



ORR Business Plan stakeholder event

Health and safety priorities

Ian Prosser

Director, Railway Safety

Proposed priorities for 2018/19

Why these priorities?

- To provide focus on the four key challenges facing the industry as set out in my 2016/17 annual health and safety report – maintaining safe and sustainable assets; managing change; culture and occupational health: and safety by design.
- To ensure lessons are learned from the tragic Croydon tram derailment through bringing the industry together to agree on a clear plan for considering and implementing safety improvements promptly and efficiently.
- To support the industry's strategy as set out in 'Leading Health and Safety on Britain's railways' and seek delivery of Network Rail's Home Safe Plan.
- To take opportunities afforded by greater route devolution which can help promote management of risk at the local/site level.
- To continue to drive for a safer railway through compliance with the law and striving for excellence.

For our regulation of the mainline and Network Rail

- Monitor deferred renewals and asset safety.
- Hold NR to account for the implementation of its Home Safe Plan and targeted reduction in key workforce health and safety topics such as track worker safety.
- Introduce RM3 for each route and complete a full end of year evaluation.
- Adjust the way ORR regulates as required by transformation of NR into a devolved route structure - continue and refine formation of virtual route teams, increase capability.
- Focus on freight derailment, examining the three contributory factors of track condition, maintenance of freight rolling stock and asymmetric loading of wagons.
- Seek improved implementation of health and safety by design as new strategic assets are introduced.
- Continued focus on reducing risk at level crossings.

For our regulation of train operators, LU, tram and heritage sectors

- Bring the industry together to agree on a clear plan for implementing all RAIB's recommendations arising from Sandilands. Progress implementation of the specific recommendations upon ORR.
- Maintain our inspection programmes and influencing around station management, train dispatch and the platform train interface, including changes arising from franchises and new rolling stock.
- Strengthen safety management systems in the heritage sector.
- Crossrail – authorisation and coming into service during 2018-19.
- Continued engagement with LU during a period of significant change management.
- Support TOCs and FOCs in their strive to licence all train drivers by the 31 Oct 2018 statutory deadline.

Occupational health and Human Factors

- Last year of Occupational Health programme plan – promote industry leadership and ensure alignment with RSSB and HSE programmes.
- Continue to support industry management capability of Human Factors, a new EU safety management system requirement,
 - fatigue management,
 - safety by design and
 - safety critical communications,as well as emerging HF risks around
 - the ageing workforce,
 - automation and
 - digital railway.

Policy, Europe and Channel Tunnel

- Continue to improve RM3, including aligning with ORR's strategic risk chapters and producing topic sets.
- Brexit
 - safety and legislative frameworks, revised EU or national
 - update criteria and procedures and
 - support the industry to manage their safety obligations throughout legislative change.
- Continued focus on refining our approach to the level crossing order regime.
- A range of internal projects on strategic planning, organisational development and our people resource.



**Any
questions?**

Rail Accident Investigation Branch

Review of 2017



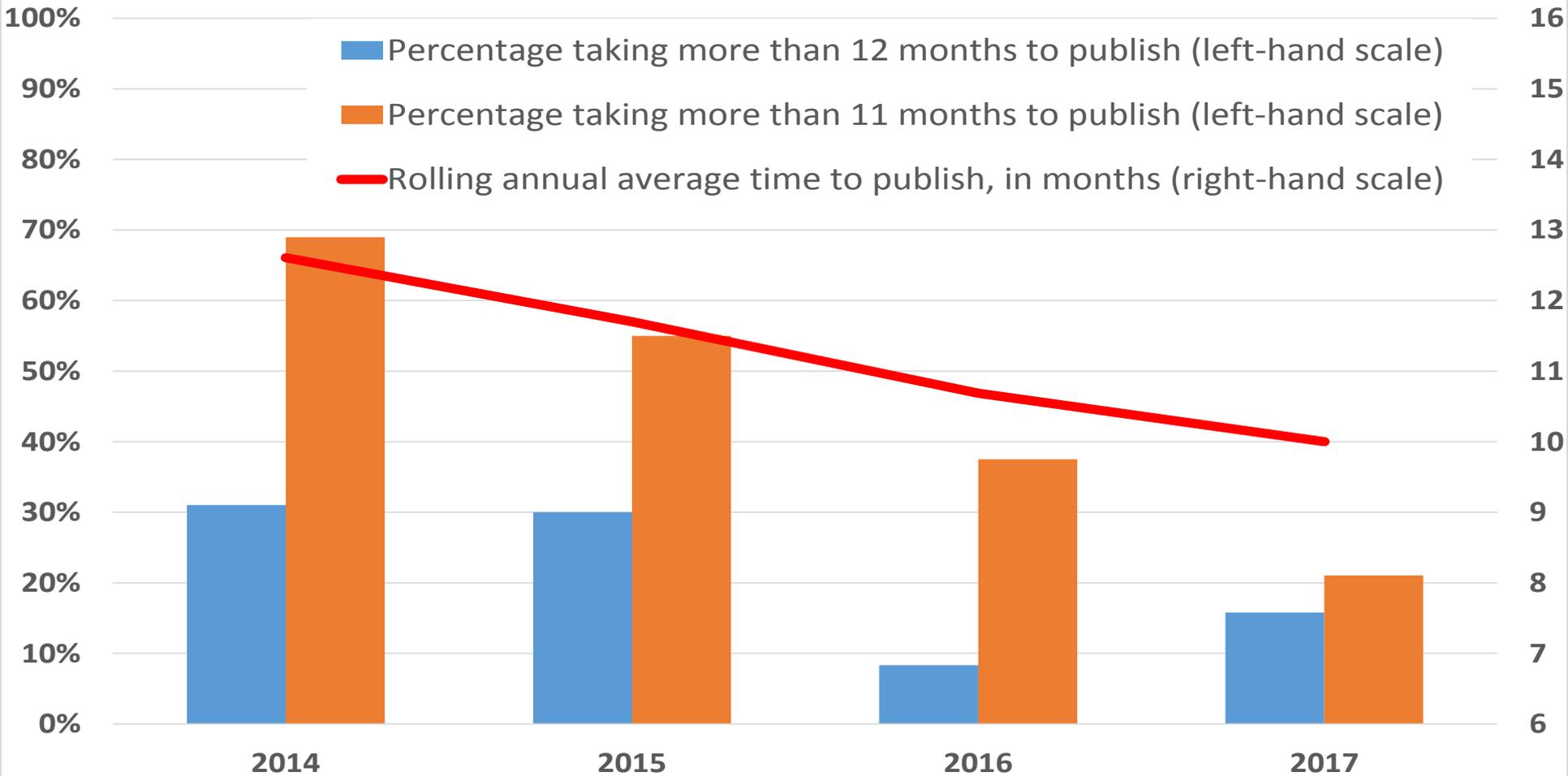
Presentation to the Railway Industry
Health and Safety Advisory Committee

Feedback from industry stakeholders

- high approval ratings (86 to 87%) against criteria such as professionalism and trustworthiness
- 91% of the respondents believed that RAIB investigations make an important contribution to improving railway safety
- RAIB was also seen to be performing well in respect of its independence and expertise
- the vast majority (89 to 90%) of those surveyed consider our recommendations to be clear, well targeted, and well supported by evidence
- 21% of those who responded to our survey thought that RAIB takes too long to complete its investigations

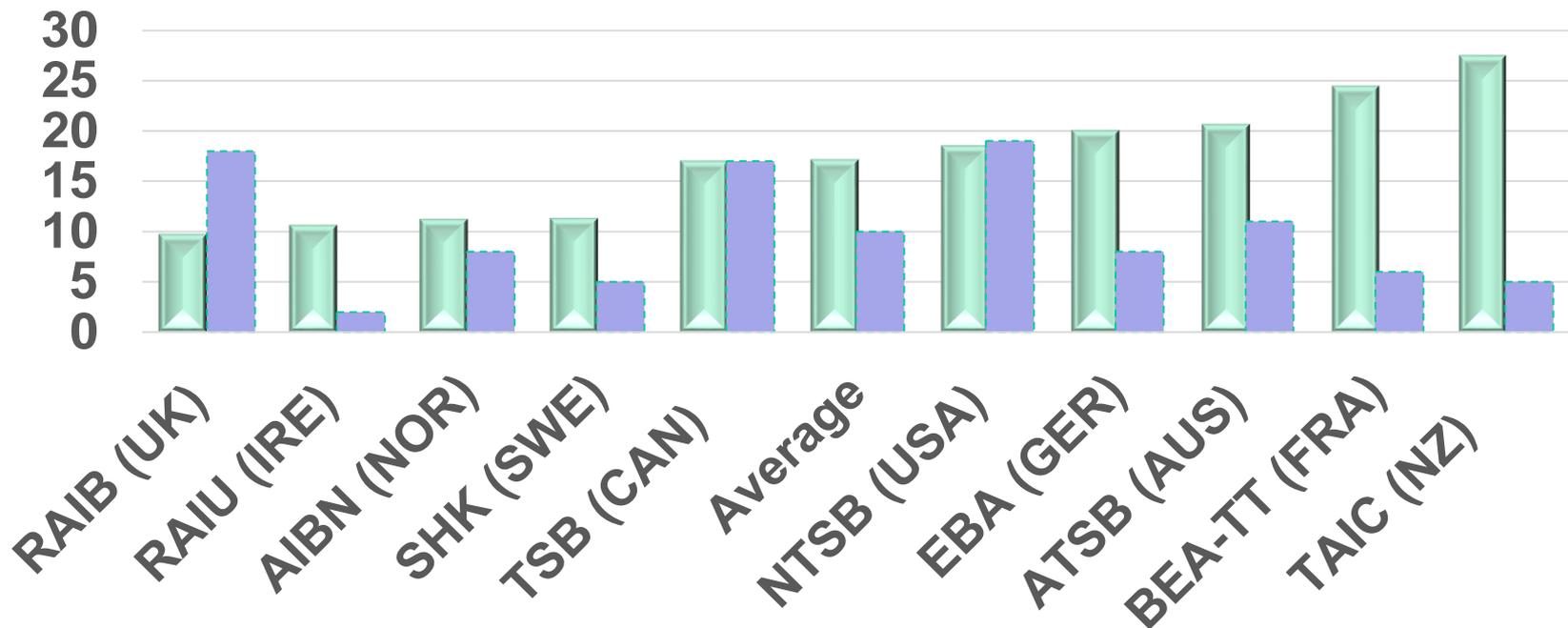
Time to publish

Time taken to publish RAIB investigations
(excluding safety digests)



International comparisons

International comparison of the outputs of railway investigation bodies (for 2017)



- Average time to publish time (months)
- Total No. of full reports

Status of RAIB recommendations (as of 31 Jan 2018)

	Number of recommendations	Implemented	In-Progress	Non-implementation	Awaiting response on actions taken + insufficient response
2014	112	91	19	2	0
2015	74	49	18	0	7
2016	73	30	33	2	8
2017	71	5	0	0	66
2018	3	0	0	0	3

The Sandilands tram accident

- Overturned travelling at 73 km/h on 30 metre radius curve
- 7 fatalities
- 19 seriously injured
- 42 passengers & driver suffered minor injuries
- only one passenger not physically injured



Areas of recommendations (summary)

Risk awareness

- **More effective UK-wide cooperation on matters related to tramway safety**
- **Better understanding of tramway risk, particularly when running off-street**

Additional control measures

- **Automatic braking at high risk locations**
- **Technology to detect a driver's loss of awareness, and to intervene when necessary**
- **Improved visual cues on the approach to hazards**

Crashworthiness

- **Improved containment provided by tram windows and doors**
- **Means of escape from a tram lying on its side**

Areas of recommendations (summary)

Underlying management factors

- Independent review of Croydon tram's risk assessment processes
- Review of the processes used to promote learning from experience (just culture)
- Improved fatigue management (observation)

Regulatory factors

- The need for the ORR to review its regulatory framework for tramways

The Sandilands tram accident – lessons applicable to the big railway

Looking beyond recent experience when assessing risk

Risk management should not only be focused the risk of change - is what you already have fit for purpose?

The value of different operators sharing experience and collaborating to understand the big risks and to develop a common understanding of good practice



The Sandilands tram accident – lessons applicable to the big railway

Can technology be used to improve the ways we monitor the alertness of safety critical staff whilst undertaking their duties, and to intervene when necessary?

The need to review fatigue management systems against current good practice (eg ORR guidance), in particular in areas related to self-reporting and life-style guidance

How organisations learn from experience – and the need for a ‘just culture’

Is AWS/TPWS reducing the risk of overspeeding to ALARP? (eg at junctions)



Narrowly avoided serious train accidents

- **Barrow upon Soar**, damage caused to a water main which caused a partial collapse of an overline bridge onto a line that was open to traffic (10/2017)
- **Watford Tunnel**, train struck landslip, derailed and was hit a glancing blow by a train in the opposite direction (11/2017)
- **Liverpool**, collapse of a wall at the top of a rock cutting onto the track below (17/2017)

Key themes to be highlighted in the RAIB's Annual Report for 2017

Reliance on signallers to ensure the safety of level crossing users;

- when giving permission for road vehicles to cross a user worked crossing; and
- when automatic crossings are not operating normally.



Key themes to be highlighted in the RAIB's Annual Report for 2017

The risk to trains when earthworks and structures fail



Key themes to be highlighted in the RAIB's Annual Report for 2017

The number and type of narrowly avoided accidents involving track workers and moving trains



Key themes to be highlighted in the RAIB's Annual Report for 2017

Fatigued railway workers

Risk factors highlighted during 2017 include:

- a series of long shifts on consecutive days
- inadequate sleep due to personal factors working a first night shift
- a long working hours culture
- fatigue management systems that are not in line with published industry guidance



Key themes to be highlighted in the RAIB's Annual Report for 2017

Errors during the installation and commissioning of new signalling and track work

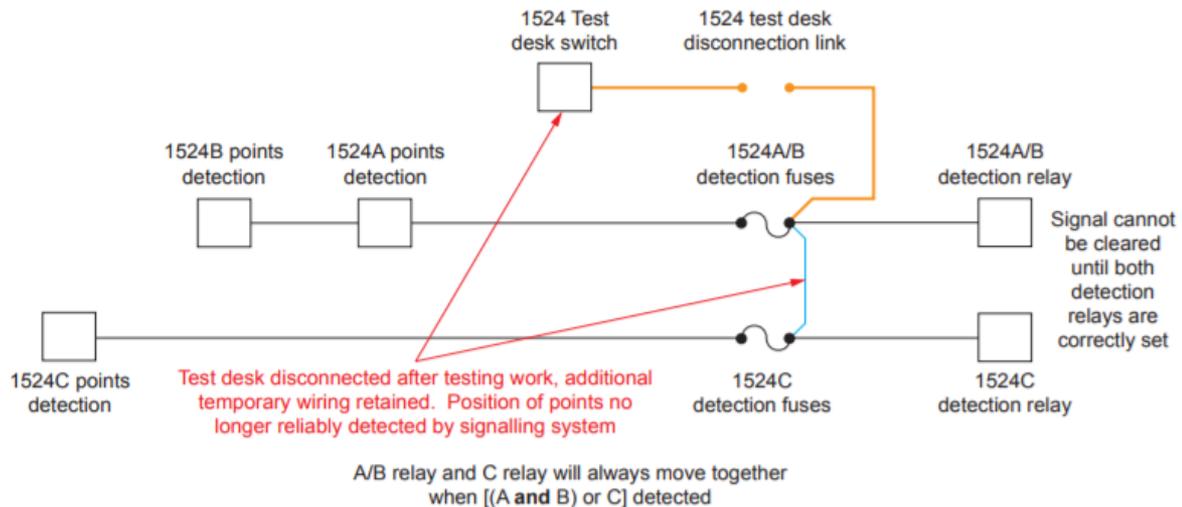


Figure 7f: 1524 points detection at time of derailment

Some particular issues for train operators and fleet engineers

- The risk of slipstreams to wheelchairs and buggies (Twyford 01/2017)
- How the shape of a door seal can make it more difficult to remove a trapped object (Bank 12/2017)
- The potential to ‘design-in’ measures to keep trains in line when they derail (Watford tunnel 11/2017)



Other issues of concern

- Signage at private crossings, Frogнал Farm (**ongoing investigation, urgent safety advice issued**)



Capturing key safety learning from previous years

In parallel with the Annual Report, RAIB intends to capture key learning by publishing thematic reports related to each of the following:

- level crossings;
- platform train interface; and
- track worker safety.

These will be published independently from the annual report, and will be regularly updated. They will not relate to any particular year but will act as a standing record of previous safety learning.

RAIB priorities for 2018

- Work with ORR to maximise the effectiveness of RAIB recommendations, and to improve the understanding of each other's roles
- Continue to work with other railway accident investigators to exchange good practice, and to help improve the quality of investigations throughout the industry (and to provide advice to other sectors where appropriate)
- Working towards closer working with the other AIBs (Air and Marine, Defence and Health Care Safety)
- Review and revise our Memorandums of Understanding with other statutory bodies (eg NPCC, BTP, ORR and others)
- Work to improve information exchange between railway accident investigation bodies in the EU, and elsewhere

Any questions?





Health and Safety in the heritage sector

**Bill Hillier, HRA Director &
Chairman of the HRA Operating &
Safety Committee**



Background

- The 'Heritage Sector' comprises railways, tramways and cliff railways of both standard and other gauges.
- It excludes main line Charter services, but includes some of their stock!
- Vast majority regulated by ORR.
- The Heritage Railway Association is the **trade body** for this sector.



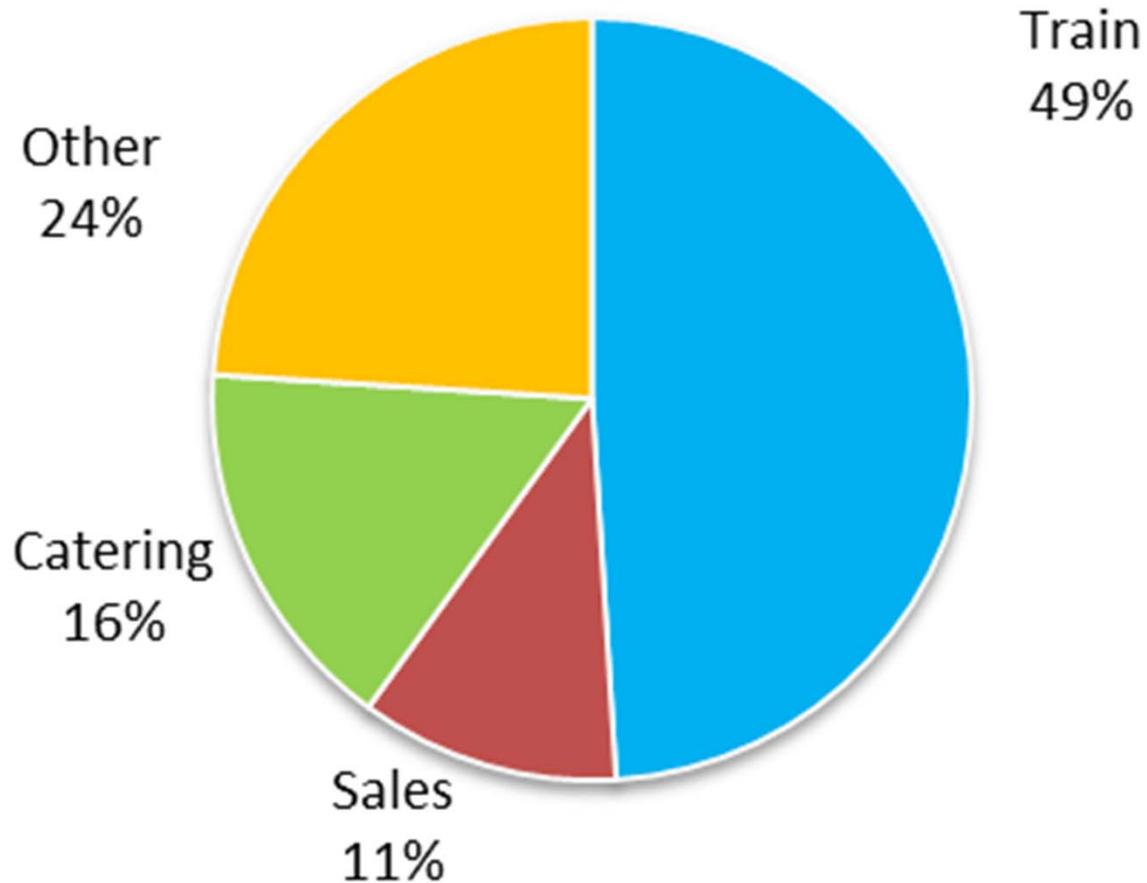
The size of the sector

We earn **£120** million pounds
carrying **8.3**million passengers
over **570** miles of track
from **456** stations.

(Std Gauge 388 miles and 244 stations)



Turnover Proportions





Passenger Operations

- **16 Million Passenger Journeys**
- **123 Million Passenger Miles**
- **1.3 Million Train Miles**
- **An *average* of 93 passengers per train**

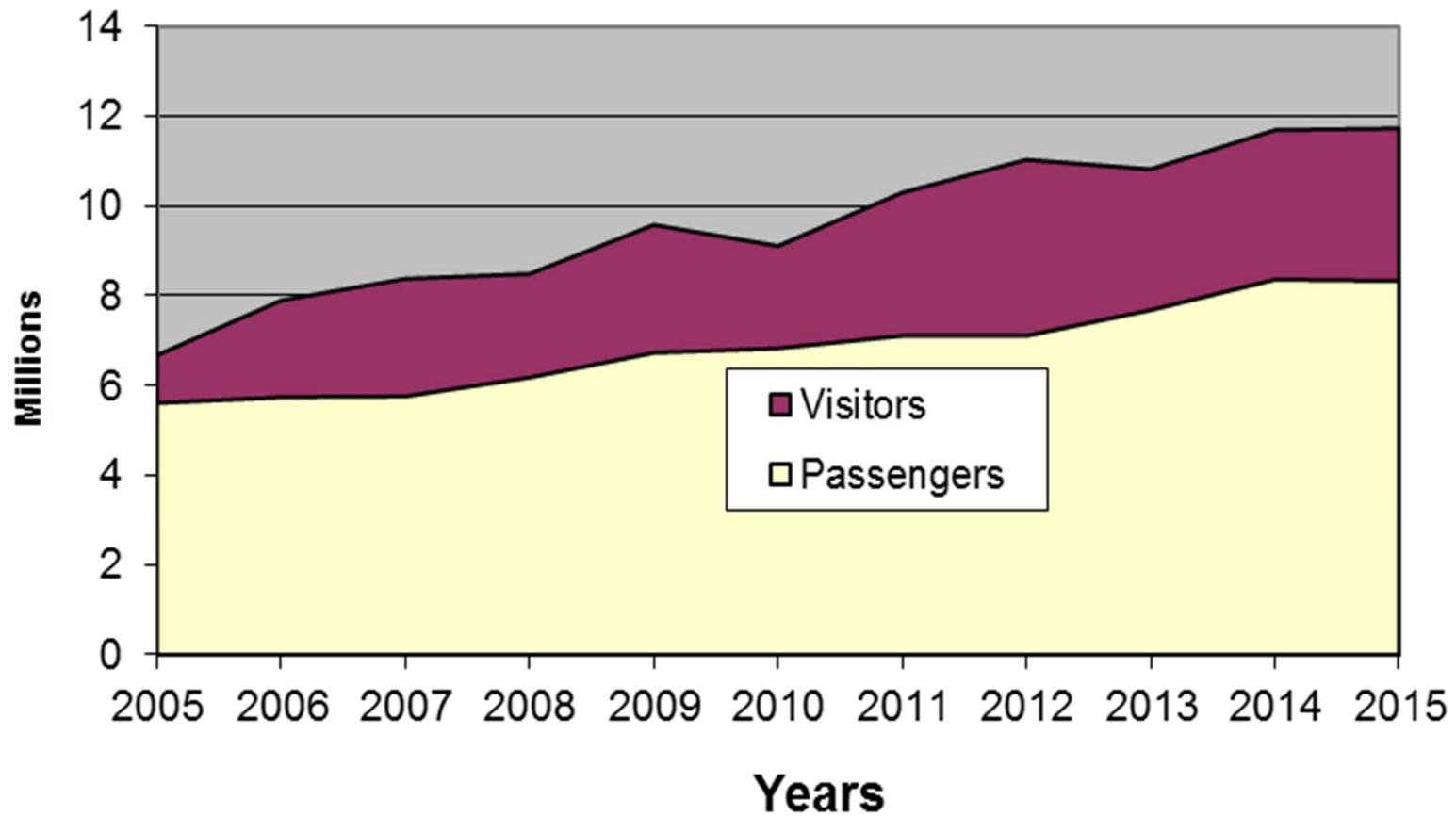


Diversity of operations

- 79 standard gauge operations
- 44 non-standard operations
- Gauge ranges from 10” to 84”
- Length varies from 0.25 to 38 miles
- Operationally isolated
- All limited to 25m.p.h. maximum
- Only three have double-track outside station limits



Visitor & Passenger Growth





Staff

- **2,761 Employed Staff**
 - Many are part-time
- **21,569 Working Volunteer Staff**
- **4,112 “Full Time Equivalent” staff**



Governance

- Governed by the same UK Acts and Regulations as the main-line
 - Excluding interoperability
- HASWA – ROGS – TWA
- Individually owned operations
 - Trust, PLC, CIC
- Funded by Members and Grants
 - Not the public purse



People Issues

- Complacency
- Arrogance / Ignorance
- Fatigue
- Aging workforce
- Management experience
- Staff do not work on the railway every day



Process Issues

- Shunting
- Steam Boilers
- Engines v Coaches v Track
- Running trains v Safety v Sustainability
- SMS Compliance
- Competence and Safety Management



HRA Provides

- Advice
- Guidance Notes (65 on our website)
- Newsletters
 - Operating & Safety Matters
- Seminars
 - SMS (with ORR)
- Fora for Good Practice and Networking



Information Sources

- Our Members
 - Many years experience
- Historic Documents
 - Handed down & found in auctions
- RSSB
 - Access to standards & reports
- ORR / HMRI
 - Essential partner



RAIB Reports

- Valuable source of information
- Railways encouraged to read ALL the reports
- HRA summarises key issues for our members
- Special presentations in certain cases
 - No prizes for guessing our March focus!



ORR Assistance

- Attend our O&S Committee
- Endorse our Guidance Notes
- Talk at our Fora
- Encourage improvements in Safety Management

- Boiler Code of Practice



Boiler Code of Practice

- Experienced people aging but requirement unchanged
- Got experienced people together
- Developed package of 24 GN's with support of ORR
- Subject to peer-review
- Accepted as THE reference set



Final Remarks

- Our environment is specific
- Our problems are not unique
- Thanks for ALL your help
- We are working to ensure the safety record of ALL railways continues to improve



Department for
Infrastructure

An Roinn

Bonneagair

www.infrastructure-ni.gov.uk

Rail Safety Authority

- Northern Ireland -



Background

- Technically not a full Rail Safety Authority.
- Agreed with Cabinet Office Legal Advisor that the Department would act as the Rail Safety Authority for Northern Ireland.
- 3 part time staff.



Legislation



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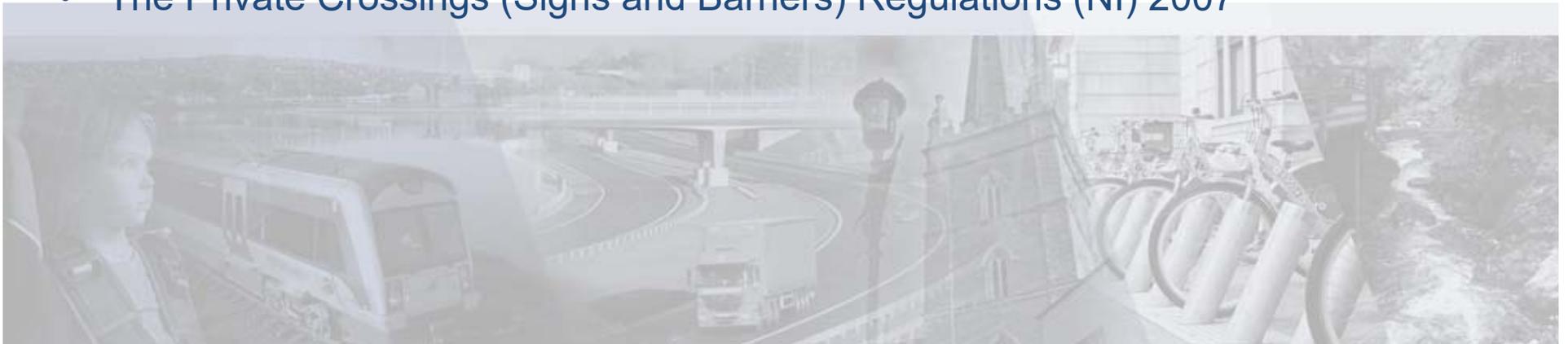
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- The Railway Safety Act (Northern Ireland) 2002
- European Directives on Rail as transposed
- The Railway Safety Regulations (Northern Ireland) 2007
- EU Railway Packages (1st, 2nd, 3rd & 4th)



Legislation

- The Railways Infrastructure (Access, Management & Licensing of Railway Undertakings) (NI) 2016
- The Railway Safety Management Regulations (NI) 2006 – as amended in 2011 & 2013
- The Rail Vehicle Accessibility Regulations (NI) 2014
- The Rail Vehicle Accessibility (Applications for Exemption Orders) Regulations (NI) 2014.
- The Train Driver Licenses and Certificates Regulations (NI) 2010 – as amended in 2013 & 2016
- The Cross Border Railway Services (Working Time) Regulations (NI) 2008
- The Private Crossings (Signs and Barriers) Regulations (NI) 2007



Specific to Northern Ireland



- Railway Safety falls within the devolution settlement.
- The Rail Safety role is proportionate to the size and scale of the Northern Ireland rail network. (333 km).
- More focused due to the small size of the network.
- Mainline dual track with significant proportion of single track.
- Enforcement carried out by Health & Safety Executive (Northern Ireland) and the Office of Rail and Road (ORR).





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Key Roles for the Department

1. Certification
2. Interoperability
3. Rail Accident Investigations



Certification



- Examine Northern Ireland Railways (NIR) application for Certification of Operations (Part A).
- Issue Part B Certification for Iarnrod Eireann (services in Northern Ireland), (NIR hold a similar Part B Certification for operations in Republic of Ireland – issued by Commission for Railway Regulation ROI).
- MOU with Office of Rail and Road (the GB Safety Authority).
- MOU with Health & Safety Executive (Northern Ireland).



Interoperability



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- Technical Standards for Interoperability.
- Safety Authority key role to certify any new subsystem or interoperable components e.g. signalling.
- Liaison with National Notified Body in preparation of technical file
- Consultation with Office of Rail and Road.
- Northern Ireland Railways usually appoint an independent safety advisor for major projects.

Related legislation is made on a UK wide basis.



Rail Accidents/Incidents



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- The Department has a responsibility to be aware of any investigation, advise the Minister and ensure the implementation of any report recommendations.
- The Rail Accident Investigation Branch carry out investigations where they consider it relevant to do so.
- The Health & Safety Executive for Northern Ireland also included.
- All recommendation arising are formally addressed to the Department as the Rail Safety Authority.
- The Department keeps the Minister informed throughout.





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Train Driver Licensing

- Department act as the Train Driver Licensing authority.
- 146 licences issued to date.
- The Train Driving Licences and Certificates Regulations (Northern Ireland) 2010 (as amended).



Rolling Stock

- Three classes of rolling stock:
 - 23 Class One 3000 trains.
 - 20 Class Two 4000 trains.
 - 8 Enterprise Shared Service trains.
- Total number of passenger journeys 2016/17 14.2 million





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Heritage Rail

- Licence 5 Heritage Rail Operations.
- Certification of heritage rail rolling stock using the mainline.
- Oversight safety role for the Department with HSE(NI) as necessary.



Future Considerations

- Impact of EU Withdrawal Bill – how will this work?
- Possibility of 2 year extension before Brexit.
- UK considering frameworks however it is important for these to provide the mechanism to enable NI to legislate.
- Particularly important for Department to maintain the devolved power to amend the necessary railways legislation.
- Future operation of cross border shared rail service and related agreements with the Commission for Rail Regulation, Iarnrod Eireann and the respective ROI government Departments.



Key Issues



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- Impact of the Brexit Agreement or lack of it.
- Single Certification – role of EU RA post Brexit.
- Development of UK frameworks.
- Need for formal arrangement with ROI.



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



RIHSAC

**RIHSAC Effectiveness – follow
up to 3 Oct discussions**

Tracy Phillips

ORR

Tuesday 20th February 2018

Summary of our October discussions

- Main areas of feedback from 3 October RIHSAC discussion were –
 - desire for RIHSAC to become more strategic and have opportunities to advise, inform and influence at key points
 - want better forward programming and planning of agendas
 - papers and presentations to be circulated in advance
 - require commitment from member organisations to attend meeting or field deputies
 - membership should be reviewed in light of greater devolution
 - other HSE advisory committees do not necessarily provide good models
 - room layout did not promote interaction

What has been done since October?

- Encouraged RIHSAC members to give presentations/lead on items – suggest every agenda has at least one member led item
- Circulated papers and presentations in advance (still room for improvement)
- Changed the room layout
- Tried to plan 2018 meetings at more strategic points e.g. end May (for CI annual report) and mid Oct (for annual risk review/emerging priorities for 19/20)
- Introduced a forward programme for RIHSAC meeting agenda items
- “Reviewed” terms of reference (but how familiar are members with them?)
- A report on RIHSAC forms a proposed agenda item for ORR’s next Health and Safety Regulation Committee meeting to help raise profile

What do we still want/need to do?

- For RIHSAC to see itself as a “community” and have contact outside RIHSAC meetings
- Review/challenge membership organisations not routinely participating and add others (Transport for the North?)
- Consider how we can keep RIHSAC informed between meetings e.g. sharing minutes of key meetings
- Add planned (health and safety related) ORR consultations and strategic chapter reviews to the forward programme to alert members well in advance
- Consider the merit of having sub committees
- Improve the RIHSAC page on the ORR website

Next steps

- Gather any further thoughts ideas from members
- Tracy to work with a volunteer RIHSAC member to take forward remaining actions?
- Consider how best to “formalise” what has been agreed