

Welcome to RIHSAC 94

Dilip Sinha, Secretary, RIHSAC

15 October 2013





Who's minding the gap?

John Cartledge Safety Policy Adviser

Presentation to RIHSAC 15 October 2013





Why does platform edge risk matter to passengers?







"At Clapham Junction the height gap between the platform and the trains on platform 15 is a health and safety issue. Towards the eastern end of the platform I have seen elderly people unable to disembark because the gap was unmanageable."









Joanna Moorhead

Thursday 22 December 2011

Yes, I do mind the gap – you don't have to be drunk to fall under a train

As public information campaigns go, this one seemed a cracker. Travelling while you're drunk is dangerous; and to make the point in the runup to Christmas, British Transport police have released CCTV images of a drunken passenger on a train as she staggers off it.

Thankfully, the woman in the film is fine, because someone saw her fall and the train was delayed while she was hauled from under it. But seeing those images makes me furious, because despite what Network Rail might like us to believe, you don't have to be drunk to fall under a train. According to the staff at my local station, Clapham Junction in south-west London, it happens to entirely sober passengers on a regular basis, because of ever-bigger gaps between platforms and trains.

I know this is true, because over the last three years my daughters, who travel to secondary school through Clapham Junction, have twice told me about incidents in which friends of theirs fell on to the tracks. Both times, as with the drunk woman in the British Transport police video, the trains were delayed while the girls were rescued.

More recently my husband, who also commutes through Clapham Junction, was about to board a train on his way to work when a female passenger just ahead of him did exactly the same as the woman in the video: she lost her footing and disappeared on to the tracks. He pulled her out, and then helped her on to the train; although shaken, she made an "announcement" to the passengers in the carriage that my husband had just saved her life.







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Yes, I do mind the gap – you don't have to be drunk to fall under a train

So my point is this: it's fine for the British Transport police to make us aware of the dangers of being drunk, but why aren't they – and Network Rail, whose responsibility this is – doing more to make their platforms safer? At the moment, all they have are some chipped and faded and barely visible signs telling you to "mind the gap", and an occasional warning announcement.

But of course it's much easier to blame drunken passengers than to look at your own shortcomings. So to help Network Rail out, I've been down to Clapham Junction with a measuring tape. I stood on Platform 15, the platform my children use each day, and I measured the gap between platform and train on six departures over a 10-minute period. The biggest gap I measured was 51cm on the 15:11 train to Sutton; the smallest gap I measured was 46cm on the 14:54 train to Epsom.

Every one of the gaps I saw was easily big enough for a passenger, especially a child-sized one, to fall through and on to the track. Twice I helped passengers who were struggling to get on to the train safely; one was an older woman with a suitcase who was unable to lift it across the gap on to the train, and the other was a woman with a toddler and a pushchair. She needed both hands (and another passenger's help) to lug the pushchair on to the train, and the only way she could do it was to leave hold of her toddler's hand, leaving him at risk of falling on to the track.







Joanna Moorhead

Thursday 22 December 2011

Yes, I do mind the gap – you don't have to be drunk to fall under a train

Does Network Rail care about these dangers? According to the platform staff this afternoon, the problem is that the platforms weren't built for modern trains, and improving them to reduce the gap would cost too much. I wonder whether that's what they'll be saying when the day comes when a child falls on to the track and dies? I suspect not; because on that day, we'll all agree that any amount of money is worth spending to keep our children safe.

So listen up, Network Rail. Those are my daughters and their friends who are falling on to your tracks. If I'm angry now, I'll be incandescent on the day that accident happens. And it will. That's what station staff told me today: because higher passenger numbers (which you have) mean more platform crowding and more accidents.

So instead of shocking us with pictures of drunks, start thinking about how to keep my children and all your other passengers safe. And please, do it now.











Mind That Gap

Simon Slade Campaign



mindthatgap@hotmail.co.uk

- About Us
- A Petition
- Inquest
- A Simon
- Contact Details
- Membership form



MIND THAT GAP is a non profit Organisation formed after the Tragic Death of Simon Slade who fell into the gap between the train and platform at Gidea Park Station. Simons fall wasnt seen by anybody not even the train dispatcher who had rushed back to his office and Simon lay on the track for 45 minutes and another three trains ran over him. Simon was still alive when he was found.

The Prime function of the organisation is to improve safety on platforms by raising awareness of Hazards like Gaps and attempting to reduce them













Rail Industry Standard

















Passenger accident at Brentwood station 28 January 2011







Learning from Operational Experience Annual Report 2011/12

Learning points:

Monitors should be visible (sighting) and clear (picture quality).

Drivers need to perform the train safety check in accordance with the Rule Book.

Driver training needs to support the above.

Train door forces need to allow trapped objects to be extracted in an emergency.

Passengers should be made aware of the risks from boarding and alighting trains.

Stepping distances should be checked to see if they are within safe limits.





Appendix A Stepping distances







Research Brief



Investigation of platform edge positions on the GB network T866 - October 2011

		Average platform height (mm) ARL			
		< RGS limit	Within RGS	> RGS limit	Total
Average platform offset (mm)	< RGS limit	323	299	486	1,108
	Within RGS	264	384	537	1,185
	> RGS limit	986	981	1,411	3,378
	Total	1,573	<mark>1,</mark> 664	2,434	5,671

Table 1 - Overview of average platform heights and offset values





































Department for **Transport**

Accessible Train Station Design for Disabled People: A Code of Practice



Version 03 - Valid from 1 November 2011

A joint publication by Department for Transport and Transport Scotland

November 2011



















Network RUS Stations

4.6.2 The speed of boarding and alighting can also be affected by significant stepping distances between rolling stock and platform. Large steps both vertically and horizontally are likely to slow passenger flows boarding and alighting. The provision of a reduced stepping distance from train to platform has the potential to improve the speed of passengers boarding and alighting, quite apart from the clear benefits to those with reduced mobility or carrying luggage.













Rail Accident Report



Fatal accident at James Street station, Liverpool 22 October 2011

Report 22/2012 October 2012











The objective of this recommendation is to reduce the likelihood of falls through the platform edge gap.

Merseyrail, in consultation with Merseytravel, Network Rail and other relevant industry bodies, should evaluate equipment and methods that reduce the likelihood of a person falling through the platform edge gap. Platform edge gap fillers and vehicle body side panels should be included in the evaluation, the outcome of which should be a plan to implement measures when appropriate to do so, for example when trains or the infrastructure are changed, improved or replaced.











EN BALLWA





















And finally ...







Thank you



Platform / train interface: presentation by London Underground Limited

London Underground's risk profile



Top Event	Risk	Risk Category	Current ranking (previous
(& Contribution to Network Risk)	(Fatalities per year)		2011.01 ranking)
Platform Train Interface (26%)	1.88	Medium	1 (1)
Unauthorised Access to Track (22%)	1.65	Medium	2 (2)
Stairs & Assaults (10%)	0.77	Medium	3 (3)
Ventilation Hazard (8.4%)	0.62	Low	4 (4)
Train Fires (7.7%)	0.57	Low	5 (5)
Escalator Incidents (4.5%)	0.33	Low	6 (6)
Derailment (2.8%)	0.20	Low	7 (7)
On Train Incidents (2.7%)	0.20	Low	8 (8)
Power Failure (2.7%)	0.20	Low	9 (10)
Lift Fires (2.5%)	0.18	Low	10 (9)
Flooding (2.2%)	0.16	Low	11 (11)
Station Fires (2.09%)	0.15	Low	12 (12)
Collision Between Trains (2.05%)	0.15	Low	13 (13)
Collision Hazard (1.09%)	0.08	Low	14 (14)
Explosion (1.02%)	0.07	Low	15 (15)
Arcing (0.78%)	0.06	Low	16 (16)
Structural Failures (0.37%)	0.03	Low	17 (17)
Lift Incidents (0.36%)	0.03	Low	18 (18)
Tunnel Fires (0.21%)	0.02	Low	19 (19)
Escalator Fires (0.21%)	0.02	Low	20 (20)
Total LU Group Risk	7.36		
Procedural framework for reducing risk.



- Rule Book for PTI
- Staff training
- Engineering assurance
- PTI groups
- Daily checks of PTI cctv
 equipment



S stock objective and analysis



- Determine how to maintain the ALARP position with a level access vehicle assuming some 9m crossing events per day.
- Comply with the Rail Vehicle Accessibility (Non-Interoperable Rail System) Regulations (RVAR) 2010, by providing no more than a 75mm horizontal gap or a 50mm vertical step.
- Reduce the step/gap at the non RVAR doorways to provide as much fully accessible platform as possible.
- Use all assets to create the combined desired PTI

The S stock PTI development



• Detailed assessment of Step and gap using Laser guided measuring tools - anomalies investigated by site visit – assessment conducted every 3-5m

		INFRASTRUCTURE GAUGING PROJECT Platform to Train Interface Survey											
BBS Code				âmercham	Station Sout	hhound Me	tronolitan line			Date S	urvened		
		Amersham Station Southbound Metropolitan line Platform One								09-Jun-04			
M019													
Rail Adjacent to Platform in DOR							Platform Edge in DOR			Offset Height	Co-ordinated	Track	
Stn No.	Easting	Northing	Level	Cant	Gauge	Code	Easting	Northing	Level	onset	Height	¥ersine	Radius
1105	47112.997	53779.148	249.393	0.002	1.422	LHR							
1106	47117.793	53777.919	249.376	-0.003	1.433	ILHR						11.896	1041.862
1107	47122.637	53776.653	249.355	-0.003	1.431	ILHR .	47122.840	53777.333	250.284	0.710	0.929	-1.409	-8882.010
1108	47127.473	53775.392	249.344	0.000	1.430	ILHR	47127.685	53776.094	250.268	0.733	0.924	-4.714	-2647.555
1109	47132.308	53774.141	249.340	-0.006	1.429	ILHR .	47132.489	53774.837	250.253	0.719	0.913	6.126	2040.847
1110	47137.152	53772.875	249.338	0.002	1.432	ILHR	47137.342	53773.579	250.247	0.729	0.909	-4.759	-2623.844
1111	47141.980	53771.623	249.324	-0.005	1.425	ILHR .	47142.172	53772.313	250.239	0.716	0.915	-3.172	-3925.483
1112	47146.814	53770.376	249.301	-0.013	1.437	ILHR .	47147.006	53771.079	250.225	0.729	0.924	-4.081	-3068.048
1113	47151.673	53769.131	249.279	-0.013	1.437	ILHR	47151.829	53769.841	250.210	0.727	0.931	-0.425	Straight
1114	47156.512	53767.892	249.259	-0.024	1434	ILHR	47156.661	53768.617	250.195	0.740	0.936	-7.154	-1743.734
1115	47161.354	53766.667	249.235	-0.026	1.432	ILHR .	47161.504	53767.388	250.181	0.736	0.946	-3.144	-3960.410
1116	47166.190	53765.450	249.235	-0.016	1.427	ILHR	47166.364	53766.178	250.188	0.749	0.953	-8.608	-1450.034
1117	47171.049	53764.245	249.226	-0.027	1432	ILHR	47171.227	53764.949	250.172	0.726	0.946	1.077	11593.507
1118	47175.891	53763.042	249.217	-0.029	1.429	LHR	47176.075	53763.768	250.167	0.749	0.950	-9.661	-1294.557
1119	47180.761	53761.852	249.222	-0.029	1.431	LHR	47180.929	53762.584	250.162	0.751	0.940	3.499	3585.691
1120	47185.622	53760.657	249.224	-0.029	1433	ILHR	47185.809	53761.392	250.161	0.758	0.937	-13.432	-934.438
1121	47190.498	53759.486	249.219	-0.033	1.431	LHR	47190.664	53760.214	250.149	0.747	0.930	0.157	Straight
1122	47195.356	53758.319	249.223	-0.032	1.428	LHR	47195.530	53759.036	250.146	0.738	0.923	2.899	4303.258
1123	47200.210	53757.147	249.213	-0.030	1.429	ILHR	47200.368	53757.873	250.142	0.743	0.929	-8.555	-1460.624
1124	47205.079	53755.989	249.206	-0.031	1.436	ILHR .	47205.268	53756.715	250.139	0.750	0.933	-3.582	-3475.451







Curvature



• Understand curved platforms and optimise the stopping position to reduce overall risk – end result of four doors where no improvement could be achieved



Identifying specific risk doors on curves



Create a suite of solutions



- Platform, track and train based solutions based on optimised stopping position.
- Track maintained/Tamped/Replaced to nominal 950mm height.
- More intelligent door systems/safeguards.
- In cab CCTV better quality images.
- Platform humps.
- Nosing stone realignment.
- Barriers to slow runners
- Under platform lighting and reflective strips
- Signage.
- Customer education campaign
- Mechanical & fixed perishable gap fillers

In-cab platform cctv



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Image Extracted from Video File: Amersham_P1_L Rev_28.09.2011

Highlighting the risk area



Awareness campaigns.





Customer Awareness







Physical mitigation







PR13: feedback from the draft determination consultation

Ian Prosser

RIHSAC 15 October 2013.

PR13 – this is the process we're going through....

- Policy decisions were set out in our draft determination published on 10
 June. This was a consultation document.
- NR, funders and others, including railway operators and trade unions, responded by 4 September.
- Responses were considered and the ORR Board made their final policy decisions on 1 Oct
- > The Final Determination will be published on **31 Oct**.
- NR produces its draft delivery plan, setting out how it will meet the outputs required in the determination in **Dec**. This is a consultation document.
- > NR produces its final delivery plan in **March** 2014.
- > 1 April 2014 all systems go...



Health and safety has been considered throughout the process....

- > ORR's safety staff have brought:
 - Knowledge of the key risks;
 - > Understanding of NR's capability to manage those risks from
 - Inspection, investigations;
 - > RM3 management capability judgments from evidence.
 - Understanding of the workforce issues and management and leadership challenges
 - A focus on where targeted spending could make the biggest difference to control of risk.



PR13 – These are the challenges for Network Rail that have important health and safety implications...

- Delivery of track maintenance and renewals (includes off-track in CP5)
- Train performance targets
- Structures and earthworks maintenance
- Implementation by NR of its Safety and Wellbeing and Health and Wellness strategies.
- Level crossings safety
- > Enhancements delivery



Looking at track Maintenance, there are safety implications that we've considered around...

- > Efficiencies offered by NR are dependent on:
 - new ways of working, including
 - > risk-based maintenance,
 - > multi skilling
 - > and remote condition monitoring.
 - > These will require cooperation from the workforce
- > On exit from CP4:
 - > NR will not have met its maintenance volumes
 - > Will be implementing fundamental changes eg business critical rules
 - But have good asset policies that should mean a safe railway if implemented.



#7300080

Looking at train performance....

- Targets set by governments in their HLOSs
- Our role to see if targets are realistic and include or amend them for the determination.
 - Draft determination had a floor of 90% ppm,
 - Many responses on this aspect which we have considered
 - Results in the final determination.
- We will inspect to ensure balance between safety and performance is achieved.



On civils and enhancements...

- Safety challenge is to ensure that NR tackles the high risk structures, rather than just deliver numbers.
- Asset information is recognised by both NR and ORR as needing to improve.
- Enhancements programme important as it can avoid intensive maintenance on old assets, and therefore eliminate some more risky operations.
 - > The final determination will show how costs of the enhancements programme have been considered.



#7300080

On Workforce Safety....issues considered included...

- Taking safer and faster isolations (AC and DC).
- Developing technologies to alert workers of approaching trains.
- Developing a prototype RRV to replace the current excavator.
- NR has published its Safety and Wellbeing strategy, with some early actions. NR proposes to eliminate all fatalities and major injuries by 2019.
- Better management of health by NR.
- Final decisions on these areas will be announced on 31 Oct.



On Level Crossings safety...we considered

- NR's proposal to deliver a plan of projects in CP5 to maximise reduction in risk of accidents.
- > A ring-fenced fund.
- > How we might monitor delivery.
- How this will work with NR's legal duty to make safety improvements during day to day business of renewals and upgrades.



Summary...

- Health and safety thinking has been integral to the process of making the determination:
 - In advice to Ministers on targeted spend;
 - In detail of the draft determination;
 - In Board decisions leading to the final determination.
- Using:
 - On-the-ground knowledge of the risks and management capability of NR and other players.





Recent European (& Canadian) accidents

John Gillespie

RIHSAC 15 October 2013

The incidents in July 2013...

- 6 July Lac-Megantic in Quebec
 - runaway 72-car crude oil-laden freight train part derailed causing a explosion and fire that destroyed 40-buildings and killed 47-locals.
- 12 July Breitigny-sur-Orge, France
 - passenger train derailed at high-speed on a fishplate jammed in a crossing and came to rest under the station canopy, killing six and injuring 62.



The incidents of July 2013...

- 25 July Santiago de Compostela, Spain
 - Over-speeding passenger train derailed at high-speed killing 79 and injuring 94 passengers
- 29 July Granges-pres-Marnand, Switzerland
 - two passenger trains collided head-on after SPAD killing one driver and injuring 35-passengers.



Lac-Mégantic on fire, 6th July 2013

How did it happen?...

- The train was planned to be left unattended on a publicly-accessible running line which had no runaway protection (such as trap points, catch points or derailers), despite there being a downhill gradient towards Lac-Mégantic.
- Risks: tampering, vandalism, runaway.
- The train had been secured using handbrakes and by keeping one of the locomotives running to keep the air brakes operative throughout the train.
- Risks: handbrakes known to be inherently weak, unattended locomotive could have shut itself down at any time due to failure.



How did it happen?

- Loco shut down by the fire service due to a minor fire. Railway employee had been present. Railway control were aware.
- > Failing: locomotive not re-started after the fire
- After about one hour the air brakes leaked off and the handbrake forces were not sufficient to hold the weight on the gradient
- > Failing: foreseeable consequence



Could it happen here?



Likelihood affected by

> Industry structure:

- UK does not have vertically integrated 'shortlines'.
- a mixed traffic/operator railway gives discipline and visibility.
- Railway Group Standards apply.

> Industry good practice:

- dangerous goods trains are not left unattended on running lines.
- loops, yards and depots have trap points.
- handbrakes, air brakes, scotches are used
- Regulatory Regime



French passenger train derailment near Breitigny-sur-Orge station July 2013



Loose fishplate jammed in diamond crossing 200-metres before Breitigny-sur-Orge station

Supposed reason for overturning





Could it happen here?



Likelihood affected by...

- Fishplates not welds only used at 23 sites on 100mph lines to secure track to switches and crossovers. Enables rail expansion/contraction.
- Effective if well-maintained (including lubrication to ease movement): need regular ultrasonic-testing to identify development of tiny flaws within steel. Regular rail-head grinding removes flaws.
- Fishplate breaks were a historic problem and have increased 30% over the last three years but reversed in 2012-13.
- Network Rail has a longer-term plan to lose bolted rail ends and use welded joints for rails and switches and crossings.
- Lessons from Southall East derailment learned.



Spanish crash: Emerging investigation findings:

- No high-to-conventional line-speed design control transition (only effective above 124mph; train passed at 121mph); the driver was the sole speed-transition risk control;
- Driver distraction: he had been on the phone to a train guard seconds before crash;
- Hybrid train-set stability and crashworthiness concerns: top-heavy front diesel generator car seen to topple first and derail set. Articulated mid/rear cars jack-knifed and one lost structural integrity causing fatalities; and
- Poor passenger survivability: 79-deaths; too high ₇₂ for non-head-on derailment/collision.






Could it happen here?



Likelihood affected by...

- Signs/TPWS+ reduces over-speeding approach control at higher risk (line converging) junctions and signals.
- TPWS+, designed to bring trains travelling up to 100mph to a halt within the safety overlap, but ineffective (of stopping train within safety overlap) above 100mph.
- Historic British over-speed derailments on Morpeth curves; now 50mph TPWS-monitored speed restriction.
- Annually, 30-40 high-risk over-speed interventions; where TPWS intervened before driver braking. RSSB initiative to identify common 'over-speeding before significant line-speed reductions transition' sites.

Likelihood affected by....

- Known TPWS weaknesses.
- Need for careful future ERTMS to conventional line speedtransitions risk control
- GB uses passive interior passenger survivability approach; resisted in Europe, but supported by ERA. RSSB 2012 research
- Mobile phone usage banned here, but cases of driver distraction remain a focus of our work;



Swiss SPAD-caused passenger train collision July 2013



What happened?

- Train leaving station passed signal at red and collided with approaching train.
- Station staff possibly gave incorrect 'Right Away' signal.
- Driver killed, 35-passengers injured, five seriously.
- On-going 'Swiss RAIB' investigation. Plans to accelerate ERTMS fitment.



What happened?

- Swiss SIGNUM automatic train protection system is only partially effective at reducing SPAD risk:
 - It only has a warning/stop function, no over-speed supervision, and no departure-stop function when combined with a station passing loop.
 - System is designed to slow down a train passing a red signal; often not before it reaches a potential conflict point. Simplified station signal layout has only one departure signal for all its tracks.
- Perhaps surprisingly, there have been other similar incidents on Swiss railways in 2013.



Could it happen here?



Likelihood affected by....

- Driver Reminder Appliance (DRA), the driver must proactively reset before the train can move.
- TPWS which is designed where track and infrastructure layouts allows – to automatically stop trains within the safety overlaps and before it reaches a potential conflict point.
 Weaknesses:
 - "Reset and continue" (few)
 - In-service monitoring poor
 - Coverage of TPWS: only effective where fitted & up to 75-100mph;
 - Trains travelling above 75-100mph could reach conflict point.



Summaryindustry & ORR must focus on the risk controls and their efficacy with crashes in mind..



CE OF RAIL REGULATION



European Safety Policy update : RIHSAC

Alan Bell

15 October 2013

4th Railway package : background

- European Commission "rail markets stagnating or declining"
- Few new rail services
- Measures needed to encourage innovation & open markets
- Technical Pillar covers safety and interoperability



4th Railway Package – interoperability (I)

- issue being addressed : delays in vehicle authorisations & costs for industry
- Irish Presidency text 'general approach' reached
- significant change from original EC proposals
- European Parliament amendments not yet considered



4th Railway Package – interoperability (II)

- > area of use declared by RU
- for cross-border vehicles, ERA issues authorisation to place on the market
- if vehicle is to be used in only one member state (MS), applicant can choose ERA or NSA
- RU then checks compatibility for area of use
- Board of Appeal for applicants
- Fixed installation signalling authorised by ERA (other types of infrastructure by NSAs)



4th Railway Package – Safety Directive (I)

- > delays in safety certification also seen as problem
- EC proposal to move to single safety certificate (no part A / part B)
- Presidency proposal align with 'general approach' on interoperability



4th Railway Package – Safety Directive (II)

- > applicant declares 'area of operation'
- ERA delivers certificate if area of operation is in more than one MS
- ERA consults all relevant NSAs to assess compliance with national rules
- if operation is in one MS only, applicant can choose ERA or NSA



4th Railway Package – Safety Directive (III) Alternative suggestion by some MS

- For cross-border services, certificate delivered by 'lead NSA' which consults other NSAs within the area of operation
- if operation is in only one MS, certificate delivered by the NSA for that MS
- > mutual recognition of certificate by NSAs
- > arguments on why safety certification differs from interoperability
- > alternative could avoid conflict of roles for ERA?
- > simpler processes? Avoids need for ERA charging regime



4th Railway Package – Safety Directive (IV) Other changes

- extension of duties to other actors, including consignors, loaders, fillers, unloaders, unfillers etc.
- Proposed extension of mandatory certification to ECMs for other vehicles (already applies to freight). And to maintenance workshops
- > restrictions on ability of MS to introduce new national rules
- > removal of many existing national rules & transparency of remaining ones
- SMS changes and further specification of assessment criteria for safety certification
- > general approach expected to be agreed in October



Other developments

- revised Common Safety Method for risk evaluation & assessment [in force but only applies from 21st May 2015]
- CSMs for supervision & monitoring [apply from 7th June 2013]
- Train Driver Licensing applies to new domestic services from 29th October 2013 (all drivers from 29th October 2018)





The railway in Parliament

John Gillespie

15 October 2013

Highlight...

- House of Commons Transport Select Committee inquiry into level crossings.
- Forthcoming consultation document on revised regulations on train protection & other matters.



The reality is that people need to cross the railway....

....with....

- More trains running faster
- More road traffic
- Bigger farm machinery crossing more often
- More pedestrians with modern behaviour living with a faster pace of life.



Our approach is to...

- 1. Help closures happen
 - All risk assessments of crossings to consider closure first
- 2. Better risk assessment by Network Rail. Check people understand the risks and controls
 - Competent people leading risk assessments
 - All parties working together to consider risks and controls
 - Businesses, TOCs and users
 - A risk management plan for each crossing
 - Influencing behaviour of users and perception of risk.



Our approach is to....

- 3 Encourage innovation and new technologies
 - In bridging & underpasses
 - > In level crossing design and fitment
 - > In specific controls at each crossing
 - > one-size-fits-all "types" of crossing do not fit
- 4 Oversee Network Rail ring-fenced spend to reduce risk at level crossings in the next 5 years.
- 5 Implement the Law Commission improvements to the law on level crossings.



Summary

- > We expect the rail industry to achieve:
 - > Effective, collaborative risk assessments
 - Focus first on closure possibilities
 - Innovation in controls
- …leading to reduced risk, and reduced harm…
- ...and a better performing network, with fewer delays caused by level crossing collisions or near hits.



Consultation document on changes to Regulations...

- Origins in Government "Better Regulation" and "Red Tape Challenge"
- > Three sets of Regulations:
 - Train protection
 - Miscellaneous provisions (brakes, fencing, communication chords etc)
 - Metrication
- > To one set:
 - Train protection

