In general, statistics show that the railways of Great Britain are safe relative to all other forms of transport. However, analysis shows that the risk at the road-rail interface remains an issue for the following reasons:

By virtue of improvements in other areas, road-rail interface risk now represents almost half of all train accident risk (two of the three most recent multi fatality train accidents were caused by road vehicles).

Most level crossings risk arises from users exposing themselves to local hazards (either wilfully or accidentally); this makes the risks much harder for the industry to control.

Accidents and incidents occurring at the road-rail interface (including level crossings, bridge strikes and incursions through fences, bridges and access points) account for approximately 12.5 fatalities and weighted injuries (FWI) per year and represent 9% of the total system risk (excluding suicides).

The rail industry has therefore focussed on mitigating the risk at the road-rail interface through the combined actions of the Road-Rail Interface Safety Group (R-RISG) and the specific actions of Network Rail and the law enforcement agencies. Recognition has also been given to worldwide good practice, expressed through the 5 Es: engineering, enforcement, education, engagement and evaluation.

This report examines the road-rail interface safety performance recorded on Network Rail managed infrastructure (NRMI) over the last ten years and the estimated underlying level of risk derived from version 6 of the Safety Risk Model (SRMv6). The report presents data trends around level crossings, bridge strikes and incursion incidents. It provides a picture of the risk and safety situation at the interface, using data up to 31 December 2009.
The report is published on the RSSB website titled Road-Rail Interface Special Topic Report and it provides practical safety knowledge to our members to enable informed safety decisions and planning to be based on all available information.

For more details please contact Siona Pitman, senior safety intelligence analyst on 020 3142 5485 or email siona.pitman@rssb.co.uk

RSSB Annual Review

RSSB has recently published a high level overview of the company’s activities during the calendar year 2009. The succinct account sets out progress and key achievements co-ordinated and delivered by the company in all our major areas of responsibility.

For more details see the Annual Review published on our website www.rssb.co.uk

Feedback on RSSB’s management of research

The rail industry’s research and development programme is managed by RSSB and funded primarily by the Department for Transport. The programme provides a capability to develop new knowledge to support industry action and decision making across a range of issues. Research is generally proposed by RSSB members through stakeholder groups, and it can be undertaken in any area that supports the improved performance of the GB railway system. It focuses on industry-wide research that no individual company or sector of the industry can address on its own.

A recent RSSB survey of key R&D industry client groups in November 2009 highlighted broad satisfaction among stakeholders with RSSB’s overall management of the programme and feedback on areas where it could improve – including providing industry client groups with further clarity on their role in relation to the research they sponsor, and how outputs might be taken up, together with managing timescales in accordance with industry needs and expectations.

RSSB has now written back to the industry client groups and is initiating the following steps to address the learning points:

> RSSB will be reviewing the processes involved in the R&D lifecycle to identify improvements in the areas of documenting formal requirements and expectations at the initial stages of projects, visibility of process, business cases, and reporting. Where changes are likely to be beneficial they will be introduced through communication with relevant client groups during the course of 2010/11.

> For all projects, RSSB is going to change the arrangements for publishing, to enhance the engagement of industry client groups in the sign off and publication process. This will be done by having publication coincide with the date that the client groups decide what action it will take with the findings – so that publication or reports or briefs will be done in support of the industry client group’s decision, rather than an end in itself. This change would be made client group-by-client group and be fully implemented by the end of 2010.

> If any member of a client group has concerns about an individual project you are encouraged to raise it with Guy Woodroffe, Head of research and development or Anson Jack, who is the Director with responsibility for research. RSSB will be involving client groups as and where appropriate on the detail of any changes to ensure they work for the benefit of all RSSB members.

If you have any further observations or thoughts, then please feed them back either directly to Guy Woodroffe, guy.woodroffe@rssb.co.uk, Anson Jack, anson.jack@rssb.co.uk or through your main RSSB contact.
Engineering Requirements for Dispatch of Trains from Platforms

As part of its review of all Railway Group Standards (RGS), RSSB has been reviewing GE/RT 8060 (Technical Requirements for Train Dispatch). It was noted that the intention of GE/RT8060 issue 1 should not, by implication, include establishing if train doors are closed – door interlocking systems establish this – but to facilitate the checking that nothing is trapped in the train doors. Clarity was also sought regarding the use of the ‘station work complete’ term in relation to the utilisation of camera/monitor systems for train dispatch purposes.

In the context of the above questions, the Rule Book and GM/RT2473 (Power Operated External Doors on Passenger Carrying Rail Vehicle) were also reviewed. As a result the following problems were identified:

1) The definition of ‘station work complete’ in the standard is different from the requirements for ‘station work complete’ in the Rule Book.
2) It was not clear in practice how it would be possible to ensure compliance for all train dispatch modes with the requirement for the design of trains.
3) In addressing the performance of the station-mounted camera/monitor system, reference to the scene observed – ‘all the train doors and the platform edge area’ – was an attempt to define the optical properties of the system rather than the scene it surveyed.

In considering possible changes to the standard in response to the above problems, it became apparent that in particular any reference to the scene provided to the driver in assisting the train dispatch operation should be regarded as an operational requirement rather than a technical requirement in an engineering standard.

In producing the re-titled GE/RT8060 issue 2, these problems have been addressed by:

Replacing throughout the document the phrase ‘station work complete’ with the phrase ‘checking that no one on the platform is potentially trapped in the train doors’. This removes a potential misinterpretation of the standard: it can no longer be interpreted to mean that confirmation of the closing of train doors is established by the facilities mandated by the standard.

Identifying the possible need for provision of operational requirements in this area, a proposal has been accepted by Traffic Operations and Management Standards Committee (TOM SC) to consider developing operational requirements in this area of train dispatch as part of TOM SC’s wholesale review of train dispatch triggered by both research conducted in this area and as a response to a number of accidents that have taken place as trains move along the platform.

Additionally, where specifically relevant to on-train camera-monitor systems, requirements identified as the responsibility of a single duty holder were withdrawn in accordance with the Railway Group Standards Code.

For more information contact John Stafford, control-command system & signalling engineer on 020 3142 5525 or email john.stafford@rssb.co.uk

Research to develop new supplier assurance framework

Management and assurance of the supply chain presents many varied and challenging issues. Senior rail industry decision makers on RSSB’s Board – and in particular Network Rail and the train operating companies – are keen to see findings taken forward from research already published by RSSB (T833: A review of potential efficiency and effectiveness improvements in rail industry supplier assurance).

T833 has shown that there is an opportunity to help suppliers readily understand the mainline railway industry’s needs and demonstrate compliance through universally recognised evidence and processes. This would realise an opportunity of £35m time-cost savings per annum to the GB rail industry and act as an enabler in building a sustainable supply chain for the future.

In response, the cross-industry Supplier Assurance Sponsor Group (SASG), which includes Network Rail, Association of Train Operating Companies (ATOC), freight operating companies, rolling stock companies (ROSCOs) and the Rail Industry Association, has asked RSSB to commission further research – T908 Developing the supplier assurance framework. This work is now underway and involves reviewing the existing arrangements and developing, in conjunction with stakeholders, proposals for industry governance and a framework for an efficient and ‘world class’ supplier assurance process.

The work is now at a stage which will see increased stakeholder communication to obtain industry consensus and buy-in for future GB rail policy arrangements. This will involve:

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FOR MORE INFORMATION ON ANY OF RSSB’S PRODUCTS AND SERVICES PLEASE CONTACT THE RSSB ENQUIRY DESK ON 020 3142 5400 OR ENQUIRYDESK@RSSB.CO.UK

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Train headlamps research leads to standards proposal

Train headlamps serve an important safety purpose by providing visual warnings of a train’s presence to people working on the line. However, train operating companies were indicating that their drivers were being dazzled by headlamp glare from oncoming trains.

This was supported by concerns reported directly through CIRAS, and the view that glare could lead to increased incidents of station stopping faults and signals passed at danger, or trackside workers losing their footing. The challenge cited by the industry through the cross-industry Rolling Stock R&D Group was how to achieve the balance between delivering sufficient brightness for visibility and also controlling glare.

In response, the Rolling Stock R&D Group asked RSSB to commission research project T530 Review of train headlamps optical performance. The work led to a range of solutions. A series of workshops led to requirements specifications for function, performance and testing, as well as consideration for the role played by the mandate to have yellow front-ends on rolling stock.

Crucially, the research found a mis-match has developed over time, between the optical properties of headlamps (as specified in Railway Group Standard GM/RT2483) and their functional and performance requirements. This has led the industry to use the new performance requirements specification, developed as part of the research, as their technical basis for inputting into the drafting of a new European standard, prEN15153-1:2010.

In parallel, the Rolling Stock Standards Committee, facilitated by RSSB, is proposing a standards change for GM/RT2483 to align with European requirements, provide a common approach to the provision of train head lamps and reduce the current concerns relating to glare from train head lamps. The supporting guidance note on train headlamp alignment will also reduce the instances of reported glare from train headlamps due to mis-alignment.

The benefits to industry include access to a comprehensive analysis of the issue, including 18 separate reports on the range of issues examined.

In addition, the GB rail industry is able to stay in line with European standards developments, and can influence the debate with up-to-date research with an assured data-to-decision making audit trail on the issues.

More details can be found on www.rssb-safp.com For more information, contact Sohail Ullah, research manager, email sohail.ullah@rssb.co.uk

All are available to RSSB members on request – email enquirydesk@rssb.co.uk, telephone 020 3142 5400. A research brief summarising the work can be downloaded from www.rssb.co.uk (project reference T530).
What effect will different investment scenarios have on the safety risk profile of the GB railway industry?

The Network Modelling Framework (NMF) is a mathematical model that has been created by the Department for Transport (DfT) to analyse specific investment scenarios including a prediction on what effect these will have on safety for the GB railway industry.

The DfT NMF model contains different modules for analysing different types of data. These include a Safety Module, Demand Module, Performance Module, Infrastructure Cost Module and a number of others. RSSB was originally involved in the development of the Safety Module for the first version of the NMF used to support the High Level Output Specification (HLOS) for Control Period 4 (2009 – 2014). The NMF was used to analyse a number of investment scenarios and the results from the safety module were used to determine the target risk reductions that could be expected from the investment. The resultant HLOS safety targets require a reduction in risk to passengers and workforce of 3% over Control Period 4. For details on the HLOS safety targets see www.rssb.co.uk and search HLOS and Common Safety Targets.

The Safety Module makes use of the structures and data from the industry’s Safety Risk Model (SRM) and is designed to estimate how the safety risk profile will change on each strategic route section in future years given different investment scenarios. Where possible the Safety Module uses data from the other NMF modules to make the risk profile specific for each strategic route section.

RSSB’s input to the next development of the NMF will consist of three phases of work. Phase 1, which is currently underway, is to update the NMF with data from the latest version of the SRM, version 6. Phase 2 will consist of improvements to the accuracy and quality of the modelling within the Safety Module and Phase 3 will see the update of the Safety Module to version 7 of the SRM (which is due to be released July 2011).

When Phase 3 of the update is complete, the DfT will use the NMF to decide on the HLOS for Control Period 5 (2014-2019), ensuring that the level of safety on the network is maintained for the chosen investment scenarios. The updated safety module will also be used by RSSB as a tool to enable the prediction of changes in risk in future years.

For any further enquiries about RSSB’s work to support the Network Modelling Framework please contact George Bearfield, safety risk assessment manager on 020 3142 5464 or email george.bearfield@rssb.co.uk

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**Risk Management Forum 2010**

The Risk Management Forum (RMF) exists to promote, develop and steer good practice in risk management for Britain’s railways. RSSB has been hosting RMF on behalf of the industry for a number of years. If you were unable to attend the event held at RSSB’s offices on 21 April, the audio from the event was recorded and this has been matched up with the slides and formatted as small movies. These can be viewed at: http://www.safetyriskmodel.co.uk/Bulletin/Pages/RMF-2010.aspx (for which registration is required).

100 delegates from across the railway industry assembled to hear a number of presentations in the following areas:

- Human Factors
- Europe and Legislation
- Change Management
- Safety Management Systems

The day was chaired by Colin Dennis, RSSB’s Head of Safety Knowledge and Planning, who also facilitated lively panel discussions at the end of each session. The event made the most of our facilities at Angel Square and the positive feedback received from the delegates’ points towards future RMF events being held here again.
Industry turns to RISAS for wheelset assurance

Following the announcement that GM/RT2470 is to be withdrawn, the rail industry is gearing up to embed RISAS (Railway Industry Supplier Approval Scheme) into its procurement philosophy for wheelsets and major wheelset components.

The withdrawal of the Railway Group Standard GM/RT2470, which currently specifies the minimum entry requirements for supply of wheelsets to industry, ceases to be in force on 5 June 2010. This represents a challenge for train operators and maintainers to ensure they continue to have adequate supplier assurance arrangements in place, which are more cost-effective and robust.

Last year, the Association of Train Operating Companies, freight operators and rolling stock companies (ROSCOs) together made a joint industry decision to recognise RISAS as the preferred means of assuring the supply of critical products and services associated with bogie overhaul. Now the industry is gearing up to make a similar move on wheelsets, building on the 2009 decision, and further establish RISAS into the industry’s supply chain psyche.

RISAS is currently the only industry-agreed scheme which will provide the necessary assurance levels required. As a ready-to-use, established, and cost-effective process, RISAS avoids the duplication and unnecessary cost of multiple generic audits of suppliers, by embracing a rigorous ‘gumption’ audit represented by a RISAS certificate.

The benefit to industry from RISAS is access to a scheme which aims to be universally recognised as the GB rail sector’s most effective and efficient method of assuring its most critical supply chains. It means a customer (eg a train operating company) isn’t working in isolation, but as part of a consensus-driven industry approach to manage the requirements of key health and safety legislation. RISAS provides the basis for customers to have faith in a supplier’s core ability and capability to consistently deliver products and services meeting customer needs, but it also translates as safer practices with significant cost and time savings.

In addition, RISAS is independent and managed for the benefit of the whole rail sector, collaboratively developed by GB mainline rail companies and suppliers through RSSB, and recognised by all mainline railway operators and the Office of Rail Regulation (ORR).

For more information, download the RISAS briefing note BN-004 (RISAS M1A - Wheelsets and M1B - Wheelset Components) from www.risas-online.org or contact Andy Tandy, RISAS administrator on 020 3142 5376 or email risas.admin@rssb.co.uk.

Common Safety Method on risk evaluation and assessment

A European Commission Regulation mandating use of a Common Safety Method (CSM) on risk evaluation and assessment became law on 19th May 2009 and will apply from 19 July 2010 to significant technical changes affecting vehicles and to significant changes concerning structural sub-systems where required by the Railway Interoperability Directive or by a Technical Specification for Interoperability.

The European Railway Agency (ERA) has produced a four-page summary and guidance on the application of the CSM on risk evaluation and assessment. The ORR is producing guidance for the GB rail industry to supplement the ERA guidance.
Industry encouraged to share safety intelligence using Rail Notices - www.railnotices.net

An issue for the rail industry is how to best record and share Urgent Operating Advice Notices and other types of safety alert. In response, Network Rail and RSSB are leading an industry-wide project to improve the process.

As a result, Rail Notices was launched in January, a secure website which is the gateway to a range of notices and alerts including operational irregularities covered under Railway Group Standard GO/RT3350.

If a specific safety event is identified and it warrants the industry being notified then the information is recorded by the user and automatically disseminated to subscribers.

The system builds on the successful National Incident Reporting (NIR) On-Line model, which covers vehicle-related safety defects under Railway Group Standard GE/RT8250, and which is linked to the Rail Notices system to allow users access to the full suite of ‘templates’ for different types of alert, but will still operate via the existing NIR On-Line website as before.

The use of the NIR model means that Rail Notices is built on an example cited as industry best practice by the recommendations report produced by the Buncefield Major Incident Investigation Board, following the explosion and fire at the Buncefield oil depot in December 2005.

The development of the new system was mainly funded and managed by Network Rail and delivered by Interfleet Technology Ltd. Ongoing management and development of new alert templates is being provided and funded by RSSB. RSSB’s role in the partnership also included development work undertaken as part of the rail industry’s research and development programme, funded primarily by Department for Transport.

The benefit to industry is the access to a single suite of reporting systems covering all aspects of reporting, spanning the whole industry, with consistent information that satisfies standards, companies’ duty of co-operation under ROGS and above all facilitates practical safety management.

Rail Notices went live in January 2010 and new templates covering internal Network Rail systems plus industry-wide Workforce Safety Alerts were introduced between February and April 2010. Further templates are expected to follow.

For more information, contact Maurice Wilsdon, head of national programmes, railway operations, email maurice.wilsdon@rssb.co.uk.

Guidance for Safe Freight Train Operation

Following the withdrawal of GO/RT3400 (Requirements for Safe Freight Train Operation), the content of GO/RC3900 (Recommendations for Safe Freight Train Operation and Loading) has been revised and transferred to a new guidance note GO/GN3653 Guidance for Safe Freight Train Operation

This document includes guidance on the loading, preparation and operation of freight vehicles and trains. It also provides guidance on the information that staff need to ensure they clearly understand matters relating to design, loading, preparation and operation of freight vehicles.

For more information contact the RSSB Enquiry Desk on 020 3142 5400 or email enquirydesk@rssb.co.uk

GO/GN3676 Guidance on the Carriage of Dangerous Goods by Rail provides guidance to help ensure that the various requirements relating to the safe carriage of dangerous goods are properly considered when checking existing arrangements or when new traffic flows are accepted.

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Assessment of the safety intelligence that can be derived from railway operations is vital to understanding risk and determining safety priorities. To assist the industry, RSSB produces an Annual Safety Performance Report (ASPR). The ASPR reviews safety performance and assesses progress in the Key Risk Areas identified by the Strategic Safety Plan (SSP). It also benchmarks rail safety in Britain against other transport modes and overseas railways, and discusses the European developments that are having an effect on the way safety is managed.

In the past, the ASPR has been aligned to the calendar year. However, the next edition will cover the financial year 2009-10. This will bring the document in line with Control Period 4, its associated High Level Output Specification (HLOS) and the SSP.

The 2009-10 ASPR will be presented at an industry event on 1 July that will also cover the release of the next phase of SMIS Vision (SMIS 9). The Safety Management Information System (SMIS) is the industry's national database for recording safety related events that occur on the network.

This new release of SMIS is aimed at meeting industry's safety data intelligence and knowledge requirements. The aim of the joint presentation is to provide RSSB members with an overview of progress at the national level, together with a vision of how national safety information may in the near future be made more accessible and more readily linked to individual company's performance.

During the SMIS Vision presentation there will be an opportunity to view the new safety intelligence and knowledge software.

If you are interested in attending the event, please email us (aspr@rssb.co.uk) or call Michal Jordan on 020 3142 5477.

The ASPR will be published electronically (online and on memory sticks) together with all the charts and associated data. An A6 Key safety facts and figures booklet will be published with a small number of the full A4 version.

To obtain quantities of the A6 booklet for a future meeting or conference, send your order (free for up to 10 copies) to stuart.carpenter@rssb.co.uk. Please state the meeting planner’s name, the title of the meeting/conference and the number of booklets required.