service-users, and stakeholders alike.

In 2022, the Commission established a working group to plan and implement our Public Sector Equality and Human Rights Duty through the three-step process of assess, address and report.

An assessment of human rights and quality issues was undertaken in relation to our engagement function with stakeholders and corporate services function, which includes procurement and human resources. The issues identified in this assessment have been provided to the management group and are being addressed under a quarterly review with all staff. This engagement will also be integrated into our next Strategy Statement 2024-2027 and progress will be reported annually in this report.

Prompt payments

It is the policy of the CRR to ensure that all payments are made promptly. Every effort, consistent with proper financial procedures, is being made to ensure that all suppliers are paid within the required time frame, in accordance with best practice. The CRR publishes quarterly reports of compliance on its website and are uploaded for 2022.

Access to information on the environment

The European Communities (Access to Information on the Environment) Regulations 2007 (S.I. No. 133 of 2007) gives legal rights to those seeking access to information on the environment from public authorities. In 2022, the CRR received one request under Access to Information on the Environment legislation.

REPORT OF PRINCIPAL INSPECTOR RAILWAY REGULATION



Railway regulation

Licensing Authority of railway undertakings

The CRR is the Licensing Authority responsible for assessing applications for and granting a licence to a railway undertaking in the State. A railway undertaking cannot operate a rail service without a licence. For the assessment, the railway undertaking applying for a licence must demonstrate to the CRR as the Licensing Authority, before the start of its activities, that it will at any time be able to meet the requirements relating to good repute, financial fitness, professional competence and cover for its civil liability. The licence of itself does not entitle the railway undertaking access to the railway infrastructure.

Licences must be renewed every five years and a register of issued licences is published on the CRR website.

No licences were due for renewal and no new applications for railway undertaking licences were received in 2022. Three current railway undertaking licences were however reissued to meet EU format requirements. The validity dates on the licences remain as originally issued (<https://www.crr.ie/economic-regulation/>).

Independent monitoring body

The functions of the CRR as the Independent Monitoring Body are to monitor the performance of the IÉ-IM in respect of its obligations under the IMMAC; to arbitrate where a dispute arises between the parties as to the requirements for compliance with the contract; to approve the performance monitoring system developed by IÉ-IM and to advise the Minister of any persistent failure-to-perform trends of the IÉ-IM.

On the 4th March 2022, the CRR issued its IMMAC Annual Report to the Minister for 2021.

Key findings of the report included the following:

- There was a lower-than-expected IMMAC outturn for 2021, with an overall underspend of €2.52m (1%). The planned versus actual spending profiles are:
 - a) In line for the IMO Department
 - b) Lower than expected in the Systems (SMS & Asset) Department, with a 4% underspend (€0.46m)
 - c) Lower than expected in the CCE Department, with a 1% underspend (€2.8m)
 - d) Higher than expected in the SET Department, with a 1% overspend (€0.91m).
- The TPS Project: the project has continued to develop plans to mitigate the impact of schedule delay on DART+. The critical interdependency is the delivery of the first new fleet order, which is expected to undergo acceptance testing between late 2024 and 2025. This new rolling stock will be fitted with ETCS Level 1 onboard equipment and will operate over the existing DART area and the sections of track from Malahide to Drogheda (D2G). The project has assessed the modifications needed to the infrastructure in this area to allow ETCS operation. These plans were submitted to the IÉ Board in November, and additional funding was approved to modify the scope of work of the project to install and fully commission ETCS Level 1 infrastructure.
- GSM-R: the forecast project completion date has been revised from June 2024 to February 2025, with associated costs to project completion under continuing review. This is to reflect the impact arising from identified project risks, the updated radio site construction schedule and the COVID-19 restrictions.

Regulatory body

Appeals and complaints

The CRR received no appeals or complaints as the Regulatory Body in 2022.

Network statement

The CRR continued its review of the Network Statement as published by IÉ-IM, to determine if its contents are in accordance with S.I. No. 249 of 2015, European Union (Regulation of Railways) Regulations 2015 and S.I. No. 398 of 2020, European Union (Regulation of Railways) (Amendment) Regulations 2020.

The review was concluded in Q4 2022, and the outcomes include:

In relation to the outstanding action points based on the interim report of February 2022 on the 2021 review, the CRR are satisfied that IÉ-IM have taken action to address these.

Due to further changes required in the Network Statement, the publishing of an Irish language version was postponed until all changes were made. The English version of the 2023 Network Statement has now been published, and the Irish version is in progress, with publication expected by Q2 2023. IÉ-IM have committed to publishing all future Network Statements in both English and Irish.

In relation to SI 398 Sch. 5 (19) and Sch. 5 (18), IÉ-IM have included updates in the 2023 Network Statement which include a link to the Weekly Circular Request Form, and an additional Annex, publishing details of the Disruptive Possession Plan.

In relation to Reg. 14(14), Sch. 4 (2) and Sch. 4 (6), the Network Statement 2023 has been updated to provide clarification on access to and charging for service facilities referred to in Schedule 2.

NATIONAL AND EUROPEAN LEGISLATION FRAMEWORK DEVELOPMENTS



National railway legislation framework

The following are the developments in the national railway legislative framework in 2022:

S.I. No. 194/2022 – Railway Safety Act 2005 (Section 26) Levy Order 2022

This placed the annual levy on the railway organisations in the State for 2022 that funded the activities related to the functions of the CRR as allowed for under Section 26 of the RSA 2005.

In relation to the continuing development of legislation, the CRR has a function under Section 72 of the RSA 2005 to keep legislation under review. In this context the CRR continued its engagement with the DoT in 2022 on proposed amendments to the RSA 2005.

European railway legislation framework

With the completion of the 4th Railway Package, the European focus is now centred on the revision of the Technical Specifications for Interoperability which continued throughout 2022. The updated TSI's are expected to be issued by the European Commission in early 2023.

The continued development of the legal and technical framework governing the operation of the European Rail Network requires extensive engagement by the European Commission, DG-MOVE and the ERA with member states and other stakeholders. To ensure an understanding and awareness of the continued development of the legal and technical framework governing the operation of the European Rail Network the CRR were active participants in over 50 meetings chaired by the European Commission, DG-MOVE and the ERA.

In 2022, we continued to participate in the Railway Interoperability and Safety Committee (RISC) as a member state nominee and as technical support to the DoT. We also participated in the DG MOVE European network of rail Regulatory Bodies. We continued in our role as the Member State representative on the ERA Management Board.

The CRR is a member of the Network of National Safety Authorities where the core objective is to conduct an active exchange of views and experience for the purpose of harmonising decision-making criteria. The CRR participated in all plenary meetings of this forum in 2022.

The CRR also continued its involvement in a number of prioritised ERA topic specific working groups.

COMMISSIONERS COMPREHENSIVE REPORT TO THE MINISTER



As Commissioner, I acknowledge the Commission for Railway Regulation's responsibility for ensuring that an effective system of internal control is maintained and operated.

This responsibility takes account of the requirements of the Code of Practice for the Governance of State Bodies (2016).

The system of internal control is designed to manage risk to a tolerable level rather than to eliminate it. The system can therefore only provide reasonable and not absolute assurance that assets are safeguarded, transactions authorised and properly recorded, and that material errors or irregularities are either prevented or detected in a timely way.

The system of internal control, which accords with guidance issued by the Department of Public Expenditure and Reform has been in place in the CRR for the year ended 31 December 2022 and up to the date of approval of the financial statements.

The CRR has a risk management policy which sets out its risk appetite, the risk management processes in place and details the roles and responsibilities of staff in relation to risk. The policy is available to all staff who may alert management on emerging risks and control weaknesses.

The CRR has implemented a risk management system which identifies and reports key risks and the management actions being taken to address and, to the extent possible, to mitigate those risks. A risk register is in place which identifies the key risks facing the CRR. These have been identified, evaluated, and graded according to their significance. The register has been reviewed and updated by the Management Team on a quarterly basis. DoT has agreed with the CRR in its Oversight Agreement that it is exempt from the requirement to establish an internal audit unit and an audit and risk committee as required by the CPGSB.

I confirm that a control environment containing the following elements is in place:

- procedures for all key business processes have been documented;
- financial responsibilities have been assigned at management level with corresponding accountability;
- there is an appropriate budgeting system with an annual budget which is kept under review by senior management;
- there are systems aimed at ensuring the security of the information and communication technology systems;
- there are systems in place to safeguard the assets;

and

I confirm that the following ongoing monitoring systems are in place:

- key risks and related controls have been identified and processes have been put in place to monitor the operation of those key controls and report any identified deficiencies;
- reporting arrangements have been established at all levels where responsibility for financial management has been assigned; and
- there are regular reviews by senior management of periodic and annual performance and financial reports which indicate performance against budgets/forecasts.

I confirm that the CRR has the appropriate procedures in place to ensure compliance with current procurement rules and guidelines. Matters arising regarding controls over procurement are highlighted under internal control issues below.

I confirm that the CRR has procedures to monitor the effectiveness of its risk management and control procedures. The CRR's monitoring and review of the effectiveness of the system of internal control is informed by the work of our internal audit, the external audit and the senior management within the CRR.

A Code of Conduct and Ethics is in place for employees.

Government policy on the pay of Chief Executives and all State Body employees is being complied with. Details of the salary of the Chief Executive Officer are published in the Annual Report and Financial Statements.

There have been no significant post balance sheet events.

The CRR is compliant with the Government travel policies.

The CRR is compliant with the asset disposal procedures.

The CRR is compliant with all relevant tax laws.

The CRR is adhering to the Public Spending Code.

APPENDICES



Appendix A

APIS stage letters of approval

Table 7
Letters of Acceptance issued in 2022

APIS Stages	Concept	Preliminary design	Detailed design	T & C	Interim operation	Service
	1	2	3	4	5	6
Infrastructure						
DART+ Coastal North	■					
DART+ Coastal South	■					
Overbridge near Maynooth			■			
Overbridge – Little Island Station			■			
GSM-R CCT – Phase 2				■		
Overbridge Ennis Station					■	
Overbridge – Cork to Midleton					■	
New Station – Pelletstown					■	
Signalling – Geashill	■				■	
Signalling – Portlaoise	■				■	
Overbridge – Dublin to Galway						■
Overbridge 1 – Cork to Midleton						■
Overbridge 2 – Cork to Midleton						■
LUAS Cross City						■
Connemara Railway						■
Rolling Stock						
22000 ICDMU B2 Cars			■			
GSM-R CCO			■			
Cavan and Leitrim Steam Locomotive						■
Connemara Railway Deutz Locomotive						■
Connemara Railway Carriages						■
Velo Kiltimagh – Rail Bikes						■

Appendix B

Passenger numbers on the heavy and light rail systems 2022

COVID-19 restrictions were lifted in early 2022 and passenger numbers have continually increased since then.

Figure 1
Passenger journeys on the Iarnród Éireann network

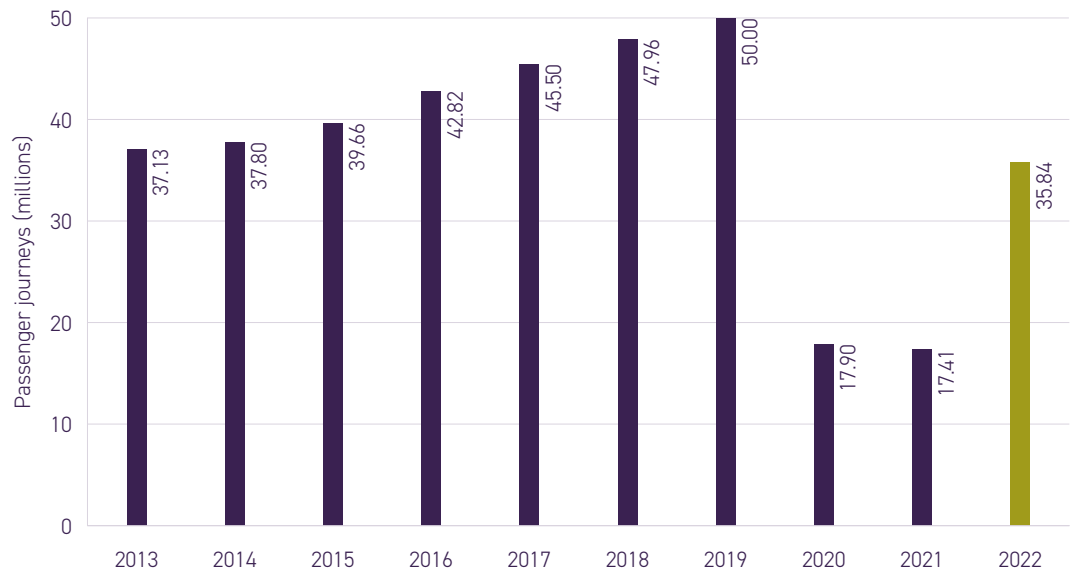


Figure 2
Passenger journeys on the LUAS network

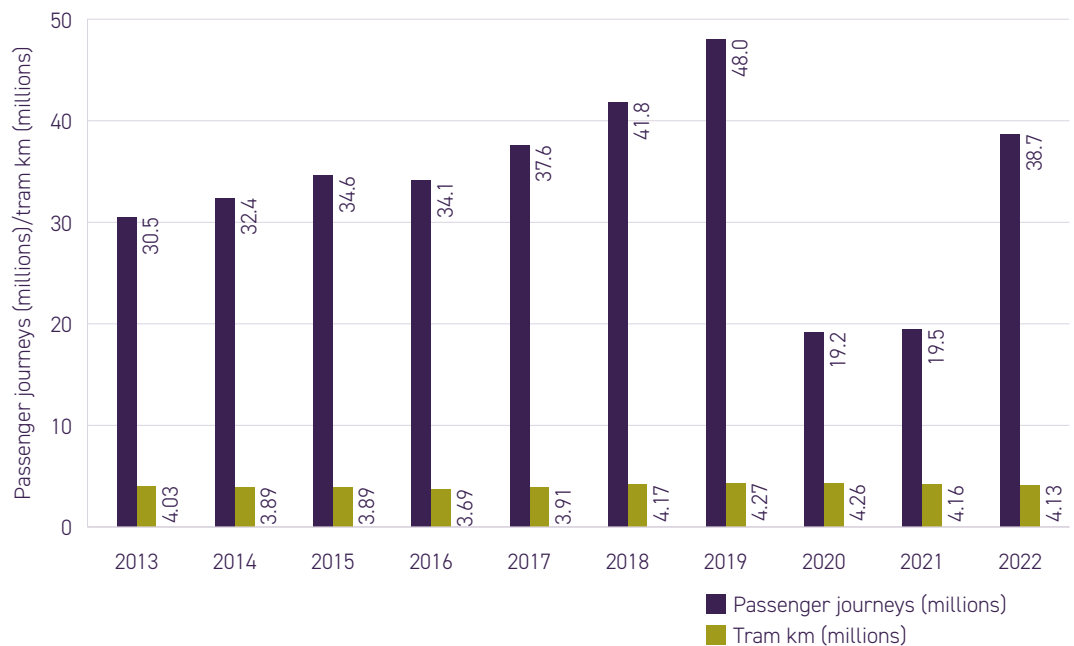


Table 8
Status of CRR outcomes as of 31 December 2022

Activity	Open		FER		Submitted		Closed	
	AR's	NC's	AR's	NC's	AR's	NC's	AR's	NC's
CRR outcomes for RSIE								
Audit	4	3	3	1	0	0	28	11
Inspection	12	4	0	2	0	0	7	3
Post Occurrence Activity	0	0	0	0	0	0	0	0
CRR outcomes for BNM								
Audit	4	3	0	0	0	0	0	0
Inspection	6	0	0	0	0	0	0	0
Post Occurrence Activity	2	0	0	0	0	0	0	0

RAIU safety recommendations

The implementation of safety recommendations made by the RAIU monitored by the CRR. We formally issue the RAIU recommendations to railway organisations or others and then track their implementation.

The status categories for recommendation tracking purposes are;

Open/in progress

Feedback (Evidence) from Railway Organisation (or another party) is awaited or actions have not yet been completed.

Submitted

The Railway Organisation (or other party) has made a submission to the CRR, advising that it has taken measures to effect the recommendation and the CRR is considering whether to close the recommendation.

FER (Further Evidence Requested)

The CRR has reviewed a submission (or further submission) but considers that further evidence is necessary to close the safety recommendation.

Closed

The CRR has reviewed a submission (or further submission) and is satisfied that the safety recommendation has been addressed.

Table 9
RAIU safety recommendations

Year	No. of reports	No. of recommendations				Total
		Open	Submitted	FER	Closed	
2014	6	0	0	1	25	26
2015	2	0	0	1	3	4
2016	3	6	0	2	12	20
2017	1	1	0	2	6	9
2018	1	1	0	1	7	9
2019	4	11	0	5	20	36
2020	4	6	0	8	4	18
2021	7	17	0	10	9	36
2022	3	16	0	0	0	16
Total	31	58	0	30	86	174
Total recommendations made to date						174

Appendix D

Safety indicator statistics

Table 10
Iarnród Éireann fatality and injury statistics

Category	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	Trend
Railway operations: passenger fatal injuries											
Fatal injury to passenger due to a train accident, not at level crossing	0	0	0	0	0	0	0	0	0	0	
Fatal injury to passenger due to a train accident at level crossing	0	0	0	0	0	0	0	0	0	0	
Fatal injury to passenger travelling on a train, other than in train accident	0	0	0	0	0	0	0	0	0	0	
Fatal injury to passenger attempting to board or alight from train	0	0	0	0	0	0	0	0	0	0	
Railway infrastructure: third party fatal injuries											
Fatal injury to third party at a level crossing involving a train	0	0	0	0	0	0	0	1	0	0	
Fatal injury to third party at a level crossing not involving a train	0	0	0	0	0	0	0	0	0	0	
Fatal injury to employee at a level crossing due to train in motion	0	0	0	0	0	0	0	0	0	0	
Fatal injury to employee due to train in motion (other than at a level crossing)	0	0	0	0	0	0	0	0	0	0	
Fatal injury to employee not due to train in motion	0	0	0	0	0	0	0	0	0	0	
Railway infrastructure: employee fatal injuries											
Fatal injury to employee at a level crossing due to train in motion	0	0	0	0	0	0	0	0	0	0	
Fatal injury to employee due to train in motion (other than at a level crossing)	0	0	0	0	0	0	0	0	0	0	
Fatal injury to employee not due to train in motion	0	0	0	0	0	0	0	0	0	0	

Table 10
Iarnród Éireann fatality and injury statistics

Category	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	Trend
Railway operations: fatal injuries to other persons											
Fatal injury due to train in motion not at level crossing	0	0	0	0	0	0	0	0	0	0	
Fatal injury to customer or visitor, no train involved	0	0	0	0	0	0	0	0	0	1	
Fatal injury involving train in motion on railway or level crossing where trespass or suspicious death was indicated	4	6	2	5	12	9	4	7	5	6	
Railway operations: non fatal injuries to passengers											
Injury to passenger travelling on train due to a railway accident not at level crossing	0	0	0	0	0	0	0	0	0	0	
Injury to passenger travelling on train due to railway accident at level crossing	0	0	0	0	0	0	0	0	0	0	
Injury to passenger attempting to board or alight from train	39	45	48	79	57	74	76	42	32	62	
Injury to passenger travelling on train, other than due to a railway accident	43	18	15	31	33	46	38	9	0	30	
Railway infrastructure: third party non fatal injuries											
Third party at level crossing injury involving a train	0	0	0	0	0	1	1	0	0	0	
Level crossing user injury not involving a train	1	0	0	0	0	1	1	2	1	2	
Railway infrastructure: non fatal injuries to other persons											
Injury to customer or visitor to premises	193	205	146	192	321	199	288	122	96	172	
Injuries to other persons including unauthorised persons	3	0	1	2	6	0	2	0	0	2	

Table 10
Iarnród Éireann fatality and injury statistics

Category	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	Trend
Railway operations: non fatal employee injuries											
Employee lost time accident involving train movement or train accident	5	21	3	1	15	13	7	8	0	0	
Employee lost time accident while working on railway not due to train in motion	39	43	32	30	30	13	35	16	8	11	
Railway infrastructure: non fatal employee injuries											
Employee lost time accident involving train movement or train accident	0	0	0	0	0	0	0	0	0	0	
Employee lost time accident while working on railway not due to train in motion	41	25	6	23	22	26	24	20	33	20	
Employee lost time accident while working at level crossing not due to train in motion	1	2	0	3	1	1	0	3	0	2	
Entity in charge of maintenance and maintenance workshops: non fatal employee injuries											
Employee lost time accident involving train movement or train accident	0	0	0	0	0	0	0	0	0	0	
Employee lost time accident while working on railway not due to train in motion	14	18	13	11	10	12	15	4	11	7	

Figure 3
Total number of train collisions by year

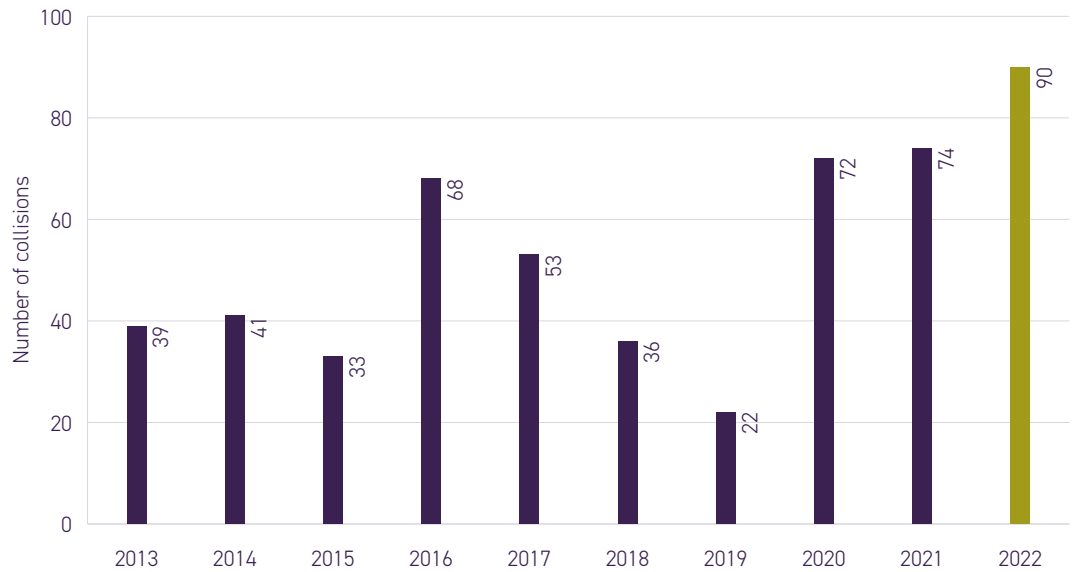


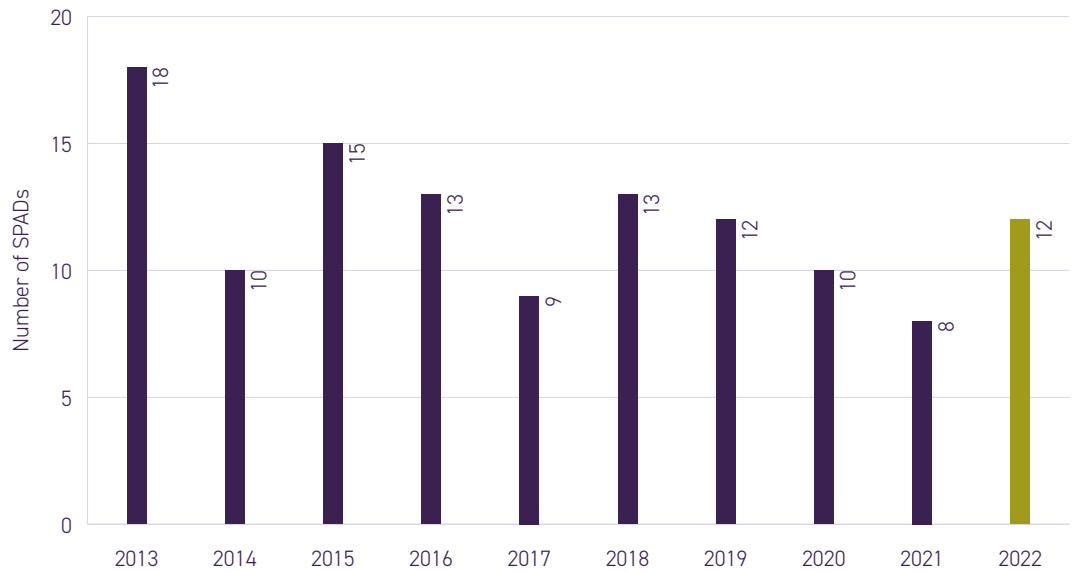
Table 11
Train collision statistics by year by category

Category	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	Trend
Train collision with passenger or goods train on running line	0	0	0	0	0	0	0	0	0	0	
Train/railway vehicle collision in station or possession movement	1	1	1	1	2	1	1	4	1	4	
Train collision with a motor vehicle at a level crossing	1	2	0	0	3	1	2	1	0	0	
Train collision with pedestrian at a level crossing	0	0	0	0	0	0	0	0	0	0	
Train collision with attended gates at a level crossing	0	0	1	0	0	0	0	0	0	0	
Train collision with road vehicle obstructing the line (not at a level crossing)	1	0	1	1	0	0	0	0	0	0	
Train collision with other obstacle on the line	7	29	1	31	25	23	8	29	27	27	
Train collision with large animal(s) on the line	29	9	29	35	23	11	11	38	46	59	
Total	39	41	33	68	53	36	22	72	74	90	

Signals Passed At Danger (SPADs)

A SPAD is defined as having occurred when a train passes a stop (red) signal without authority. SPADs are a particular precursor event that the CRR monitors at its supervisory meetings with IÉ-RU. The trend in recent years has seen a decline in these precursors. However, an increase is noted in 2022.

Figure 4
Signals passed at danger



Train derailments

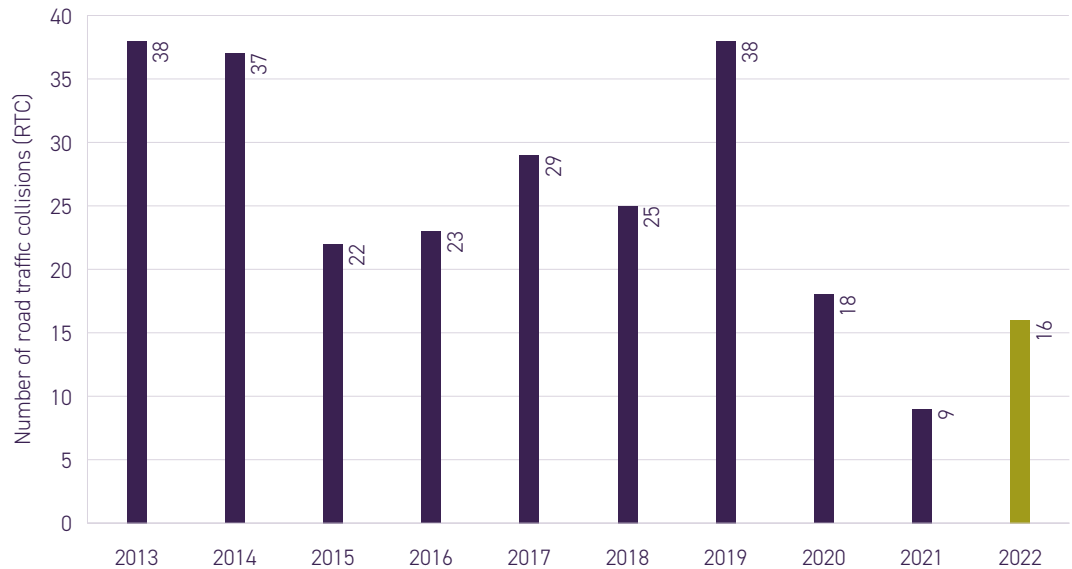
Train derailments remain at low levels with all those occurring in 2022 taking place in sidings.

Figure 5
Train derailments



Road traffic accidents involving trams

Figure 6
Road traffic accidents
(collisions) involving
trams by year



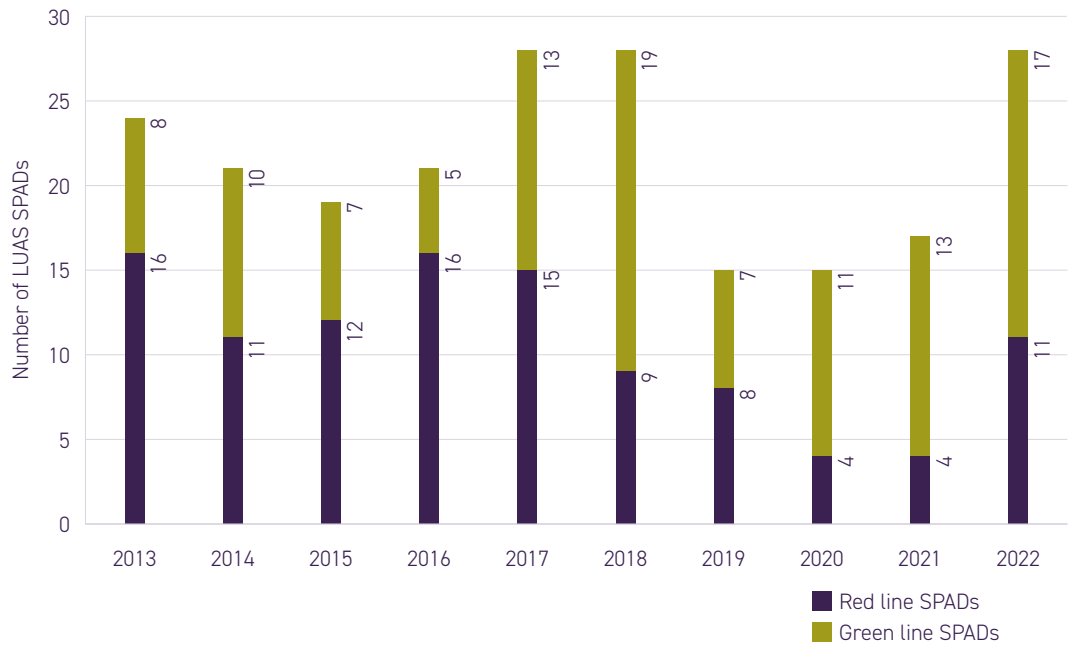
Signals Passed At Stop (SPASs) LUAS

SPAS events also occur on the LUAS network, albeit the signalling system doesn't automatically identify these excluding 3 locations (Sandyford Stop-Depot Entrance, Broombridge Depot Entrance and the Cookstown interchange) where there is detection. Rather the majority of the network relies on the tram driver to self-report that they passed a signal at stop, i.e., the signal was displaying a stop aspect. While there was a slight increase 2021, there was a significant increase in 2022. The data would suggest that there is a disproportionate number of SPASs being attributable to newly qualified drivers and this is an issue the CRR is discussing with Transdev.

Transdev employ a categorisation for such events and differentiate between lower risk signals passed at stop, that is where a tram might simply stop 1m past a signal, compared to higher risk events in which a signal is passed at danger where there is potential for a collision with another tram or road vehicle.

The data indicates that 90%+ are lower risk occurrences and in 2022, for example, there was 1 higher risk event where a tram past the signal and crossed points on a conflicting route, with another tram in the area with the possibility of a collision.

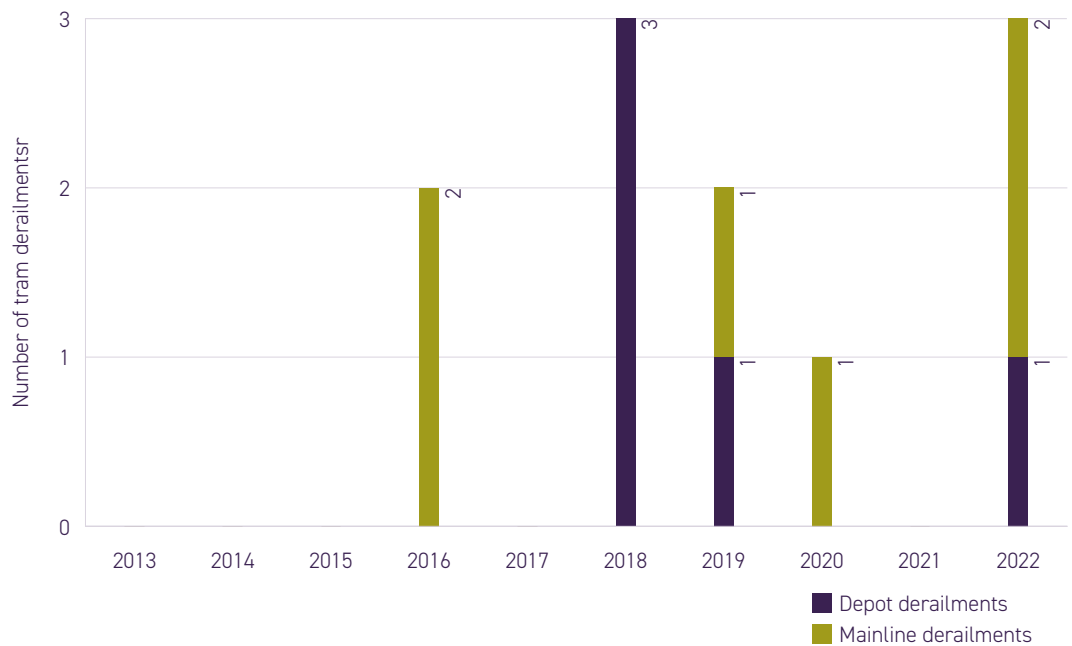
Figure 7
Signals passed at stop
by trams



Tram derailments

There were two mainline tram derailments in 2022. The first occurred to an in service tram as it departed Belgard Stop, while the second occurred to an out of service tram on Abbey Street.

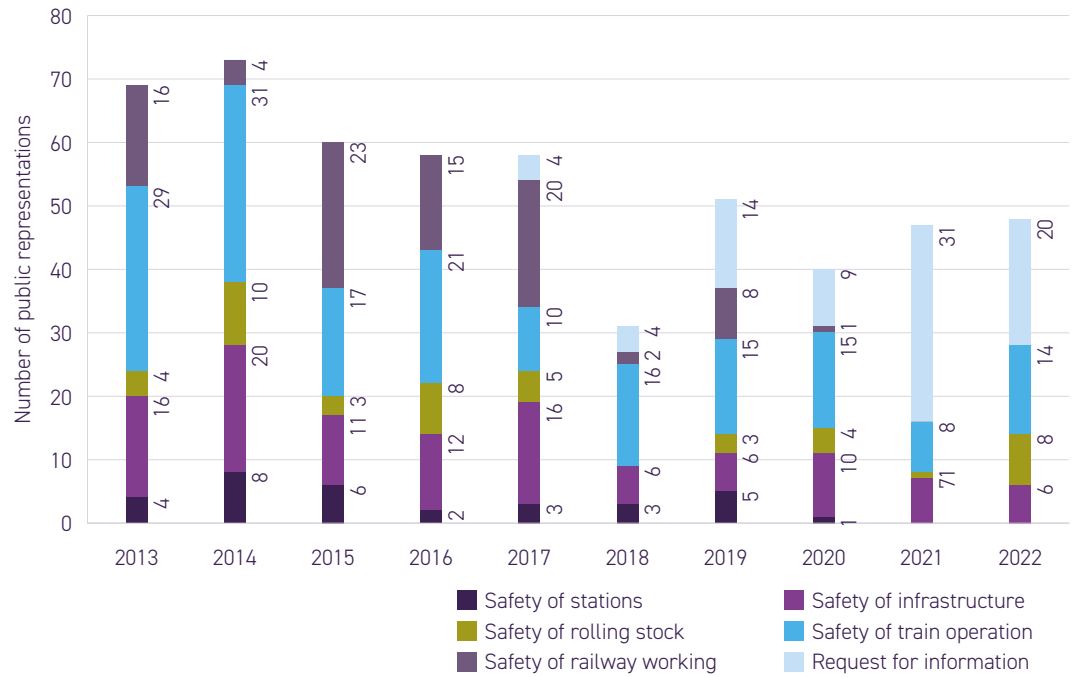
Figure 8
Tram derailments



Public representations

Public and railway staff representations received in 2022, by category.

Figure 9
Public representations



Appendix E

Heritage railways with a current safety certificate

Table 12
Heritage railways with a current safety certificate

<p>Diffin Light Railway Oakfield Park Raphoe Co Donegal</p>	<p>The Diffin Light railway is a private narrow-gauge railway, 4.5km long, in the grounds of Oakfield Park Demense, Raphoe, Co Donegal. The line runs through a variety of landscaped gardens with features which include, lawns, lakes, woods, meadows and streams.</p>
<p>Cumann Traenach na Gaeltacht Lair Fintown Co Donegal</p>	<p>Cumann Traenach na Gaeltacht Lair is a narrow-gauge railway 4.8km long. The railway runs from Fintown to a point known as a 'Head of Lake'. The railway is a community owned project funded by Government and open to the public on specified dates.</p>
<p>Irish Steam Preservation Society Narrow Gauge Railway Stradbally Co Laoise</p>	<p>The Irish Steam Preservation Society Narrow Gauge Railway marketed as the Stradbally Woodland Express is located in the woodlands of Stradbally Hall Estate. It is a narrow-gauge railway 800m long. The railway is operated for heritage and leisure purposes by volunteers.</p>
<p>Lartigue Mono Railway John B Keane Road Listowel Co Kerry</p>	<p>The Lartigue Mono Railway, LMR, consists of three distinct areas make up the railway, these are, the main site, the museum and the original site. Within the main site is located the railway itself. The Museum section consists of the entrance to the site, the car park and the Museum building. To the rear of the car park is to be found the original site where the Lartigue of 1886 was located the remains of which have been unearthed.</p>
<p>Waterford and Suir Valley Railway Kilmeadan Station Kilmeadan Co Waterford</p>	<p>The Waterford and Suir Valley Railway is a narrow-gauge railway between Kilmeadan Station and Bilberry, Waterford city. It runs on a section of the abandoned Waterford to Mallow railway line. The length of the railway is 10km. The Company is overseen by a voluntary Board of Directors.</p>
<p>Cavan & Leitrim Railway Dromod Co Leitrim</p>	<p>The Cavan & Leitrim Railway is a narrow-gauge railway 0.8km long. The railway runs from Dromod station to a point approximately 90 meters from the Mohill-Dromod road on the original track of the Cavan & Leitrim Railway.</p>
<p>Midlands Great Western Railway Ltd. Maam Cross Railway Station, Maam Cross Road, Connemara, Co Galway</p>	<p>The Connemara heritage railway operates on an isolated narrow gauge track approximately 400m long.</p>

Table 13
Heritage railways that do not hold a current safety certificate

Tralee-Dingle Steam Railway Co Ltd Town Hall Prince's Quay Tralee Co Kerry	The Tralee-Dingle Railway is a narrow-gauge railway of 3km in length and runs from Ballyard Station at Tralee to Blennerville Station. The railway runs along the line of the closed Tralee to Dingle railway line.
West Clare Railway Co Ltd Moyasta Junction Kilrush	The West Clare Railway is a narrow-gauge railway, operating over 4km of track. The railway is centred on the former station at Moyasta, near Kilrush, Co Clare where the original station house has been restored to a museum. The line in use runs over the original track bed of the West Clare Railway.
Lullymore Heritage & Discovery Park Ltd Lullymore Rathangan Co Kildare	Lullymore Heritage Railway is a 1km looped journey through rehabilitating cutaway peatlands.

Heritage Railways cannot operate unless they have a current safety certificate.

Appendix F Glossary

APIS	Authorisation to Place in Service
BNM	Bórd na Móna
CILT	Chartered Institute of Logistics and Transport
CPGSB	Code of Practice for the Governance of State Bodies
CRR	Commission for Railway Regulation
DART	Dublin Area Rapid Transit
DeBo	Designated Body
DGSA	Dangerous Goods Safety Advisor
DLR	Diffin Lake Railway
DoT	Department of Transport
ECM	Entity in Charge of Maintenance.
EFTA	European Free Trade Association
ERA	European Railway Agency
ETCS	European Train Control System
EU	European Union
FoI	Freedom of Information
GSM-R	Global System for Mobile Communications – Railway
ICDMU	Intercity Diesel Multiple Units
IÉ	Iarnród Éireann
IÉ-IM	Iarnród Éireann Infrastructure Manager
IÉ-RU	Iarnród Éireann Railway Undertaking
IMMAC	Infrastructure Manager Multi Annual Contract
LCC	LUAS Cross City
NIR	Translink Northern Ireland Rail
NR	National Rules
NSA	National Safety Authority
OTM	On Track Machine
RAIU	Railway Accident Investigation Unit.
RISC	Railway Interoperability and Safety Committee
RPSI	Railway Preservation Society of Ireland
RSA	Railway Safety Act
RSIE	Rhomberg Sersa Ireland
SEAI	Sustainable Energy Authority of Ireland
SMS	Safety Management System
SPAD	Signal Passed at Danger
SPAS	Signal Passed at Stop
TDLR	Transdev Dublin Light Rail
TII	Transport Infrastructure Ireland
TPS	Train Protection System
TSI	Technical Specification for Interoperability
USAN	Urgent Safety Advice Notice

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