



# RSC Annual Report 2010

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# Railway Safety Commission

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Annual Report 2010

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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 2010 and, in addition to providing information on RSC activities, administration and governance; 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 National Safety Authorities of the other Member States of the European Union in the on-going development of the European railway safety regulatory framework. This results in considerable work for the RSC in relation to the harmonisation of national legislation and implementation of EU common safety methods.

A requirement to replace safety certificates previously issued under local legislation with new certificates conforming to the requirements of the European Railway Safety Directive by January 2011 resulted in a major new area of activity for the RSC in 2010. In order to obtain safety authorisation for its Infrastructure Manager function and safety certification for its Railway Undertaking activities, Iarnród Éireann (IÉ) was required to develop and implement a safety management system (SMS) compliant with EU assessment criteria. It is anticipated that conformity assessment of the IÉ SMS will be completed in January 2011.

EU Regulations also mandate the manner in which railway Infrastructure Managers and Railway Undertakings are to be monitored to ensure that they implement and adhere to their respective SMS. The RSC is in the process of establishing an enhanced audit and inspection regime to supervise IÉ compliance with their SMS in accordance with EU common safety methods. However, this will result in a requirement for additional specialist human resources.

By the end of 2010 specialist technical human resources had fallen to 44% of the required capacity with a consequential risk to the RSC's ability to deliver on its regulatory duty to supervise railway safety in Ireland. In addition to unfilled vacancies, two Railway Safety Inspectors resigned during the last quarter of 2010. Every effort is being made to resolve this situation as early as possible in 2011.

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. Because of the need to determine if this is an endemic problem, the RSC has 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.

# Foreword

User-worked public road level crossings continue to 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. In regard to train operations, there has been no significant change over the past three years in the number of signals passed at danger (SPADs). These two areas are obvious targets for further safety investment so as to reduce the level of risk posed by user worked level crossings and to provide increased levels of automatic train protection.

In the current economic environment 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 2010.

A handwritten signature in dark ink, reading 'G Beesley'. The 'G' is large and stylized, with a long horizontal stroke extending to the right. The name 'Beesley' is written in a cursive script.

**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 1<sup>st</sup> 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 full 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 understands and effectively manages the safety risk associated with its operations. 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 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 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 2010, the position of Commissioner was vacant and, as a result of the Department of Finance embargo on recruitment, two other technical positions remained unfilled. Gerald Beesley was appointed Railway

Safety Commissioner in August 2010, but technical resources were further depleted by resignation of two staff, one in October and another in December 2010.

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, a comprehensive review of Human Resource requirements was undertaken and submitted to the Department of Transport in November 2010.

## 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) within the RSC with shared administration but functionally separate appointment and reporting arrangements. In 2007, the Chief Investigator of the RAIU was appointed by the Minister for Transport. 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 part of this new body. Until such time however, the RAIU will retain its current status within the RSC.

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.

# 1. The Railway Safety Commission

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 2010 the RAIU initiated 6 formal investigations into incidents and accidents on the railway, 1 of which was a LUAS incident. The remaining 5 were IÉ incidents/accidents:

## **LUAS:**

- Tram derailment at the Point, 13<sup>th</sup> May 2010

## **Iarnród Éireann:**

- 29000 railcar suspension failure, 18<sup>th</sup> May 2010
- Pedestrian fatality at XE039, 27<sup>th</sup> June 2010
- Gate strike by train at XC219 Buttevant, 2<sup>nd</sup> July 2010
- Road vehicle strike and fatality at XM096, 2<sup>nd</sup> September 2010
- Road vehicle strike at XM250, 24<sup>th</sup> October 2010

In 2010 the RAIU published the following 6 reports into accidents and incidents that were investigated, 1 of which was a LUAS incident. The remaining 5 were IÉ incidents/accidents:

## **LUAS:**

- LUAS Derailment at Connolly Station, published 21<sup>st</sup> April 2010

## **Iarnród Éireann:**

- Train collision at Waterford Station, published, 4<sup>th</sup> March 2010
- Derailment at Limerick Junction, published, 10<sup>th</sup> June 2010

- Malahide Viaduct Collapse, published, 16<sup>th</sup> August 2010
- Fernslock AHB Level Crossing near miss, published, 26<sup>th</sup> August 2010
- Derailment near Wicklow Station, published 15<sup>th</sup> November 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 approval; compliance supervision and enforcement; and European and legislative harmonisation

### 2.1 Conformity Assessment

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

#### 2.1.1 Safety Management Systems

A significant element of work during 2010 was the on-going activity related to the assessment of the Iarnród Éireann (IÉ) SMS in conformity with the requirements of the Railway Safety Directive and the RSA. In January 2010, the RSC and IÉ established a high-level monitoring group which held meetings on a monthly basis to review progress on the preparation of the SMS. Conformity assessment by the RSC has been carried out in accordance with the EU Common Safety Methods (CSMs) for the safety authorisation of Infrastructure Managers and safety certification of Railway Undertakings. The work was 95% complete by the end of 2010, and it is anticipated that IÉ will achieve safety authorisation from the RSC for its Infrastructure Manager function and safety certification for its Railway Undertaking activities in January 2011.

#### 2.1.2 Approval to Place in Service

During 2010 the RSC handled a considerable workload in relation to approval of new Infrastructure works, including three new sections of line. The Ennis – Athenry and Clonsilla – Dunboyne sections of the IÉ network were respectively opened for traffic on 30<sup>th</sup> March 2010 and 3<sup>rd</sup> September 2010; and the B1 extension to the LUAS network from Sandyford to Brides Glen opened on 16<sup>th</sup> October 2010.

The Cork – Cobh re-signalling project was fully commissioned on 5<sup>th</sup> April 2010, and a new suburban railway station at Clongriffin, between Howth Junction and Portmarnock, was opened for passenger traffic on 19<sup>th</sup> April 2010. Rolling stock approvals for IÉ included phased approval for 5 on-track maintenance machines and on-going work in relation to the introduction to service of Inter-City Railcars (ICRs).

Other approvals included the works in connection with the Aviva Stadium, which spans the IÉ line at Lansdowne Road, and the associated improvements to passenger handling facilities at the adjacent suburban station. Preliminary designs for the two underground projects – the DART interconnector for IÉ, and Metro North for the Railway Procurement Agency – were both approved. A full list of projects is contained in Appendix 4

### 2.2 Compliance, Supervision and Enforcement

The RSC's supervision activities are derived from the need to ensure that railway undertakings are implementing their approved safety management systems and on-going assessment of their performance through asset inspections and accident tracking.

#### 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.

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

- High level supervision meetings with Executive Officers and Safety Managers;
- Sample inspections of assets and
- Audits of key stakeholders.

#### 2.2.1 Compliance Auditing

In 2010, as part of the RSC's monitoring programme, a number of high level supervision meetings were held with the relevant duty holders (IÉ and Veolia) where key safety indicators were discussed. In addition, four compliance audits of IÉ's Safety Management System were undertaken.



## 2. Functional Performance

### These focused on;

- Competence management of level crossing Gatekeepers
- Asset maintenance (Points & Crossings)
- Signalling maintenance and staff competence
- Rolling Stock maintenance (specifically in two Depots)

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

The RSC completed its compliance audit into the collapse of the Broadmeadows Viaduct at Malahide and the Wicklow derailment, and both documents were made publically available on the RSC website.

### Regarding the Malahide viaduct the RSC completed its audit in March 2010 and identified 4 non-compliances:

- Iarnród Éireann failed to undertake inspections as set out in IÉ standard I-PWY-1307
- Iarnród Éireann failed to undertake inspections/checks as set out in IÉ standard I-SMS-9021
- Iarnród Éireann failed to undertake inspections and use prescribed forms as set out in IÉ standard I-STR-6510
- Iarnród Éireann failed to implement a competence assessment for all personnel engaged in safety critical roles in accordance with IÉ Railway Safety Standard 67

In addition, the RSC made 16 recommendations covering a broad

range of safety management issues, that included document control, training and competence and safety responsibilities.

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 also undertook a review of Buttevant level crossing signalling arrangements following a collision incident that occurred there. A train (a special track geometry measuring train) collided with the level crossing gates, fortunately only resulting in infrastructure damage and train delay.

The RSC also audited Veolia, undertaking one compliance audit of their Safety Management System. **This focused on;**

- The management of line-side signalling maintenance and the vehicle location system.

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.

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;
- Signal Cabins (locations responsible for the control of train movements);
- Locations of known or reported trespass and/or vandalism
- 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.

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

## 2. Functional Performance



### 2.2.3 Industry Concerns

The RSC maintains formal and informal contact with our 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 two fatal incidents in 2010 (excluding cases of trespass or where self harm is suspected). The first involved a farmer at an accommodation level crossing near Sixmilebridge, Co. Clare, while the second fatal incident occurred when a freight train struck a tractor at another level crossing on the Dublin side of Castlerea, in Co. Roscommon. The RSC are concluding a compliance inspection into the latter and are tracking Iarnród Éireann's inquiry into the fatality that occurred near Sixmilebridge.

In September 2010 a serious injury to a youth occurred near Fatima stop on the LUAS Red Line. The individual was engaging in an activity known as 'tram surfing'. This activity is where an individual holds on to the exterior of the tram, usually the doors, while the tram is in motion. The youth fell from the tram and sustained serious injuries and was hospitalised.

The RSC acknowledges the promotional activities Veolia has undertaken since this incident and the RSC will continue to monitor such activities closely.

### 2.2.4 Public Representations

The public, passengers or others, are our principal customers and their railway safety concerns are always given the highest attention. The RSC try, wherever possible, to deal with the matters directly, however, when necessary we seek additional information from the duty holder in order to provide a full and comprehensive response.

In 2010, we received 47 direct or indirect representations relating to a range of heavy and light rail infrastructural and operational matters, an increase on the number received in 2009 (31). Some 37 representations related to Iarnród Éireann operations or infrastructure with the remaining 5 pertaining to the LUAS (Dublin light rail) system. A small number did give cause for concern and the RSC acted immediately to ensure action was taken, for example the train doors being enabled on the wrong side. The remainder gave no immediate or specific cause for safety concern but all were investigated and responded to. 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 2010 were again varied in nature, ranging from heating on trains, which is arguably not a safety issue, to signage at level crossings. There was an increase in the number of representations received by the RSC

regarding the condition of railway bridges all of which were inspected by the RSC and responded to with the assistance of IÉ.

### 2.2.5 Reactive Monitoring

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

#### Iarnród Éireann incidents:

- Fatal incident near Nenagh, Co. Limerick (Coroner classified as mis-adventure), 26<sup>th</sup> June 2010
- Fatal incident at XE039 near Sixmilebridge, Co. Clare, 27<sup>th</sup> June 2010
- Train collision with level crossing gates at Buttevant, 2<sup>nd</sup> July 2010
- Fatal incident near Castlerea, Co. Roscommon, 2<sup>nd</sup> September 2010
- Landslip fouling a running line in Tipperary town, 7<sup>th</sup> September 2010

#### LUAS Incidents:

- Tram derailment at Spencer Dock, 13<sup>th</sup> May 2010
- Serious Injury at Fatima due to trespass, 3<sup>rd</sup> September 2010
- Person Struck by Tram in the Naas Road area due to trespass, 26<sup>th</sup> November 2010

### 2.2.6 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 2010 the following enforcement measures were instigated;

## 2. Functional Performance

### Section 76 of the RSA 2005 - Improvement Plan requested following:

- The RSC's review of the IÉ signalling arrangements at Buttevant level crossing
- The RSC's compliance audit into the IÉ maintenance of semaphore signalling
- The RSC's compliance audit into the IÉ delivery of the AD Little Recommendations following the partial collapse of the Broadmeadows viaduct
- RSC inspection of the infrastructure assets belonging to the heritage West Clare Railway

### Section 77 of the RSA 2005 – Improvement Notice (letter of intent or notice served) following:

- the RSC's compliance audit into IÉ rolling stock maintenance<sup>1</sup>

### 2.3 European and Legislative Harmonisation

The Train Driver Licensing Directive (2007/59/EC) was transposed into Irish law in August 2010. This Directive aims to harmonise the competencies of train drivers at a European level and facilitate the movement of labour. A license will not be an automatic entitlement to drive, as holders must also hold a complementary certificate issued by the railway enterprise. The system will take effect for newly appointed cross-border drivers from October 2011.

The RSC prepared legislative text to

transpose the recast Railway Interoperability Directive 2008/57/EC into Irish law. Interpretation of this technically complex Directive was harmonised in Europe during 2010 and a number of the Annexes to the Directive were modified. Advice was also given to the Department regarding the transposition of Directives 2008/110/EC and 2009/149/EC, amending the Railway Safety Directive 2004/49/EC.

In addition, technical assistance was provided to the Department in regard to the transposition of European Directive 2008/68/EC on the inland transport of dangerous goods, as amended by Directive 2010/61/EU. This resulted in the signing into law of Statutory Instrument No 651 of 2010 (European Communities Transport of Dangerous Goods by Rail Regulations) in December 2010.

The RSC continued to positively contribute to the regulatory development of European railways. It attended three meetings of the Committee on the Interoperability and Safety of the European Rail System as technical advisor to the Department of Transport. It is represented on the Board of the European Railway Agency and at number of ERA working groups, and it attended four 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, Department of Transport, road hauliers and the Gardaí. The group met three times during 2009. 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. Three such meetings took place in 2009, in Mullingar, Limerick and Castlebar.

As stated in the 2008 annual report, the RSC completed research in the area of Bridge Strike prevention techniques. A number of recommendations were made and directed towards all relevant stakeholders including the RSC, IÉ, the Road Safety Authority (RSA) and the Irish Road haulage Association (IRHA). These recommendations have been reviewed by the individual organisations and their implementation is being monitored through the RRSWG. A good practice guide on prevention of bridge strikes has been drafted and is scheduled to be published in early 2011.

<sup>1</sup> The notice was not served as representations made by Iamróid Éireann satisfied the RSC that corrective action had been taken. The request for an improvement plan is currently being considered by the RSC.

# 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 IE network in service was 1683 route-kilometres, an increase of 18 km. **The main changes to the system in 2010 were:**

- Commissioning of the line between Ennis and Athenry;
- Commissioning of the line between Clonsilla and Pace (M3);
- Services ceased on the South Wexford line between Snowhill (Waterford) and Rosslare Strand.

The number of recorded passenger journeys dropped by 1½ % in the year 2010.

Accident statistics are presented in detail in Appendix 2. Nine deaths involving railway vehicles in motion were reported. These unfortunate events involved, among others, a young man in pursuit of a dog on the line, a man attempting to remove a farm animal from the line in the vicinity of a farm-field level crossing and a man on a farm

tractor at a user-worked road level crossing.

No derailments or collisions of service trains were reported. Nevertheless, a maintenance train and a locomotive both derailed in sidings and a tamper derailed while performing maintenance on the main line. Although there was a decline in the number of main signals passed at danger, the overall figure for signals passed at danger remained constant.

There were two collisions of trains with motor vehicles at user-worked road level crossings, one with a car and one with a tractor, and one collision of a train with the gates of an attended level crossing.

The rate of road vehicle strikes to bridges over and under the railway has not changed significantly since the year 2009. Three landslips affecting the railway line were reported.

Fire and smoke incidents on trains increased after a considerable decline in 2009. Of the nine incidents reported, one was a deliberate act on a DART vehicle, another involved a locomotive, another involved an on-track maintenance machine and the remainder involved passenger stock. None of these resulted in injury to any passengers.

The number of reported train collisions with large animals on the line remains

stable. Of these incidents, the majority now involve deer.

Four broken rails were found on passenger lines in 2010. This compares with two broken rails on passenger lines and two on a freight line for the year 2009. No track buckles were reported for the 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 Sandyford: 95% on dedicated right-of-way with 14 signalled and 2 unsignalled road level crossings. The Red line is 16.6 km long, running from Tallaght to The Point (Dublin docklands): 60% on dedicated right-of-way with 41 signalled road level crossings.

The total tram-kilometres run was 3.1 million: of which 38% were on the Green line and 62% on the Red line, representing an increase of about 14% compared to 2009. 27½ million passenger-journeys were completed, an increase of about 8% compared to 2009. **The main changes to the system in 2009 were:**

- Complete delivery and commissioning of 402 trams, and transfer of all 401 trams to Red Line;
- Retrofit of wheel slide prevention system to the 401 trams;
- Opening of the Green Line extension to Bride's Glen for passenger service in October 2010;

# 3. Assessment of Duty Holder Safety Performance

- 9 additional signalled road level crossings at junctions.

## **The following events were recorded in passenger service during the year 2010:**

- 30 minor road traffic accidents
- 2 major contacts with a member of the public
- 1 serious event following attempt to ride on tram exterior;
- 20 minor contacts with a member of the public
- 2 derailments
- 5 attempts to set trams on fire

The number of road traffic accidents (RTA) increased by 30% compared to 2009, and the average tram-kilometres between RTA stands at 94,000 km. The great majority of RTAs occur on the Red Line. The number of contact incidents with a person increased by 22%. Three serious injuries were reported, one with a cyclist and two involving trespass.

There were 375 emergency brake applications, with the rate per million tram-km showing a further decrease of 6%. Although the number of times the emergency handle was used returned to the 2008 level after inordinate abuse by one individual in 2009, less than 10% of these actions were for good reason and 95% of events occurred on the Red Line.

## **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.

One accident occurred at a level crossing, where a car driven by a local man approached the crossing in icy and foggy conditions and collided with the barrier and with one wagon of a train. The crossing was protected by barriers and had signs and flashing lights. No significant injuries resulted.

## **3.5 Heritage Railways**

No incident was reported by a heritage railway in 2010. 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

Our funding 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 2010 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 2010 are contained in Statutory Instrument No. 10 of 2010.

Our accounts for 2009 were subject to audit by the Comptroller and Auditor General and were approved by them in February 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

This is the fifth year of the RSC's existence. We are continuing to develop processes and procedures to ensure a strong internal control environment. 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
- Establishment of an Internal Audit function to advise the RSC on discharge of its responsibilities for the internal financial control system.

During 2010, 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 of all payments by the Commissioner;
- Certification of all invoices, including travel and subsistence claims, prior to payment and authorisation by the Commissioner;
- Setting 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.

### 4.3 Joint Oireachtas Committee on Transport

In September the RSC reported to the Joint Oireachtas Committee on Transport following the publication of the RAIU report into the collapse of the Broadmeadows Viaduct.

## 4. Corporate Governance and Administration

### 4.4 Irish Language Commitment

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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.

### 4.5 Freedom of Information

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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 2011. In the meantime, the RSC is committed to conforming to the principles of this Act.

### 4.6 Customer Charter

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The Customer Service charter was prepared in 2006 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 2010.

### 4.7 Risk Management

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

### 4.8 Code of Ethics and Business Conduct.

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

### 4.9 Statement of Strategy 2009-2011

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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 will be guided by this Statement of Strategy.



## 5. Looking Forward

**The RSC will continue to implement its responsibilities under European and National legislation and during 2011 particular areas for priority will be:**

- The completion of conformity assessment of the Iarnród Éireann SMS and subsequent safety authorisation of IÉ Infrastructure Manager functions and safety certification of IÉ Railway Undertaking activities.
- Conformity assessment of the Railway Preservation Society of Ireland (RPSI) SMS to ensure that their heritage train operations do not introduce any additional risk on the IÉ network.
- Introduction of a new audit and inspection regime to supervise IÉ compliance with their SMS in accordance with EU common safety methods.
- Resolution of the shortfall in specialist technical human resources to ensure that the RSC has adequate capacity to undertake the new audit and inspection regime.
- Completion of the approval process to permit the RPA to place in service the 4.2km City West extension of the Luas network from Belgard to Saggart.
- Conformity assessment of a further series (17 x three-car sets) of Inter City Railcars (ICRs) to ensure safety compliance prior to permitting IÉ to place the same in service.
- Completion of a specialist study to identify factors that can contribute to loss of informal corporate memory, with particular reference to the engineering functions of Iarnród Éireann.

During 2011 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	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Staff	5,759	6,021	5,833	5,590	5,462	5,114	4,933	4,845	4,499	4,254
Train-km passenger	12,356,000	12,602,000	12,245,000	11,777,000	13,034,000	14,505,000	16,060,000	18,044,657	16,190,950	n/a
Train-km freight	4,133,000	2,895,000	2,705,000	3,350,000	4,953,000	3,737,000	772,000	1,034,173	946,374	n/a
Train-km total	16,489,000	15,497,000	14,950,000	15,217,000	17,987,000	18,242,000	16,832,000	19,918,501	18,182,358	n/a
Total passenger journeys	34,206,000	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
Passenger -km total	1,515,303,000	1,628,410,000	1,600,615,000	1,581,698,000	1,781,400,000	1,872,067,000	2,007,065,000	1,975,786,000	1,681,100,000	1,677,939
Route Km								1657	1665	1683

n/a Statistic not available at the time of compilation of this report

# Appendix 2

## Appendix 2: Iarnród Éireann Rail Incidents and Injuries 2001–2010

Railway operations and track maintenance: fatal injuries	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Fatal injury to person due to a train accident, not at level crossing	-	-	-	-	-	-	-	-	-	-
Fatal injury to passenger traveling on a train, other than in train accident	-	-	-	-	-	-	-	-	-	-
Fatal injury to passenger attempting to board or alight from train	-	1	-	-	-	-	-	-	-	-
Fatal injury to customer, no train involved	-	-	-	-	-	-	1	-	-	-
Fatal injury due to railway accident at a level crossing	-	1	-	1	-	-	1	1	-	2
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)	1	-	-	-	-	-	-	-	-	-
Other fatal injury to employee on the railway	-	1	-	-	-	-	-	-	-	-
Fatal injury on railway or level crossing where trespass or suspicious death was indicated	11	9	10	11	8	7	5	8	3	8
Injury to passenger due to a train accident not at level crossing	11	5	-	-	12	-	-	-	2	-
Injury to passenger traveling on train, other than in a train accident	60	54	66	70	73	41	35	22	40	28
Injury to passenger attempting to board or alight from train	65	43	69	65	48	55	50	43	17	64
Injury to passenger in station or visitor to premises	81	108	81	86	105	69	84	74	88	27
Employee injury involving train movement or train accident	10	5	12	8	4	15	8	9	13	12
Employee injury while working on railway	118	104	109	118	100	69	78	79	65	57
Employee injury at level crossing	3	1	2	-	1	2	4	-	-	-
Person injured in railway accident at level crossing	3	1	-	-	-	-	1	-	-	-
Passenger injury in railway accident at level crossing	-	-	-	1	-	-	-	-	-	-
Level crossing user injured	2	3	-	3	4	-	1	1	1	-
Injury to other person	2	4	6	6	3	5	1	2	-	1

Train incidents	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Derailment of any passenger or goods train on running line	1	1	4	-	2	3	1	2	1	-
Other derailment on running line	1	-	1	-	-	2	2	2	2	1
Train collision with any passenger or goods train on running line	1	-	1	-	1	1	-	-	1	-
Train collision with buffer-stop (passenger train in service on running line)	2	1	-	-	-	-	-	1	-	-
Other train/train collision on running line	-	-	1	-	-	-	-	1	-	-
Train collision with a motor vehicle at a level crossing	2	4	-	2	2	1	4	4	-	2
Train collision with attended gates at a level crossing	4	3	2	3	-	2	2	1	-	1
Train collision with a vehicle obstructing the line (not at a level crossing)	-	2	2	-	-	-	-	-	-	-
Train collision with animal(s)	32	32	43	40	42	43	42	33	20	24
Train collision with other obstacle on the line	2	2	3	1	-	5	9	17	10	27

Rolling stock incidents	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Fire or smoke on locomotives or other rolling stock	7	11	8	9	4	13	27	13	6	9
Train dividing in running	-	2	1	-	3	-	1	1	1	-
Rolling stock door incident	-	4	3	-	-	1	11	4	1	1

Permanent way & infrastructure incidents	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Rail on passenger line fractured from head to foot	3	5	3	1	6	4	1	2	2	4
Bridge under the railway struck by road vehicle	79	99	137	123	203	194	140	86	98	92
Bridge parapet over the railway struck by road vehicle	3	4	6	13	12	23	40	26	16	14
Main (running) signal passed at danger where warning was given in time	29	22	32	29	36	25	22	12	18*	14*
Total signals passed at danger	n/a	25	51	41	45	34	32	22	23	22

n/a Statistic not available at the time of compilation of this report

\* Including a train movement past its limit of authority

# Appendix 3

## Appendix 3: LUAS Statistics Dublin Light Rail Operating and Accident Statistics 2005–2010

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

*Note: The first complete year of LUAS operation was 2005*

# Appendix 4

## Appendix 4: Approvals granted by RSC in 2010

Infrastructure Projects	Project Phase			
		Preliminary Design	Detailed Design	Operation Commission
Cork Cobh Re-signalling			√	√
Clongriffin Railway Station				√
DART Underground		√		
Dunboyne Commuter Rail				√
Hopes Bridge : Cork line				√
LUAS Line A1		√		
LUAS Line B1				√
Lansdowne Road Stadium				√
Limerick Tunnel : Bridge at Greenfield Road				√
Longford bypass : new bridge				√
Metals – Dun Laoghaire				
Metro North		√		
M7/M8 : Bridge at Doon			√	√
M7/M8 : Bridge at Kilmustulla				√
M7/M8 : Bridge at Lisnagry				√
M7/M8 : Bridge at Coolballyogan				√
M7/M8 : Bridge at Magheraskeagh				√
M7/M8 : Bridges at Clonkeen				√
M9 : Bridge at Knockmoylan				√
M9 : Bridge at Jordanstown				√
M9 : Bridge at Roughfield				√
M9 : Bridge at Dunkitt				√
M9 : Bridge at Dunbell				√
M9 : Bridge at Kilmacow				√
M50/N3 upgrade : new bridge				√
N17/N18 : Bridge at Airglorney				√
Nenagh Bypass : bridge widening				√
Railway Pipe Bridge : Wexford Line			√	√
Waterford & Suir Valley Railway : train shed			√	
Western Rail Corridor				√
Wicklow Port Access Road : Two bridges				√

Rolling Stock Projects	Project Phase				
	Concept	Preliminary Design	Detailed Design	Test & Comm	Service
Ballast Wagons			√	√	
Barclay Steam Locomotive 2265					√
LUAS 402 tram - Advertising					√
LUAS Road Rail Cleaning Vehicle		√			
Plain Line Tamper		√	√	√	√
Points & Crossing Tamper			√	√	√
Ultrasonic Testing Wagon	√				

