Rail Safety & Standards Board

INFORMATION BULLETIN

Weighting of injuries – RSSB Board approves a change

Since the late 1980's fatalities and injuries have been used to assess safety risk and the reasonable practicability of proposed changes. The established means of taking account of injuries has been to weight injuries in relation to facilities, where, 10 major injuries and 200 minor injuries are taken as being statistically equivalent to one fatality. All safety report and analyses that include the term Fatalities and Weighted Injuries (FWI) use these weightings. For example, the current level of risk, as defined in the Safety Risk Model (SRM) version 5, is 182 FWI/year.

Following a significant amount of research, consultation within the industry, the Office of Rail Regulation and Department for Transport, and a recommendation from the Safety Policy Group, the Board of RSSB has recently approved a change to this approach. With effect from 1 April 2008, a new weightings structure will be introduced which more appropriately weights the significant number of minor injuries that are not sufficiently serious to be reportable under RIDDOR. This formalises weightings for the occurrence of shock/trauma that can occur as a result of witnessing or being involved in a range of accidents/incidents.

The weightings will be as follows:

	Now	1 April 2008
Fatality	1	1
Major injury	10	10
Minor injury	200	No longer applicable
Shock/trauma	200	No longer applicable
Reportable Minor Injury and Class 1 Shock/trauma		200
Non-reportable Minor Injury and Class 2 Shock/trauma		1000

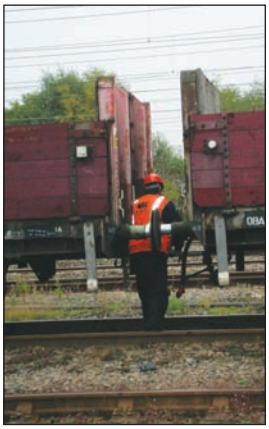
Where:

- Class 1 Shock/trauma injuries relate to witnessing a fatality, incidents and train accidents (collisions, derailments and fires), and
- Class 2 Shock/trauma injuries relate to all other causes of shock/trauma such as verbal assaults, witnessing physical assaults, witnessing non-fatal incidents and near misses.

The new weightings will have an effect on the future reporting of safety information and in the assessment of the value of preventing the less serious minor injury and shock/trauma events. The RSSB Board considers this will more accurately reflect the value that society places on such events. Due to the high number of less serious minor injuries and shock/trauma events that occur on the mainline railway each year, the change in the weightings will result in the current level of risk, predicted by the SRM, of 182 FWI/year being reduced to approximately 140 FWI/year.

The Board has recommended that all currently approved plans are not amended, but that these figures are used with immediate effect for the assessment of future investments and safety improvement schemes.

Shunter Safety



Shunting is one of the highest risk occupations on the railway. At a Shunting Safety Workshop held in October 2007, it was agreed that RSSB would undertake a special topic report on shunting risk.

RSSB has now produced the report which looks at the risks faced by shunters and discusses the underlying causes that contribute to the current risk level.

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The key points from the report are:

- Shunter responsibilities in both Train Operating Companies (TOCs) and Freight Operating Companies (FOCs) are changing.
- There have been four shunter fatalities in the past 10 years. All involved FOC shunters. Three of the fatalities were attributed to getting trapped in between two vehicles whilst carrying out manual coupling. This rate compares to seven shunter fatalities in the previous 10 years.
- On average, each FOC shunter loses 0.7 days each year as a result of injuries sustained whilst working. This compares with 0.2 for TOC shunters.
- There is no evidence of any significant trend in shunter incident rates in the period since January 2002.
- The greatest contribution of lost-time injuries comes from slips, trips or falls whilst *'moving around or between work areas'*. Strains and sprains are the most common types of injury resulting in lost-time.
- Human factors have a critical impact on shunter safety. In particular, management visibility, effective resource planning and a robust risk-based competence management system were identified as some of the essential elements for maintaining shunter safety.

The Operations Focus Group (OFG) is set to coordinate future research into the causes of shunting incidents, including human factors and workforce safety campaigns. The group will also be responsible for the development of any arising recommendations.

You can find the Shunter Safety Special Topic Report on the RSSB website at **www.rssb.co.uk/safety/spr/spreports.asp**. For further information, contact **Lisa Mazin, safety intelligence analyst**, on **020 7904 7720** or email **lisa.mazin@rssb.co.uk**

Summary of Safety Performance 2007

RSSB has published a report summarising safety performance of the rail industry for 2007. Industry safety performance has generally been maintained, and in some areas improved. However, there was one passenger killed in a train accident at the beginning of the year (the first for over two years).

The summary provides an initial, high-level, overview of the main safety indicators for 2007.

This summary is a forerunner to the more detailed assessments to be found in the Annual Safety Performance Report (ASPR), due in April 2008.

To view the document visit
http://www.rssb.co.uk/safety/spr/spreports.asp

Standards News

Four documents have been authorised for publication or withdrawn in February 2008 Catalogue as follows:

Documents published

- GM/GN2642 – Issue 1 Guidance on Wheel / Rail Low Adhesion Measurement
- GM/GN2643 – Issue 1 Guidance on Wheel / Rail Low Adhesion Simulation

Documents withdrawn

- GO/RT3271 – Driver Only Operation
- GO/RC3571 – Driver Only Operation (Passenger) RACOP

Got an issue with a Railway Group Standard?
Call the **RSSB Enquiry Desk** on **020 7904 7518** or email **enquirydesk@rssb.co.uk**

Technical Specification for Interoperability (TSI) for Conventional Rail Infrastructure

The European Railway Agency (ERA) has sent a preliminary draft of the Conventional Rail Infrastructure TSI (Draft 2.0), together with an accompanying report, to the Directorate-General for Energy and Transport (DG TREN) of the European Commission on 21 January 2008. The documents are to be considered by Article 21 Committee on 14 February 2008, with a view to approving them for public consultation. Article 21 Committee is a committee established in accordance with Article 21 of the Interoperability Directives to assist the Commission in making decisions about TSIs. Publication of the Conventional Rail Infrastructure TSI is planned for 2010.

Other TSI News

Two new TSIs, and one revised TSI, were adopted in December 2007. The decisions to adopt the TSIs (bring them into force) will apply from 1 July 2008. The decisions relate to TSIs on 'persons with reduced mobility', 'safety in railway tunnels' and the 'infrastructure sub-system of the trans-European high-speed rail system'.

The TSI relating to the 'infrastructure sub-system of the trans-European high-speed rail system' is a revision to the current High Speed Infrastructure TSI. Article 6 of the decision (the legal text) sets out some transition arrangements.

More information can be found at **http://ec.europa.eu/transport/rail/interoperability/tsi_revised_en.htm**

For more information contact **Jon Taylor, head of standards delivery, infrastructure and rolling stock** on **020 7904 7657** or email **jon.taylor@rssb.co.uk**

Learning from Accidents Seminar

On 24 January, RSSB hosted an interesting workshop to clarify the different parties roles and confirm RSSB's exact role in the wider industry approach to learning from accidents. The objectives of the workshop were to:

- identify and document the wider industry roles and relationships in the context of learning from accidents, and
- develop an agreed and achievable strategy for RSSB's work in the learning from accidents area, which recognises and meets stakeholder needs and expectations.

The day started with a key note speech from Paul Thomas - Director Environment, Health, Safety and Quality, BNFL and non-executive director, RSSB – who stressed that good safety and good business were inevitably entwined, and gave an overview of learning from accidents from a non-rail viewpoint. Presentations from Network Rail, Southeastern, Office of Rail Regulation and Rail Accident Investigation Branch followed. Each presenter spoke about the process of learning from accidents in their organisation, and offered some personal views on how the industry might take things forward.

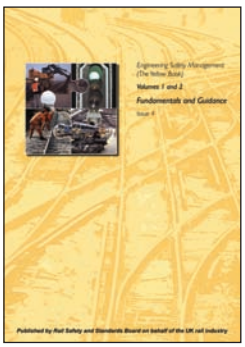
The morning session was used to inform the development of a nominal learning from accidents framework, having the key themes of: data collection, analysis, dissemination, action, review and strategy. From the presentations, it emerged that taking into account the influences from, and on, organisational culture would most likely also need to be brought into the framework.

The afternoon session commenced with a presentation from RSSB, which outlined work currently being undertaken under the different areas of the framework, and posed a series of questions for consideration by the workshops each being tasked with looking at two different framework themes. The outcome of the syndicate work was a list of potential future developments for the industry under the framework, with some initial proposals for where RSSB could assist.

The next step will be to formalise the findings in a short report, which will be sent to workshop participants for comment, before being distributed to the wider industry for consultation.

For more information contact **Liz Davies, safety intelligence strategy manager** on **020 7904 7493** or email **liz.davies@rssb.co.uk**

Yellow Book User Survey



The Yellow Book Steering Group is seeking feedback following publication of Yellow Book Issue 4. A short questionnaire will be appearing on the Yellow Book website **http://www.yellowbook-rail.org.uk/** in the coming weeks and you are encouraged to complete it and pass on your views.

The Yellow Book (full title 'Engineering Safety Management') is a handbook designed to help people who are involved in changes to the railway (such as new trains and signalling) make sure that these changes contribute to improved safety. For more information about the Yellow Book contact **Richard Barrow, control, command and signalling engineer** on **020 7904 6746** or email **richard.barrow@rssb.co.uk**

SMIS Data Quality

Safety Management Information System (SMIS) data forms the backbone of the safety intelligence and risk assessments that are used across the industry to inform safety decision making.

In addition, the industry representatives on the SMIS Programme Board, ATOC Operations Council and the Train Operators Safety Group have recently expressed the desire to be able to compare safety performance at the company and route level for cross-industry benchmarking. For successful use of the data in both of these important areas the data must be of high quality and recorded consistently.

With the approval of the SMIS Programme Board and ATOC Operations Council, RSSB is leading a programme of initiatives to review and improve data quality. This programme is now underway and will be repeated annually in the future. The initiatives range from data quality health checks, providing data quality indicators to users by email and making improvements to supporting guidance on the RSSB website which will be updated later this year.

For more information please contact **Paul Sizer, safety intelligence delivery manager** on **020 7904 7496** or email **paul.sizer@rssb.co.uk**

Train Horns Update

The cross industry Train Horns Steering Group (THSG), facilitated by RSSB, met on 11 January 2008 to review progress and agree further action. This has included publishing a new communication to update all interested parties, the seventh such notice, and the first statement from the Group since the Rule change which was implemented in April, and formally published in June 2007, following the recommendations of the THSG.

The overall effect of the Rule change has been positive in that the noise problem for line side residents has been reduced but there remain some areas where complaints about train horn noise persist, particularly in relation to the different ways that horns are used.

RSSB also continues to progress investigation of the potential that broadband technology might bring to train horns, including consideration of a proposal to conduct further research into where such technology is used already (eg in sirens used by emergency service road vehicles), and to carry out human factors tests on the audibility of such horn noises.

The actions for the THSG going forward are to:

- Continue to keep a watching brief on enquiries about train horn noise as part of the 'day job' of RSSB, Network Rail and train and freight operating companies.
- Progress the research on the risk from removing single whistle boards on approaches to level crossings with good sighting in one direction, and development of improved guidance on pedestrian use of crossings.
- Publish the specification for train horns for the benefit of developers of future horns.
- Progress research on the other uses of broadband horns.
- Meet again if there are any significant developments to consider, but will otherwise keep in touch through correspondence.

The THSG consists of representatives from: RSSB, Network Rail, Passenger Train Operators, ATOC, Freight Train Operators, ORR, and is supported by RSSB's technical and risk expertise. The communication, which contains more comprehensive detail, is available on the RSSB website at: **http://www.rssb.co.uk/community_relations/index.asp**. For further information contact the THSG chair **Anson Jack**, **anson.jack@rssb.co.uk**, or the **RSSB Enquiry Desk** on **020 7904 7518**.

Simulation Training and Assessment review

Recently-published RSSB research reviewing simulation training and assessment in the GB rail industry has provided the train driving management community with some valuable insights. See **http://www.rssb.co.uk/pdf/reports/research/T711_rb_final.pdf**

An extensive survey demonstrated both the broad extent that simulation is used within the industry, and to its increasing cost-effectiveness as a contribution to staff development.

RSSB's Simulation Group was the stakeholder client for T711, *Review of Simulation Training and Assessment in the GB Rail Industry*. The review built on and extended work carried out by RSSB in 2004 with the key objectives of surveying the industry to establish what progress had been made over the previous three years; to look at developments in the field; and to compare and contrast the use of simulation for training and assessment in the rail industry with that in other safety critical industrie.

The report findings indicate that there has been, and is planned to be, continued investment into cab and infrastructure simulation technology. Since 2004, simulation has significantly improved in its capabilities with accelerating technological change and a lowering of costs. Better communications through the growing availability in the UK of broadband internet access has also enhanced the use of web based activities in the workplace, including web-based simulations. The processing power needed for high fidelity modelling and graphic displays that was previously associated with high-end simulators is now available on modestly priced personal computers and even some hand held devices.

Other safety critical industries were explored and a number of case studies have been included within the report. These show that although rail has significantly advanced since 2004, there is still a great deal that can be learnt by following the good practice of other key industries.

Malcolm Cook, from First ScotRail and Chair of the UK Rail Industry Simulator User Group is already seeing the knowledge the research provides, being applied in the field. Commenting on the research, Malcolm said, "Clearly, the use of simulation in training and assessment continues to widen across the GB rail network. Similarly the technical knowledge and ability of the user continues to evolve, by developing and adapting lessons learnt by rail industry colleagues and the other safety critical industries. This research has provided the Simulator User Group with a clear picture of where we were last year, and makes six key recommendations, to ensure we stay 'ahead of the game'."

For further information contact **Roger Luckins, workforce development specialist** on **020 7904 7552** or email **roger.luckins@rssb.co.uk**

SMS Programme of Visits to Stakeholders

Following on from the ROGS-One-Year-On Conference held in November, RSSB's SMS Programme Team will be conducting a series of stakeholder visits during 2008.

The purpose of the visits will be to develop an effective working relationship and to gain a firm understanding of the issues being faced by industry with regard to the development and implementation of Safety Management Systems following the introduction of ROGS. This will provide a solid foundation for the SMS Programme to our members where it is most required.

The visits will centre around the following topic areas and will be aimed at Senior Safety Manager Level within companies requiring either Safety Certification and/or Authorisation under ROGS: -

- *Background to and developments in, the RSSB SMS Programme*
- *Feedback on recent Duty of Cooperation publication*
- *European SMS developments*
- *Understanding industry good practices with a view to sharing*
- *Stakeholders' Issues / Requirements*
- *Update on other relevant RSSB activities*

For further Information about the RSSB SMS Support Programme, please contact **Stuart Parsons, sms programme manager** on **0207 7904 7236** or e-mail **stuart.parsons@rssb.co.uk**

Cross Industry Carbon Reduction Working Group

In October 2007 a cross industry response to the Department for Environment, Food and Rural Affairs (DEFRA) Carbon Reduction Commitment scheme was produced, see **http://www.rssb.co.uk/national_programmes/sustainable_rail/defra_carbon_reduction_commitment.pdf**

This scheme applies to industries, such as rail, with an annual electricity consumption in excess of 6,000 MWh from mandatory half hourly meters. Those industries coming within this scheme will be required to cap carbon levels at a decreasing rate year on year. It was established that domestic energy would be included within this scheme, but that DEFRA was 'minded to exclude' traction energy.

The response outlined the risks if traction energy was to be included. These are:

- The scheme focuses on absolute emissions – which do not take account of expected rail growth.
- It creates a perverse incentive by exclusions of other transport modes from the scheme.
- The rail industry already indirectly pays through the inclusion of electricity suppliers within the European Trading Scheme.

An outline was given of ongoing cross industry work with the Department for Transport and Office of Rail Regulation to improve traction energy efficiency through the Sustainable Rail Programme and independently within the rail sector.

It was proposed that greater benefit would be derived from the development of a cross industry approach, facilitated through the Sustainable Rail Programme, to reduce carbon emissions, which would support Government Policy in a cost effective manner. An outline and timeline was given for the development of a cross industry carbon reduction trajectory for traction energy co-ordinated and facilitated by the cross industry Carbon Reduction Working Group.

A meeting was held with DEFRA early January to discuss their views on the rail industry's response to the Carbon Reduction Commitment (CRC). With regard to the inclusion of traction energy there were strong signals that DEFRA will confirm the exemption for traction energy and it noted broad agreement amongst stakeholders for its continued exclusion. However, it warned that rail would be subject to some form of policy instrument in due course. So it would be in rail's interest to proactively shape policy developments. The Government's response on CRC consultation is expected at the end of February, which will be published together with an analysis of the consultation responses.

For more information contact **Kathy Findlay, programme manager sustainable development specialist** on **020 7904 7652** or email **kathy.findlay@rssb.co.uk**

Events

Date	Name of event	Location
19 March 2008	Railway Community Safety Forum	The National Motorcycle Museum, near Birmingham Int'l station
20 March 2008	Intelligent Trains – use of Rail Vehicle Conditioning Monitoring.	IMechE, London
3 - 4 July 2008	Risk Management Forum	Nottingham University

For more information on these events contact **Stella Okezie, conference manager** on **020 7904 7934** or email **stella.okezie@rssb.co.uk**

Spotlight

RSSB Launches safety culture toolkit in partnership with First Group

Understanding and improving safety culture is recognised internationally as a fundamental factor in the management of safety. For the rail industry this has the dimensions of industry level, individual company and potentially geographic culture.

To this end, RSSB have developed a web-based Safety Culture Toolkit that will allow rail companies to measure their own safety culture, and determine what actions they could take to tackle any issues identified, without the need for extensive external support. The Toolkit will also facilitate the accumulation of data in one place, to make it easier to establish a single industry view and also enable the benchmarking of individual companies' cultures.

Development of the Toolkit has involved consultation with experts in the rail industry and in the high-hazard industries. Full scale pilot trials have been undertaken by several rail companies.

The Toolkit is now being launched for use by RSSB members and First Group has agreed to pilot the tool in a number of their rail locations. RSSB can help members in setting up and using the toolkit and will be followed by on-going consultation and review to ensure the needs of industry continue to be met.

If you have any questions regarding the Safety Culture Toolkit or are a member who would like to explore using it, please email the **Safety Culture Toolkit helpdesk** on **safetyculturetoolkit-HF@rssb.co.uk**

Log on to our website:
www.rssb.co.uk