

ORR protects the interests of rail and road users, improving the safety, value and performance of railways and roads today and in the future

Risk Assessment and Risk Ranking (RARR)



RIHSAC

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What is the RARR?

- The RARR is the “*Risk Assessment and Risk Ranking*” process:
 - Allows RSD to understand the risk profile/landscape of the rail industry and which risks are most important.
 - Updated annually through facilitated workshops to understand various risks, how performance is changing and how much RSD can influence the risk.
 - Like the EMM and RM3, RARR supports and validates our regulatory decisions.

Requirements for and purpose of a RARR

- The Common Safety Method on Supervision
- Meeting the principles of the ORR Enforcement Policy
- Facilitates the development of strategic risk chapters

“To identify and prioritise significant railway health and safety risks; this helps us to focus our resources on the highest identified risks where we believe we can make the greatest impact to reduce risk and to achieve Railway Duty Holder compliance with GB health and safety legislation. By doing this, we aim to achieve our strategic goal of high performing regulation.”

Key factors for RARR process

■ Initial risk estimation:

- Likelihood + Consequence.
- What is the worst, credible outcome, considering the current control measures and their level of effectiveness. (i.e. almost safety risks could result in a fatality under very unusual circumstances, therefore the higher scores should only be assigned where the highest consequences are most “credible”).

■ Is the risk individual/multiple/catastrophic?

■ Control Vulnerability:

- How well is the risk currently being managed currently (how effective are the current controls)?
- How will control effectiveness change in future (+ = improve, - = decrease and 0 = no change)?

■ ORR influence. How much impact could RSD have on effecting the risk? (5 = Absolute duty, which ORR has vires for, 0/1 = no ability/vires/scope to influence).

Overview of RARR 2019 timelines

- 17 Sept - Day 1 Mainline RARR
- 31 Oct – Day 2 Mainline RARR (Rescheduled from 26/09/19)
- 12 Nov – Presentation to RIHSAC
- 21 Nov – Heritage RARR
- 27 Nov – LUL RARR (Rescheduled from 30/10/19)
- 27 Nov – Present Mainline RARR outputs to DMM
- 10 Dec – Trams RARR
- Jan 2020 – Software Systems RARR
- TBC - Cascade outputs to team planners

RARR modelling

- The algorithm (excel equations) have not been modified or verified from the 2018 version.
- This was mainly due to capacity and resourcing issues.
- We will look to test, re-design and validate the algorithm as part of the year 2 data work.
- Some changes were due to remodelling (see associated paper).

Risk (Change = difference in ranking number since 2018, two arrows = large change)	2019 Ranking	Change	Risk (Change = difference in ranking number since 2018, two arrows = large change)	2019 Ranking	Change
Failure in or inadequate SSOW whilst on or near the line leading to workforce being struck by trains	1		Failure of Earthworks (including as a result of drainage) resulting in loss of track integrity or debris on the line and leading to derailment.	7	
Poor Patching and modification of software leading to failure in service and resulting in a serious incident.	2		Inadequate management of Platform train interface (PTI) risk leading to Fall between train and Platform and resulting in passenger struck by train	8	
Failure to manage T&V / Suicides leading to unauthorised access to track and lineside resulting in trespasser being struck by train (and/or electrocution)	3		Insufficient risk assessment (Narrative, ALCRM), including understanding human behaviour, leading to poorly controlled LX and resulting in pedestrians struck by train.	9	
Lack of robust SMS/CMS for Charter train operations leading to lack of safe separation and resulting collision between trains.	4		Poor boundary security measures (trespass / animals on line) or failure to maintain/implement suitable boundary measures leading to opportunity for objects on the line/animals and resulting in train derailment.	10	
Lack of suitable controls to prevent public coming into contact with live equipment resulting in electrocution	5		Unidentified or inadequately managed medical fitness for safety critical work (diabetes, vision, obesity, attention deficit disorder) which may lead to an operational incident	11	
PTI incident resulting in a trap and drag injury.	6		Failure of component or system in service, incl software resulting in collision between trains.	12	

Significant Ranking Changes

- (3) Failure to manage T&V / Suicides...
 - Control vulnerability and trend are worsening, based on recent poor performance in this area.
- (9) Insufficient risk assessment (Narrative, ALCRM)...
 - Trend worsening due to recent increase in fatal injuries at Level Crossings.
- (10) Poor boundary security measures...
 - Control vulnerability and trend are worsening, based on recent poor performance in this area.
 - Risk description was also modified to include the risk of objects being placed on the line.

Emerging priorities for 2020-21 (still subject to internal discussion and completion of RARR process)

- Maintain the capacity and capability of our staff – recruit and training
- Network Rail (NR) change and the beginnings of major reform in the sector
- LUL – Maintaining performance under new leadership teams: “all change”
- Track worker safety (NR)
- Leadership and succession in heritage sector
- Progressing remaining RAIB’s Sandilands recommendations to near completion and supporting the monitoring and reviewing of the Light Rail Safety and Standards Board
- Maintain pressure on areas like SPAD management, new rolling stock (software) and PTI with TOCs

Emerging priorities for 2020-21 continued

- Trespass and suicide prevention going forward
- Human factors, health and wellbeing, including mental health
- NR delivery on CP6 – electrical safety, earthworks, renewal values, R and D
- Post Brexit – evolution of the regulatory framework, (including possible review of authorisation processes and consideration of European technical standards framework), supporting Government building international relations
- Emerging policy areas: HSWA and accessibility, crime and security. Securing co-operation across the sector/s (databases and reporting / Leading Health and Safety on Britain's Railways)
- Continue work on internal improvement projects, data and public perception of risk, Quality Management System further support and development, competency framework and supporting L&D processes

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Thank you

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Strategic Risk Priority Chapter 4 – Level Crossings



Anna O'Connor

RIHSAC

12 November 2019

Strategic Risk Priority Chapter 4 – Level Crossings

- The Chapter has been revised following internal consultation, so that it reflects the current position in relation to level crossings and their regulation by ORR.
- This has resulted in the following changes:
 - Updated data for the mainline railway on:
 - numbers and types of level crossings;
 - Accident and incident data for the different types of crossings and summary of risk.
 - Inclusion of data on the types of level crossings found in the heritage sector and incidents/ accidents.
 - Updated data on Network Rail’s activity, to reflect the position at the end of CP5 and looking ahead into CP6.
 - Updated ORR activity table, covering both the mainline and heritage sector.

Strategic Risk Priority Chapter 4 – Level Crossings

NEXT STEPS:

- Comments/ suggestions from RHISAC members would be appreciated by 22nd November 2019. Please forward to:
 - Clare.Povey@orr.gov.uk
- Consultation at November POLCO.
- Fully revised Chapter to December HSRC for discussion and agreement.



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Emerging thoughts: revised strategic risk chapter on occupational health 2020

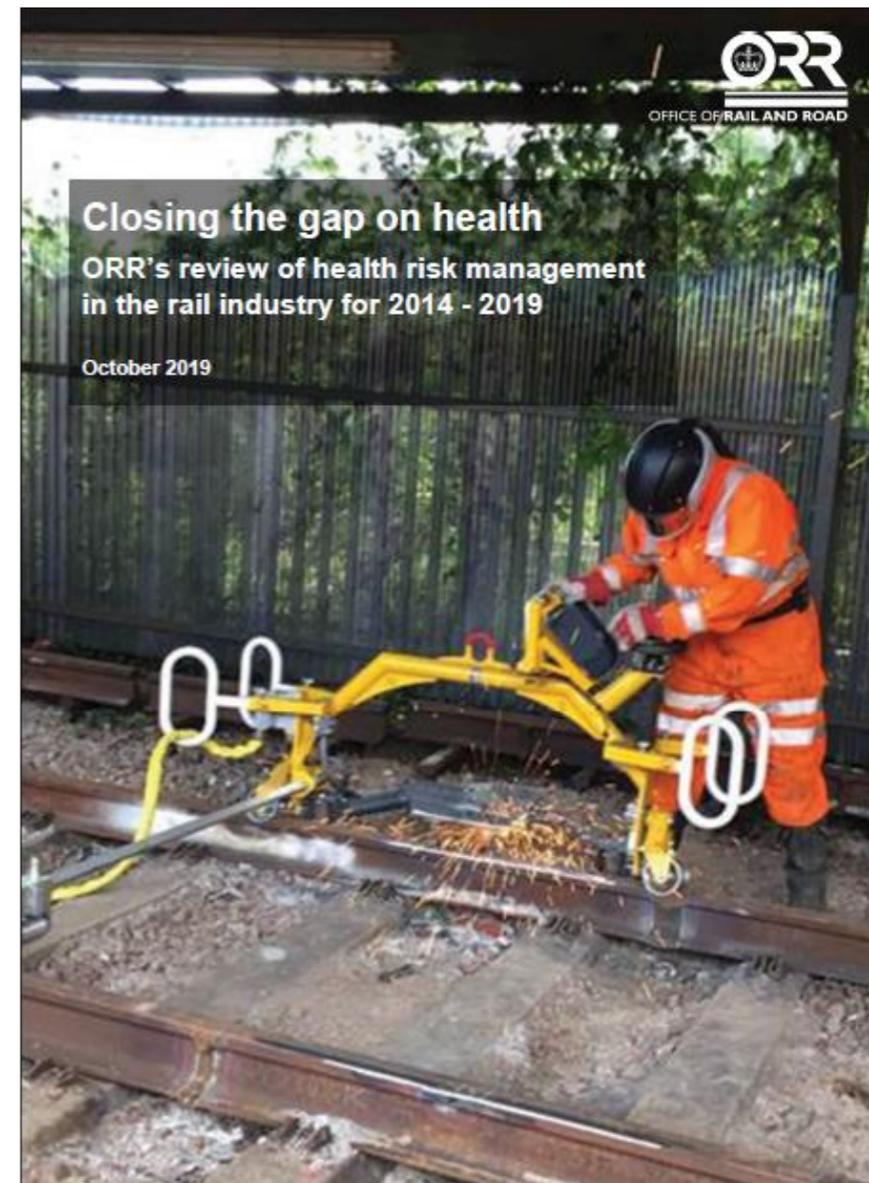
RIHSAC 12 November 2019

Anna O'Connor, RSD Head of Projects

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SRC review: evidence based

- Review of occupational health SRC in early stages
- Informed by comprehensive review of evidence by end ORR's 2014-19 health programme
- Data on extent, causes, and costs of ill health in rail
- Evidence on industry maturity in managing health: inspection, enforcement, visible leadership and delivery
- **Vision:** sustained progress towards consistent legal compliance, with worker health treated equally with worker safety at both company and industry level



Where are we now?

- Sustained focus by ORR on worker health over last 10 years, via dedicated health programmes, driven real progress
- Step change in industry ambition, leadership and collaboration
- Improved awareness and risk control in key areas: particularly manual handling and mental health as drivers of sickness absence, and hand arm vibration syndrome (HAVS)
- But...still a need for formal enforcement (43 Notices since 2010) to secure compliance with minimum legal requirements
- Health to remain key ORR focus: shift to business as usual
- Expect the industry to lead in supporting continuous improvement: health standards, guidance, and shared health data
- Longer term aim: build industry capability in health risk assessment and modelling (FWI for health)

Targeting our resource

- Revised SRC to set out proportionate approach: manage expectations on extent of ORR activity
- Target resource where compliance gaps greatest, and on those activities the regulator is best placed to deliver
- Focus on planned inspection, investigation and assurance work, supported by appropriate policy work
- More use of RM3 for health (us and employers)
- Emphasis on health by design: less reliance on PPE as last line defence
- Retain a focus on mainline, including supply chain
- Less scrutiny of TfL: demonstrated capability to deliver mature health risk management
- Light rail/tram sector: monitor and encourage more sharing good practice
- Proportionate engagement with heritage, including support HRA

Proactive inspection priorities on health

- HAVS risk control and health surveillance compliance
- Long latency occupational lung disease: asbestos, diesel fume, silica dust, welding fume
- Use these planned inspections to update intelligence around compliance on noise (knowledge gap currently)
- Use RM3 to build understanding of behaviour/culture in managing health risk
- Monitor and challenge NR on delivery against their priority health programmes at route level and centrally
- Engage with NR in developing their use of RM3 for health
- Provide adequate training and guidance to inspectors to support consistent inspection and enforcement
- Increased attention to health in heritage sector to build understanding by operators and support our trainee inspector competences

Reactive inspection priorities on health

- HAVS: ORR mandatory investigation of worsening HAVS diagnoses
- Monitor incidents and selective investigation of:
 - Musculoskeletal disorders (MSDs): seen steady progress with the industry motivated and engaged to reduce further
 - Microbiological hazards: legionella (train washes, tanking facilities)
 - Medical fitness for work: where implicated in safety incidents
 - Mental health: managing traumatic incidents
- Work-related stress:
 - apply [HSE's investigation](#) criteria for complaints
 - consider the most effective way for ORR to support clearer recognition and action on work-related stress

Supporting and challenging the industry

- Input to principal industry health forums to maintain momentum in sustaining recent progress
- Publish ORR regulatory guidance where is a clear need and it adds value
- Publish available health data on our data portal to improve transparency
- Review and develop our policy position in developing/emerging areas, for example effluent, air quality
- Support and challenge the mainline to:
 - improve current processes for managing fitness for work
 - efforts to drive shared health data collection and quality
 - build industry capability in health risk assessment and modelling

Next steps

- Seek HSRC views on proposed SRC priorities 9 December 2019
- Consult RIHSAC on draft text December 2019 (4 weeks)
- Amend SRC following RIHSAC consultation
- Present fully consulted draft SRC to HSRC 23 March 2020
- Publication by end March 2020



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Questions?

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