



RSC Annual Report 2011



Railway Safety Commission

Annual Report 2011

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Foreword



In accordance with Section 28(3) of the Railway Safety Act 2005, the Railway Safety Commission (RSC) is required to present an annual report to the Minister for Transport. This is the annual report for the year 2011 and, in addition to providing information on the activities, administration and governance of the RSC; it presents statistical data on the safety performance of the various participants in the railway sector in Ireland during the year under review.

The RSC continues to participate with the National Safety Authorities of the other Member States of the European Union in the on-going development and implementation of the European railway safety regulatory framework. This results in a considerable workload for the RSC in relation to the harmonisation of national legislation and implementation of EU common safety methods.

EU Regulations mandate the manner in which railway Infrastructure Managers and Railway Undertakings are to be supervised to ensure that they implement and adhere to their respective approved Safety Management System (SMS). The RSC has established an enhanced audit and inspection regime to supervise IÉ compliance with its approved SMS in accordance with EU common safety methods. This regime is being extended to cover the activities of the RPSI on the IÉ network.

Under the current embargo on public sector recruitment it has not been possible to engage permanent staff to cover the shortfall in specialist technical human resources, which stood at 56% at the beginning of the year. As this presented a significant risk to the RSC's ability to deliver on its regulatory duty to supervise railway safety in Ireland, the RSC resorted to consultant specialists in 2011 to execute the majority of audits on Iarnród Éireann compliance with its SMS, contracting in services under framework arrangements on an audit-by-audit basis.

Consultant technical specialists are also contracted in under framework arrangements to support the safety conformity assessment and approval for placing in service functions of the RSC. However, these contract arrangements are less than satisfactory in that their administration demands management resources, and they do not satisfy the requirement to develop and retain corporate knowledge within the RSC. In an effort to overcome this deficiency and to provide for the longer-term resolution of this critical issue, the RSC has entered into an agreement with Engineers Ireland whereby two recently graduated engineers have been placed with the RSC on a four-year training programme aimed at developing them to Chartered Engineer status.

In March 2013 the current derogation for Ireland on separation of railway infrastructure and train operating activities expires. Consequently, Iarnród Éireann (IÉ) will be working throughout 2012 to develop Infrastructure Manager and Railway Undertaking businesses that conform to the EU requirements. This will introduce significant organisational change that will be subject to safety validation and will also lead to the introduction of separate SMS for the respective businesses. Conformity assessment of the two new SMS by the RSC in line with EU assessment criteria will be an important part of the successful delivery of this project as safety authorisation of the Infrastructure Manager and safety certification of the Railway Undertaking will be required before the businesses are operationalised.

A significant finding arising out of the Railway Accident Investigation Unit (RAIU) report of the investigation into the collapse of the Broadmeadows Viaduct at Malahide in August 2009 was the loss of corporate memory as a contributory factor to the incident. The RSC considered that this finding warranted further investigation and commissioned a specialist study to identify factors that can contribute to loss of informal corporate memory, with particular reference to the engineering functions in Iarnród Éireann. The report of the study was issued to relevant stakeholders in early September 2011, and Iarnród Éireann promptly agreed to develop a plan for implementation across the engineering functions of the recommendations contained in the report. Iarnród Éireann subsequently broadened the scope of implementation to include train operating functions.

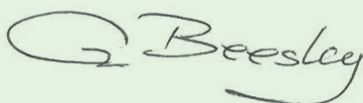
Foreword

User-worked public road level crossings present a high-risk interface between members of the public and the railway, as responsibility for safe use of the level crossing rests with the road user. The RSC has undertaken a study into the suitability of this type of level crossing, of which 48 exist on the Iarnród Éireann network, and will issue findings during the first quarter of 2012. The risk associated with user-worked level crossings on public roads makes them an obvious target for further safety investment.

In regard to safety of train operations, there was a significant drop in the number of signals passed at danger (SPADs) during 2011. This improvement has been primarily achieved by corrective coaching of train drivers, but it must be recognised that, apart from the DART network, positive train protection is not available on the remainder of the Iarnród Éireann network. The safe working of trains is therefore in the hands of the train drivers and their obedience to railway signals. In this respect Ireland has remained static and, compared to the rest of the world, has actually fallen behind. It is now necessary to consider how automatic train protection might be rolled out across the Iarnród Éireann network and the implications that this has for safety investment in the railways.

Under the current economic circumstances, where even the railway sector does not have any particular immunity from constraints on expenditure, it becomes increasingly important that the RSC continues to focus on its mission “To advance the safety of railways in Ireland through diligent supervision and enforcement.”

In conclusion, it is appropriate to thank the staff of the RSC for their commitment and support in executing our statutory duties during 2011.



Gerald Beesley
Commissioner for Railway Safety

1. The Railway Safety Commission



1.1. The Origin and Role of the Railway Safety Commission

The Railway Safety Commission was formally established on 1st January 2006 in accordance with the requirements of the Railway Safety Act (RSA) 2005. In the context of the Railway Safety Directive (European Directive 2004/49/EC) the RSC is the National Safety Authority for the railway sector in the Republic of Ireland. The Railway Safety Directive came into force in Ireland when the RSA was amended by the European (Railway Safety) Regulations (S.I. No.61, 2008). As the independent regulatory agency charged with oversight of the safety of all railway activities in the State, the RSC is required to ensure that each railway organisation operating in the State understands and effectively manages the risk to safety associated with its activities. This is achieved in three ways, viz.:

Conformity Assessment – Assessing Safety Management Systems (SMS) to ensure that they conform to all requirements prior to awarding safety authorisation or safety certificates, and assessment of new railway infrastructure and rolling stock to ensure safety compliance prior to placing in service;

Compliance Supervision & Enforcement – Auditing compliance with the procedures and standards prescribed in each approved SMS, and inspection of railway assets to assess compliance with fitness for purpose criteria. Compliance with safety recommendations is assured through the monitoring of implementation plans and by taking enforcement proceedings where necessary; and

European & Legislative Harmonisation – Supporting the harmonisation of legislation with European Directives and Regulations, and ensuring that the consequent implementation of related technical and procedural measures conforms to mandatory European requirements.

1.2 Structure and Organisation

The RSC is a small, specialist technical organisation staffed with professional engineers supported by a two-person administrative team. A flat reporting structure promotes and facilitates the free-flow of information and ideas, encouraging consultation and creative thinking. Not only does this enable the RSC to meet the requirements of the work programme set out in its business plan, but it also provides the flexibility needed to respond effectively to immediate and unforeseen work demands.

In addition to the Commissioner, the approved level of staffing provides for a further eight technical staff. At the beginning of 2011, four technical positions remained unfilled as a result of the Department of Finance embargo on recruitment.

In view of the risk that a shortfall in technical capacity presents to the ability of the RSC in delivering on its regulatory duty to supervise railway safety, steps have now been taken to contract in specialist technical resources.

1.3 Railway Accident Investigation Unit

To meet the requirements of Article 18 of the Railway Safety Directive, the Railway Safety Act provides for the establishment of a Railway Accident Investigation Unit (RAIU). Although currently within the RSC and sharing administrative resources, functionally it has independence for the investigation of railway accidents and serious incidents. In 2009, the Minister for Transport announced the establishment of a multi-modal transport accident investigation body. While enabling legislation has yet to be passed, it is planned that the RAIU will be separated from the RSC as soon as possible in order to comply with EU requirements.

1. The Railway Safety Commission

Investigation by the RAIU is “for cause”, that is to say it seeks to identify the full facts of an incident and why it occurred with a view to preventing recurrence. The Railway Safety Directive specifies, in loss and injury terms, a minimum threshold above which investigation is mandatory. Investigation of incidents of lesser impact is discretionary.

In 2011 the RAIU initiated 3 formal investigations into incidents and accidents on the railway, all of which were IÉ incidents/accidents:

IARNRÓD ÉIREANN:

- Car Strike at Morrrough Level Crossing, XG173, County Galway, 14th February 2011;
- Runaway locomotive at Portlaoise loop, County Laois, 29th September 2011;
- Axle journal bearing failure on a locomotive at Connolly Station, Dublin, 18th October 2011.

In 2011 the RAIU published the following 7 reports into accidents and incidents that were investigated, 1 of which was a LUAS incident. The remaining 6 were IÉ incidents/accidents:

LUAS:

- Tram derailment at The Point Stop, Luas Red Line, 13th May 2010;

Iarnród Éireann:

- Laois Traincare Depot Derailment, 20th January 2010;
- Secondary suspension failure on a train at Connolly Station, 7th May 2010;
- Gate Strike at Buttevant Level Crossing (XC 219), County Cork, on the 2nd July 2010;
- Person struck at level crossing XE039, County Clare, 27th June 2010;
- Road vehicle struck at level crossing XM096, County Roscommon, 2nd September 2010;
- Car Strike at Knockaphunta Level Crossing (XM250), County Mayo, 24th October 2010;

2. Functional Performance



This section of the annual report deals with the performance of the RSC in its three key work areas of Conformity Assessment and Authorisation to Place in Service; Compliance Supervision and Enforcement; and European and legislative harmonisation

2.1 Conformity Assessment and Authorisation to Place in Service

Activities under this heading comprise two principal strands, assessment of Safety Management Systems (SMS) and approval to place in service new or significantly modified railway infrastructure and rolling stock.

2.1.1 Safety Management Systems

In January 2011 Iarnród Éireann was issued with Safety Certification for its Railway Undertaking function and granted Safety Authorisation for its Infrastructure Manager function. The Railway Preservation Society of Ireland were issued with Safety Certification as a Railway Undertaking in July 2011. The respective SMS assessments were carried out by the RSC in accordance with the Railway Safety Directive and Common Safety Methods for Conformity Assessment.

2.1.2 Authorisation to Place in Service

Infrastructure Approvals on the IE Network during 2011 included four bridges and a new station. On the LUAS Network, Line A1 between Belgard and Saggart opened for passenger traffic on 2nd July. Rolling Stock Approvals for IE included ongoing work on the phased approval of on-track machines, an additional Intercity Railcar order, and the upgrading of a Mk III Generator Van. The LUAS Road Rail Cleaning Vehicle was approved for Detailed Design. All of the Approvals were carried out under the Railway Safety Act 2005. A full list of projects is contained in Appendix 4.

The Interoperability Directive 2008/57/EC was transposed into Irish Law in August. This gave effect to the European process of authorisation to place in service railway sub-systems. The RSC are currently updating their guidelines to reflect the "Authorisation to Place in Service" process. The upgrading of Pearse Station will be the first project to be approved under the new regime.



Presentation of Safety Certificate to IÉ 31st January 2011



Presentation of Safety Certificate to RPSI 1st July 2011

2. Functional Performance

2.1.3 Train Driver Certification

The RSC commenced the drafting of a guideline on the application of the Train Driver Certification Directive, 2007/59/EC. The guideline will be relevant for training centres, examination centres, trainers, examiners, railway undertakings, infrastructure managers train drivers and candidate drivers. It is expected that Iarnród Éireann will be recognised as a training centre and examination centre during 2012. Train Driving Licences will be issued by the RSC and a register will be held by the RSC to the requirements contained in Commission Regulation (EU) No 36 of 2010 and Commission Decision 2010/17/EC.

2.2 Compliance, Supervision and Enforcement

The RSC's supervision activities are derived from the need to ensure that Railway Undertakings and Infrastructure Managers are implementing their approved safety management system (SMS).

It is further informed by:

1. Industry safety concerns, typically arising from accidents and incidents;
2. Complaints and representations by, or on behalf of, passengers or affected parties;
3. Reactive monitoring, including post-incident compliance inspection

The RSCs supervision activity employs a number of techniques that include:

1. Audits of duty holders compliance with SMS;
2. Sample inspections of assets and operations;
3. High level supervision meetings with Executive Officers and Safety Managers.

2.2.1 Compliance Auditing

The RSC introduced an enhanced regime for auditing IÉ compliance with its SMS, with audits in 2011 which focused on;

- The Chief Civil Engineer's department in Limerick Junction Division;

- The Chief Civil Engineer's department in key function areas;
- The Chief Mechanical Engineer department as a whole;
- The Chief Mechanical Engineer's department key function areas;
- The Operations department of IÉ (train operations function and the Head Quarters function); and
- Application of company standard IÉ SMS 013 on the management of organisational change.

Furthermore, two process audits of IÉ's Safety Management System were undertaken by the RSC. These focused on;

- The Management of CTC Signaller competence;
- The Management of Cuttings & Embankments.

All audits resulted in recommendations being made and IÉ have implemented or are implementing these.

The RSC completed a compliance inspection following a fatality at level crossing XM096 on the 2nd September 2010, which is available on the RSC website. The RSC completed its compliance inspection in March 2011 and identified 2 non-compliances. These related to:

- Failing to implement internal level crossing standard MW50 section 2: "Views of approaching trains";
- Failing to comply with regulation 5 of S.I. 701 of 2003: "Training of rail personnel in the carriage of dangerous goods".

In addition, the RSC made 7 recommendations covering a broad range of safety management issues, that included communications with local authorities and the erection of signage.

In accordance with Section 76 of the Railway Safety Act the RSC requested an 'Improvement Plan' from Iarnród Éireann (IÉ) and this was promptly submitted. The RSC have been closely monitoring IÉ's plan and are satisfied that the non-compliances have been addressed and that the recommendations have been implemented or substantially implemented. The RSC audited Veolia, undertaking one compliance audit of their safety management arrangements (Safety Case).

2. Functional Performance



This focused on:

- Interface management of LUAS stakeholders.

Again a number of recommendations were made and Veolia, in conjunction with Alstom (the infrastructure maintainer) and the Railway Procurement Agency (RPA), are addressing these.

Lastly, the RSC audited Bord Na Mona (BNM), undertaking one compliance audit of their safety management arrangements (Safety Case). This focused on:

- The management of Level crossings

Three non-compliances (NC's) were identified during the course of this audit and they related to:

- BNM not achieving the required frequency of Health & Safety Committee Meetings;
- Level crossings not being inspected in 2010 or 2009 by those staff identified in the Safety Case;
- The absence of any annual review of standards or control procedures .

Again a number of recommendations were made and BNM have addressed these.

The RSC actively monitors the implementation of all recommendations made and seeks evidence of actions taken before any recommendation is closed.

2.2.2 Inspections & Accident Tracking

A number of inspections of IÉ and Veolia were also carried out focusing on:

- Infrastructure assets including bridges and level crossings;
- Stations;
- Central Traffic Control (the location responsible for the control of train movements over the majority of the network);
- Tramway infrastructure, security and trespass.

Where the occasion permitted, inspectors took the opportunity to travel in locomotive cabs to assess operations and the condition of the permanent way. In-service inspections were also conducted on all heritage railways currently operating.

2.2.3 Supervision Meetings

In 2011, as part of the RSC's Supervision Programme, a number of high level supervision meetings were held with the relevant duty holders (IÉ, Veolia and Bord Na Móna) where safety performance was discussed

The RSC also monitored the implementation of Railway Accident Investigation Unit (RAIU) recommendations made following their independent 'for cause' investigations.

2.2.4 Industry Concerns

The RSC maintains formal and informal contact with its peer regulatory and investigatory bodies in Europe. All accident reports and safety advisory notices by these peer organisations that were deemed relevant to Railway Undertakings here were circulated by the RSC.

There were no fatal accidents on the IÉ network in 2011 (excluding cases of trespass or where self-harm is suspected). However, there were two incidents that under slightly different circumstances could have resulted in more serious consequences. The first involved a member of the public whose hand got trapped in a train door and was pulled alongside the departing train. The second was when a journal bearing on a locomotive axle failed.

The RSC are concluding a compliance inspection into the latter and are tracking Iarnród Éireann's inquiry into the door related incident.

In October 2011, the LUAS suffered its second fatality since operations commenced in 2005. The accident occurred on Stevens Lane, just beyond the entrance to St. Patricks Hospital. A male walking towards Heuston Station wandered off the pavement directly into the path of an approaching tram, heading inbound towards Heuston Stop.

2. Functional Performance

2.2.5 Public representations

The RSC always gives the highest attention to representations concerning railway safety made by the public, passengers or others. The RSC tries, wherever possible, to deal with the matters directly, however, when necessary the RSC seek additional information from the duty holder in order to provide a full and comprehensive response.

In 2011, we received 55 direct or indirect representations relating to a range of heavy and light rail infrastructural and operational matters, an increase on the number received in 2010 (47). Of these, 44 representations related to Iarnród Éireann operations or infrastructure with the remaining 11 pertaining to the LUAS (Dublin light rail) system, and some heritage railways. A small number of these did give cause for concern and the RSC acted immediately to ensure action was taken.

The remainder gave no immediate or specific cause for safety concern but all representations were investigated and responses issued. The RSC continues to track representation topics on an ongoing basis to identify any recurrence or trends that might indicate a need for further attention.

Representations in 2011 were varied in nature, ranging from level crossing condition to tram road markings. There was an increase in the number of representations received by the RSC relating to level crossing condition and where appropriate assets were inspected by the RSC and responded to with the assistance of IÉ.

2.2.6 Reactive monitoring

Reactive monitoring, site inspection and compliance inspections/audits took place in relation to the following incidents:

Iarnród Éireann incidents::

- Passenger incident at Coolmine Station, 4th July 2011;
- Intercity Railcar engine fire at Athenry 3rd September 2011;



- An axle journal bearing failure on a locomotive wheel-set, 18th October 2011.

Luas Incidents :

- Tram pedestrian fatality at Stevens Lane, 11th October 2011.

2.2.7 Enforcement activity

Section 7 of the RSA 2005 provides for a number of enforcement measures, ranging from requesting an Improvement Plan to a serving a Prohibition Notice. During 2011 the following enforcement measures were instigated: Section 76 of the RSA 2005 - Improvement Plan requested following:

- the RSC's compliance inspection following the fatal accident at XM096;

2. Functional Performance



- the RSC's compliance audit into IÉ's management of cuttings and embankments;
- the RSC's compliance audit into IÉ's management of CTC Signallers competence;
- the RSC's SMS audits of IÉ's CCE, CME and Operations departments;
- the RSC's compliance audit into BNM's management of level crossings;
- RSC audit of the Waterford & Suir Valley's Safety Case.

2.3 European and Legislative Harmonisation (2007/59/EC)

The Train Driver Licensing Directive aims to harmonise the competencies of train drivers at a European level and facilitate the movement of labour. Considerable progress was made in implementing this Directive in the course of the year, as indicated in section 2.1.3 of this report.

The RSC was involved in direct consultations with the Department of Transport, Tourism and Sport (DTTAS) and the Office of the Parliamentary Draughtsman to transpose the recast Railway Interoperability Directive 2008/57/EC into Irish law. Interpretation documents for this technically complex Directive were agreed in Europe during 2010 & 2011 and a number of the Annexes to the Directive were modified.

The RSC also consulted with the Department in their transposition of Railway Safety Directives 2008/110/EC and 2009/149/EC, which amend the primary Railway Safety Directive 2004/49/EC. However, on foot of pilot proceedings against the State resulting from the degree of implementation of the Railway Safety Directive, the Railway Safety Commission embarked on a comprehensive review of the transposition legislation.

The RSC continued to positively contribute to the regulatory development of European railways. It attended two meetings of the Committee on the Interoperability and Safety of the

European Rail System as technical advisor to the DTTAS. It is represented on the Board of the European Railway Agency and contributes to a number of ERA working groups. It attended three plenary meetings of ERA with the National Safety Authorities.

2.4 Road Rail Interfaces

Safety at Road Rail Interfaces continues to be of concern. The RSC chairs the Road Rail Safety Working Group (RRSWG) which offers opportunity to maintain disquiet on this issue through its members – railway undertakings, road authorities, DTTAS, road hauliers and the Gardaí. The group met once during 2010. In addition to these meetings the group also organised awareness meetings around the country to get together with engineers and managers from the local authorities and the railways to communicate to them our work in the group and to discuss particular areas of concern at the locations visited. One such meeting took place in 2011, in Kilkenny.

A good practice guide on prevention of bridge strikes was published in early 2011. The RSC also progressed a study into the suitability of user-worked level crossings on public roads and met with IE to discuss the interim findings. It will issue its findings in the first quarter of 2012.

3. Assessment of Duty Holder Safety Performance



3.1 Introduction

The safety performance of the duty holders in the Republic of Ireland is considered for the four principal railway sectors that the RSC regulates, namely heavy rail, light rail, industrial systems and the heritage railways. Each railway operator and infrastructure manager is obliged to notify railway incidents and accidents to the RSC. This data is used for assessing duty holder safety performance among other things.

3.2 Iarnród Éireann Network

At year end, the IÉ network in service was 1683 route-kilometres, the same as in 2010. There were no significant changes to the network or to the operation of trains.

Accident statistics are presented in detail in Appendix 2. Seven deaths involving railway vehicles in motion were reported.

No derailments or collisions of service trains were reported. Nevertheless, six derailments occurred in sidings and a set

of points was damaged on a running line. There was a very significant decline in the number of main signals passed at danger, which may be due to new systems of non-judgemental proactive monitoring, mentoring and corrective coaching of train drivers by the District Traction Executives.

There was one collision of a train with a motor vehicle at a user-worked road level crossing, and no collisions of trains with the gates of an attended level crossing.

A reduced rate of road vehicle strikes to bridges over and under the railway has been sustained since 2008. No landslips affecting the railway line were reported for 2011.

Reports of fire and smoke incidents on trains remain steady. Eight incidents were reported, none of which resulted in injury to any passengers.

The number of reported train collisions with large animals on the line increased. Of these incidents, the majority involve deer.

3. Assessment of Duty Holder Safety Performance



There were two broken rails on passenger lines and none on a freight line for the year 2011. By comparison, four broken rails were found on passenger lines in year 2010. There were two broken rails on passenger lines and none on a freight line for the year 2011. By comparison, four broken rails were found on passenger lines in year 2010.

3.3 LUAS

The LUAS urban light railway system consists of two separate double-tracked lines. The Green line is 16.5 km long and runs from St. Stephen's Green to Bride's Glen: 95% on dedicated right-of-way with 14 signalled and 2 un-signalled road level crossings. The Red line is 19.7 km long, running from Saggart to The Point (Dublin docklands): 60% on dedicated right-of-way with 41 signalled road level crossings.

The total kilometres run for 2011 is 3.856 million km compared to the figure for 2010 of 3.082 million km, an increase of 25%: this increase is a result of the expansion of

the network by almost 40% since October 2010.

29.1 million passenger journeys were completed in 2011 compared to 27.6 million passenger journeys completed in 2010, an increase of 5%.

The main change to the system in 2011 was the A1 extension from Belgard to Saggart opened in July 2011.

The following events were recorded in passenger service during the year 2011:

- 30 minor road traffic accidents (no change from 2010);
- 2 major contacts with a member of the public (one cyclist injury; one pedestrian fatality);
- 11 minor contacts with a member of the public;
- 1 flooding event;
- 1 attempt to set trams on fire;
- 1 vehicle contact with overhead electrical line.

The number of road traffic accidents (RTA) remained steady. The great majority of RTAs occur on the Red Line. Although

3. Assessment of Duty Holder Safety Performance



the number of contact incidents with a person dropped from 22 to 13, 35 ‘near-miss’ contact incidents were reported where the tram brushed a vehicle, pedestrian or bicycle. One serious injury was reported, involving a cyclist, and one fatality where a pedestrian wandered off the pavement into the path of a tram.

There were 478 emergency brake applications, 100 more than in 2010. Abuse of the emergency handle doubled after halving in 2010. The total number of public disorder and vandalism incidents increased significantly from 1514 in year 2010 to 1935 in year 2011.

3.4 Industrial Systems

The Bord na Móna industrial railway system interfaces with the public road. The RSC’s involvement is limited to its interfaces with public roads and other railways.

Three incidents were reported where the gates of a level

crossing were struck by a road vehicle. One derailment was reported at a level crossing, where a level crossing gate swung open and derailed a peat wagon.

3.5 Heritage Railways

No incident was reported by a heritage railway in 2011. Whilst the safety performance of the sector was generally satisfactory, the RSC is working with a number of heritage railway operations to improve their safety standards.

4. Corporate Governance and Administration



4.1 Introduction

Corporate governance comprises the systems and procedures by which enterprises are directed and controlled. In this regard, the RSC has adopted and is compliant with the Code of Practice for the Governance of State bodies, as published by the Department of Finance.

4.2 Finance

4.2.1 Funding

Funding for the RSC is provided in part by the Department of Transport by a Grant-in-Aid and in part by a levy on the railway undertakings. In 2011 the Grant-in-Aid funding amounted to €1m. In 2008 the RSC invoked the provision of section 26(1) of the Railway Safety Act 2005 and made regulations to impose a levy of each of the Railway Undertakings. These regulations are made annually, and the regulations for 2011 are contained in Statutory Instrument No. 120 of 2011.

RSC accounts for 2010 were subject to audit by the Comptroller and Auditor General and were approved by them in December 2011.

4.2.2 Statement on Internal Financial Control

The RSC acknowledges responsibility for ensuring that an effective system of internal financial control is maintained and operated. The system can provide only reasonable and not absolute assurance that assets are safeguarded, transactions authorised and properly recorded, and that material errors or irregularities are either prevented or would be detected in a timely manner. Maintaining the system of internal financial controls is a continuous process and the system and its effectiveness are kept under ongoing review.

4.2.3 Financial Control Environment

2011 is the sixth year of the RSC's existence. Processes and procedures to ensure a strong internal control environment are continually under review and development. A number of measures have been identified to assist in

creating this environment and steps have been taken to embed them in the RSC:

- Clear definition of management responsibilities;
- Establishment of formal procedures for monitoring the activities and safeguard the assets of the organisation;
- Adoption of the principles of corporate governance contained in the Code of Practice for Governance of State Bodies;
- Compliance with Internal Audit requirements to advise the RSC on discharge of its responsibilities for the internal financial control system.

During 2011, the RSC had made further progress in developing a strong internal control environment through a framework of regular management information, administrative procedures including segregation of duties, and a system of delegation and accountability. In particular this framework includes:

- A comprehensive budgeting system with an annual budget which is reviewed and agreed by the RSC;
- Regular and ongoing review by the Commissioner of all payments;
- Certification of all invoices, including travel and subsistence claims, and authorisation by the Commissioner prior to payment;
- Setting of targets to measure financial and other performance.

The RSC confirm that all appropriate procedures for financial reporting, internal audit, procurement and asset disposal are being carried out.

4.2.4 Tax Compliance

The RSC is compliant with regard to its tax obligations.

4.2.5 Travel and expenses

The RSC is compliant with all relevant Department of Finance circulars on travel, subsistence and associated expenses.

4. Corporate Governance and Administration

4.3 Irish Language Commitment

The RSC is committed to implementing the relevant parts of the Official Languages Act 2003. RSC signage and stationery are currently in both Irish and English.

4.4 Freedom of Information

The former Railway Inspectorate division, forerunner of the RSC under the aegis of the Department of Transport, was subject to the Freedom of Information Act. It is expected that the RSC will be included among the organisations governed by this Act by 2012. In the meantime, the RSC is committed to conforming to the principles of this Act.

4.5 Customer charter

The Customer Service charter was updated in 2011 and is available on the RSC website. This charter describes the level of service a customer can expect from the RSC. No customer service complaints were received in 2011.

4.6 Risk Management

The RSC has a risk management system in place to review key risks to its business.

4.7 Code of Ethics and Business Conduct.

A Code of Ethics and Business Conduct is in place for the Commissioner and all staff and it is being adhered to.

4.8 Statement of Strategy 2009-2011

In 2009 the RSC produced their second Statement of Strategy. This document identifies the strategic direction of the RSC, including the RAIU, for the period 2009 to 2011, providing external stakeholders with a clear guide to its goals and business objectives. In carrying out its responsibilities, the RSC is guided by this Statement of Strategy.

4.9 Website

The RSC maintains an active website at www.rsc.ie
The RAIU maintains an active website at www.raiu.ie

5. Looking Forward

The RSC will continue to deliver on its responsibilities under European and National legislation and during 2012. The ten areas that will be the focus of particular attention during 2012 are as follows:

- Comprehensive review of railway safety legislation with the objective of developing recommendations to achieve complete conformity with EU directives;
- Guidance to Iarnród Éireann on its internal restructuring for compliance with EU requirement for the separation of Infrastructure Manager (IM) and Railway Undertaking (RU) activities with particular emphasis on assessment of safety validation of organisational change;
- Conformity assessment of separate Iarnród Éireann safety management systems (SMS) for IM and RU and subsequent safety authorisation of IM and safety certification of RU;
- Conformity assessment of the Northern Ireland Railways (NIR) application for Part 'B' safety certification to ensure that their SMS adequately addresses cross-border train operations and does not introduce any additional risk on the IÉ network;
- Extension of the new audit and inspection regime to supervise compliance by the Railway Preservation Society of Ireland (RPSI) with their SMS in accordance with EU common safety methods;
- Strengthening arrangements to avert any shortfall in specialist technical human resources that might impair the RSC in delivering on its obligations under EU and national legislation;
- Completion of the approval process to permit Iarnród Éireann to place in service a further series (17 x three-car sets) of Inter City Railcars (ICRs);
- Completion of a technical study on the suitability of user-worked level crossings on public roads;
- Comprehensive audit of safety on the self-contained heritage railways with a view to improving the application of safety management in that area;
- Development of processes and procedures in conformity with ISO 17020 requirements to enable RSC achieve accreditation.

During 2012 the RSC will continue to focus on its mission "To advance the safety of railways in Ireland through diligent supervision and enforcement."

Appendix 1

Appendix 1: Iarnród Éireann Statistics

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Staff	6,021	5,833	5,590	5,462	5,114	4,933	4,845	4,499	4,254	4,125
Train-km passenger	12,602,000	12,245,000	11,777,000	13,034,000	14,505,000	16,060,000	18,044,657	16,190,950	16,582,606	17,008,042
Train-km freight	2,895,000	2,705,000	3,350,000	4,953,000	3,737,000	772,000	1,034,173	946,374	341,954	360,299
Train-km total	15,497,000	14,950,000	15,217,000	17,987,000	18,242,000	16,832,000	19,918,501	18,182,358	17,691,837	18,066,007
Total passenger journeys	35,370,000	35,558,000	34,550,000	37,653,000	43,350,000	45,513,000	44,646,000	38,800,000	38,225,000	37,375,000
Million Passenger -km total	1,628,	1,601	1,582	1,781	1,872	2,007	1,976	1,681	1,678	1,639
Route Km							1657	1665	1683	1683

Appendix 2

Appendix 2: Iarnród Éireann Rail Incidents and Injuries 2002–2011

Annual statistics for accidents and incidents	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Railway operations: passenger fatal injuries										
Fatal injury to passenger due to a train accident, not at level crossing	-	-	-	-	-	-	-	-	-	-
Fatal injury to passenger due to a train accident at level crossing	-	-	-	-	-	-	-	-	-	-
Fatal injury to passenger travelling on a train, other than in train accident	-	-	-	-	-	-	-	-	-	-
Fatal injury to passenger attempting to board or alight from train	1	-	-	-	-	-	-	-	-	-
Railway operations: third party fatal injuries										
Fatal injury to third party at a level crossing involving a train	1	-	1	-	-	1	1	-	2	-
Fatal injury to third party at a level crossing not involving a train	-	-	-	-	-	-	-	-	-	-
Railway operations and track maintenance: employee fatal injuries										
Fatal injury to employee at a level crossing due to train in motion	-	-	-	-	-	-	-	-	-	-
Fatal injury to employee due to train in motion (other than at a level crossing)	-	-	-	-	-	-	-	-	-	-
Fatal injury to employee not due to train in motion	1	-	-	-	-	-	-	-	-	-
Railway operations: fatal injuries to other persons										
Fatal injury due to train in motion not at level crossing	-	-	-	-	-	1	-	-	-	-
Fatal injury to customer or visitor, no train involved	-	-	-	-	-	1	-	-	-	-
Fatal injury involving train in motion on railway or level crossing where trespass or suspicious death was indicated	9	10	11	8	7	5	8	3	8	7
Railway operations: non-fatal injuries to passengers										
Passenger injury due to a railway accident not at level crossing	5	-	-	12	-	-	-	2	-	-
Passenger injury in railway accident at level crossing	-	-	1	-	-	-	-	-	-	-
Injury to passenger attempting to board or alight from train	43	69	65	48	55	50	43	17	64	46
Injury to passenger travelling on train, other than in a railway accident	54	66	70	73	41	35	22	40	28	10
Railway operations: third party non-fatal injuries										
Third party at level crossing injury involving a train	1	-	-	-	-	1	-	-	-	1
Level crossing user injury not involving a train	3	-	3	4	-	1	1	1	-	2
Railway operations and track maintenance: non-fatal employee injuries										
Employee lost time injury involving train movement or train accident	5	12	8	4	15	8	9	13	12	9
Employee lost time injury while working on railway not due to train in motion	104	109	118	100	69	78	79	65	57	45
Employee lost time injury while working at level crossing not due to train in motion	1	2	-	1	2	4	-	-	-	-
Railway operations: non-fatal injuries to other persons										
Injury to customer or visitor to premises	134	84	71	74	72	70	54	56	85	113
Injuries to other persons including unauthorised	1	2	1	1	-	1	-	-	-	-
Train incidents										
Derailment of train on or fouling running line	1	12	5	5	9	7	3	3	1	-
Derailment in possession on running line (including possessions)	1	4	1	2	4	1	2	1	1	-
Derailment in IÉ siding	77	58	46	19	16	8	12	4	14	4
Derailment in private siding	-	6	4	4	3	4	-	4	2	2
Train collision with passenger or goods train on running line	-	-	-	-	1	-	-	-	-	-
Train/railway vehicle collision in station or possession movement	-	2	-	1	1	-	1	1	-	-
Train collision with a motor vehicle at a level crossing	4	1	2	2	1	4	4	-	2	1
Train collision with pedestrian at a level crossing	-	-	-	-	-	1	-	-	1	-
Train collision with attended gates at a level crossing	6	2	4	2	2	2	1	-	1	-
Train collision with road vehicle obstructing the line (not at a level crossing)	2	2	-	-	-	-	-	-	-	-
Train collision with large animal(s) on the line	32	43	40	42	43	42	33	20	24	35
Train collision with other obstacle on the line	6	4	10	8	5	9	17	10	1	7

Appendix 2 cont.

Permanent way & infrastructure incidents										
Broken Rail on passenger running line	5	3	1	6	4	1	2	2	4	2
Broken Rail on freight only line or siding	3	4	1	-	1	-	1	2	-	-
Total broken rails (excl. Workshops & depots)	8	7	2	6	5	1	3	4	4	2
Broken or cracked fishplate	464	511	254	380	332	358	187	160	109	42
Track misalignment or buckle	/	/	/	/	5	1	-	3	-	-
Class 1 ultrasonic defect	34	81	35	31	29	21	27	47	41	2
Bridge under the railway struck by road vehicle	99	137	123	203	194	140	86	98	92	80*
Bridge parapet over the railway struck by road vehicle	4	6	13	12	23	40	26	16	14	9
Landslip or structural failure affecting operations	11	2	-	4	10	4	-	11	3	-
Main signal passed at danger where warning was given in time	22	32	29	36	25	22	12	18	14	4
Total running and shunt signals passed at danger	25	51	41	45	34	32	22	23	22	6
Gate or barrier at level crossing hit by road vehicle	19	12	35	18	21	37	24	23	31	17
Road vehicle hit by barrier at level crossing	6	12	20	12	8	6	4	5	7	4
Total building fire	-	2	-	-	-	9	3	5	2	2
Rolling stock incidents										
Fire or smoke on locomotives or other rolling stock	15	9	11	8	13	27	13	6	9	8
Train dividing in running	2	1	-	3	-	1	1	1	-	-
Rolling stock door incident	4	3	-	-	1	11	4	1	1	2

* To be verified

Appendix 3

Appendix 3: LUAS Statistics Dublin Light Rail Operating and Accident Statistics 2004–2010

Year	2005	2006	2007	2008	2009	2010	2011
Tram Km (000)s	2,500	2,661	2,751	2,744	2,695	3,082	3,860
Road Traffic Accidents (RTA)	36	24	28	32	23	30	30
Contact of person with tram	8	21	18	20	18	22	13
Collision tram/tram	1	-	-	-	-	-	-
Derailment in depot	4	-	3	1	-	-	-
Derailment on mainline	1	1	-	-	1	2	-
Other injury event						1	-
- First Aid	5	1	3	1	5	2	1
- Medical Attention	10	9	11	4	20	15	9
- Hospital care	2	2	2	1	4	3	1
- Fatality	-	-	-	1	-	-	1
Total Injuries	17	12	16	7	29	20	12
Emergency Handle	14	20	22	43	108	41	103
Emergency Brake	946	747	540	435	350	374	478

(- denotes Zero)

Note: The first complete year of LUAS operation was 2005

Appendix 4

Appendix 4: Approvals granted by RSC in 2011

Infrastructure Projects	Project Phase			
		Preliminary Design	Detailed Design	Operation Commission
Athenry – Bridge (Teagasc)			√	
Clonmel – Bridge Widening			√	
Crusheen Station		√		
Ennis Station – Footbridge			√	
Grand Canal S2S Docklands Cycle Route			√	
LUAS Line A1				√
N22: Tralee Bypass – Bridge			√	
R916, Garrycastle Bridge Re-alignment Scheme			√	
Thurles Link Road: Bridge			√	

Rolling Stock Projects	Project Phase				
	Concept	Prelim Design	Detailed Design	Test & Commission	Service
Ballast Cleaner	√	√	√	√	
Ballast Wagons					√
Intercity Railcars	√	√	√	√	
LUAS Road Rail Cleaning Vehicle			√		
Mk III Generator Van	√	√	√	√	
Multi-Purpose-Vehicle	√	√	√	√	
Ultrasonic Testing Wagon	√	√	√	√	

Appendix 5

Appendix 5

Overview of Energy Usage in 2011

In 2011, the Railway Safety Commission consumed 140,939 Kwh of the energy in our building, Trident House, consisting of:

- 44,364 Kwh of electricity;
- 96,574 Kwh gas.

Actions Undertaken in 2011

In 2011 the RSC undertook a number of initiatives to improve our energy performance, including:

- Reducing the amount of open space in the office by adding partitions thereby increasing the efficient use of heat while reducing the amount of heat lost
- Encouraging all staff members to reduce their energy consumption

Actions Planned for 2012

In 2012 the RSC intends to further improve our energy performance by undertaking the following initiatives:

- Increase staff awareness of energy consumption and the methods of reduction.
- Continuing to monitor energy consumption