Influencing user behaviour at level crossings
ILCAD 2018
Where have we come from

Level Crossing Risk Indicator Model - National
What have we done so far?

Since April 2009

- Invested over £200m
  - Closed 1126 Crossings
  - Reduced the status of 70
  - Introduced over 100 dedicated Level Crossing Managers

- Completed the Level Crossing Safety Improvement Programme
- Initiated the Level Crossing Risk Reduction Fund Programme
- Initiated Level Crossing Prioritised Technology Programme

- Launched a number of Safety Awareness Campaigns
What are we up against?

“I have lived here for 20 years I know when the trains are coming”

“I saw the red light but couldn’t see a train coming so I went for it”

“I was running late to pick my daughter up from school; I couldn’t be late again”

“Yeah, the train passed about a minute ago”
Research

Network Rail and RSSB research including:

- T335 – Improving road user and pedestrian behaviour at level crossings
- T730 – Understanding human factors and developing risk reduction solutions for pedestrian crossings at railways stations
- T756 – Research into traffic signs and signals at level crossings
- T983 – Research into signs at private crossings
- T984 – Research into the causes of pedestrian accidents at level crossings and potential solutions
- Network Rail Willingness to wait
Research into signs and signals at public road level crossings

- **Overall aim**
  - Investigate signs, signals, markings and other road design elements that best convey the particular points of information that road users need when approaching level crossings

- **Two phases**
  - Review current signs and signals and provide improvement suggestions
  - Further develop the suggestions from Phase 1

- **Key results**
  - Minimise the variety of signs at that level crossing users need to see, read, interpret, and respond to
  - Clearly delineating road users' decision point so that it is separated from the level crossing surface and the area directly below the barriers (if fitted).
  - Using a well-understood audible warning
Research into the causes of pedestrian accidents at level crossings and potential solutions

► Objectives were to
  • Establish the causes of pedestrian accidents at level crossings
  • Improve or promote any existing, and identify any new mitigations that offer cost-effective solutions to reduce pedestrian risk

► Conclusions were
  • Establish reliable, low cost active warnings to upgrade passive crossings
  • Provide good surfaces at all crossings
  • Target busy station crossings
Willingness to Wait

Research into the willingness to wait at MSL crossings

► Objectives were to

• Identify an evidence-base that will inform suitable maximum waiting time limits
• Identify and prioritise the range of factors that influence willingness to wait
• Identify, evaluate and prioritise options for the willingness to wait violations

► Conclusions

• Red Light Traverse behaviours are complex, certain behaviours dominate – often well intentioned behaviours
• Behaviour is driven by anticipated waiting times
• Using education and enforcement initiatives

A better railway for a better Britain
Understanding From Data

<table>
<thead>
<tr>
<th>Accident category</th>
<th>SRM modelled risk (FWI / year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road traffic accidents</td>
<td>0.04</td>
</tr>
<tr>
<td>Public struck or trapped by crossing equipment</td>
<td>0.12</td>
</tr>
<tr>
<td>Public slips, trips and falls</td>
<td>0.29</td>
</tr>
<tr>
<td>Train occupants</td>
<td>0.21</td>
</tr>
<tr>
<td>RV occupants in collisions with train</td>
<td>1.66</td>
</tr>
<tr>
<td>Passenger struck by train on station crossing</td>
<td>0.29</td>
</tr>
<tr>
<td>Public pedestrian struck by train</td>
<td>5.59</td>
</tr>
</tbody>
</table>

- Fatalities
- Major injuries
- Minor injuries
- Shock and trauma
Understanding From Data

User behaviour should be measured by more than just accidents

Near Misses, Incorrect Usage

- Near misses with road vehicles
  - Decreasing trend
  - Easier to influence

- Near misses with pedestrians
  - Slight increase
  - Better reporting?
Understanding From Data

Narrative Risk Assessments

- Census
  - Number of Vehicles?
  - Number of Pedestrians?
  - Vulnerable Users?
    - Location
    - Demographics
What have we done?

Used Technology

- Miniature Stop Lights
- Covtec SAWD
- Standing Red Man
What have we done?

Used Technology – Overt Enforcement Cameras
Previous Education Campaigns

Cyclists please take care

In the last five years cyclists were involved in 143 incidents on level crossings. Be safe and take care.

1. The amber lights at road level crossings mean STOP. It’s tempting to glance, but don’t do it – you’re putting your and everyone else’s safety at risk.
2. Don’t assume there is only one train at a time看你经验 to a guessing game. When the train is crossing, traffic rules come into effect. Do not cross the road while the lights are on. At footpath crossings, check both ways before crossing – there is no train coming, don’t cross.

User worked crossing with telephone

- Keep your phone within easy reach of the crossing,
- Cross the level crossing
- If you can’t wait for the train, call your phone
- You can’t use your phone while crossing

Please stay alert

- It’s easy to get distracted, especially by listening to music. If you’re in a group, don’t assume that someone else is looking out for you. Stay alert and listen.
- Check that the path is clear before crossing.

Remember, on the footpath crossings, there is a risk of pedestrians suddenly appearing on the path.

Network Rail asks safety.

National Helpline: 0845 711 4441
networkrail.co.uk/livelocrisings
Drivetech Driver Education Course

What happens

► Classroom based
► Based around four key principles of offending
  • Driver behaviour
  • Personal responsibility
  • Hazard perception
  • Improving driving skills
► Interactive
#BOSSINGTHECROSSING

13 week campaign

► Sensory Impaired
► Young People
► Cyclists
► Dog Walkers
► Parents

Lives can change in a split second.
Carelessness can kill. Look, listen and live.

For more information about level crossings visit www.networkrail.co.uk/pedestrians

#BossingtheCrossing
At 17, Lucy was an aspiring hairdresser using the railway every day – that all changed in a split second when she was hit by a train on a level crossing.
#BossingtheCrossing
Thanks