



**LEVEL CROSSINGS – CONTROL OF RISK DURING ‘QUIET HOURS’
AT CROSSINGS EQUIPPED WITH WHISTLE BOARDS**

Open Government Status		Fully Open	
Date of issue/last review	10 April 2008	Date of next review	10 April 2010
RGD postholder/owner		Level Crossing Topic Strategist	
National Team (where appropriate)		Level Crossing NET	
RGD cleared by		Deputy Chief Inspectors Policy and Operations	
RGD type		Policy_____	<input type="checkbox"/>
		Information_____	<input checked="" type="checkbox"/>
		Procedure_____	<input type="checkbox"/>
Target audience		HMRI_____	<input type="checkbox"/>
		Policy_____	<input type="checkbox"/>
		Inspectors_____	<input checked="" type="checkbox"/>
		Admin_____	<input type="checkbox"/>
Assign to block		Process/New Legislation_____	<input type="checkbox"/>
		Topic/Technical_____	<input checked="" type="checkbox"/>
		Stakeholder Management_____	<input type="checkbox"/>
		Legal_____	<input type="checkbox"/>
		Business Support/Transition__	<input type="checkbox"/>
Keywords Level Crossing; Train Horns; Rule Book; Quiet Hours			
Summary			
<p>This Rail Guidance Document gives background and guidance to HMRI inspectors assessing protection at level crossings where whistle boards form part of the protective measures.</p> <p>As an outcome of RSSB-led studies into the effects of train horn noise prompted by increasing numbers of complaints, the Rule Book was amended. As from 1 December 2007 train drivers are instructed not to routinely sound train horns when passing whistle boards between the hours of 23:00 and 07:00.</p>			
Consultation Level Crossing Working Group; Deputy Chief Inspector Operations; Deputy Chief Inspector Policy;			

Background

1. Train whistles and horns have traditionally been used to warn level crossing users where sighting of approaching trains is less than needed to give adequate warning of train approach [RSPG 2E Chapter 11]. On the national network there are around 1250 crossings where whistle boards form part of the protective arrangements.
2. In recent years train operators have introduced new rolling stock with louder horns and noise complaints from residents, MPs, local authorities and the Noise Abatement Society have increased. Although the concerns relate more widely than level crossings, much of the attention has been focused on routine use of horns at whistle boards on crossing approaches.
3. The industry response to the complaints was co-ordinated by RSSB. They commissioned research to improve understanding of the issues surrounding use and effectiveness of whistle boards, the health effects of train horns noise on those living close to the railway, and the feasibility of alternative approaches to managing the risks.
4. The researchers found, among other things, that the average safety benefit of whistle boards was low, but that they could be justified on cost-safety benefit grounds because of their low cost. At certain high-risk crossings the safety benefit was acknowledged as being much greater, by perhaps up to 100 times the average.
5. Statistics published in RSSB Research Report T668 'Train Horns Risk Review' show an average 2.5 fatal accidents and about 30 near misses occurred annually at whistle board crossings between 2001 and 2005. Of the order of 10% of the incidents and a lower proportion of near misses took place between 2300 and 0700.
6. Researchers also found significant impact on the health of people living near to whistle boards. The main health effects were the result of sleep deprivation and in some cases this led to chronic outcomes. The scale of the problem had increased since louder horns were introduced.
7. In 2006 RSSB formed the cross-industry Train Horns Steering Group (THSG) with membership drawn from RSSB, Network Rail, TOCs, FOCs, ATOC and ORR. The group reviewed the research

findings and published its recommendations in December 2006. These included that the industry should:

- introduce a night time quiet period, between 2300 and 0700 when trains will not routinely sound their horns at whistle boards; and
- require where technology is available, drivers to only use the low tone from two tone horns at whistle boards.

8. THSG made other recommendations related to risk assessment, crossing review, criteria for installation of whistle boards, guidance on horn use and rolling stock technical requirements.

9. The quiet period and low tone recommendations were accepted by the industry and implemented by changes to Rule Book Module TW1 that came into force on 1 December 2007.

10. During consultation on implementing the recommendations ORR commented that a blanket quiet hours restriction on the use of horns at whistle boards could result in inadequate control of risk at crossings with significant night time or early morning use. ORR believed the number of crossings so affected was likely to be small.

11. This opinion took into account research reported in T668 which identified that whilst the collective night-time user risk was low at most crossings, there may be a small number used for routine pedestrian night-time access or crossed by a larger number of trains where collective risk is greater.

12. As a result of the consultation Network Rail gave an undertaking to review the risk at each crossing and implement reasonably practicable measures to ensure continued satisfactory risk control.

13. Health and safety law requires that crossing users are not exposed to risks to their health and safety so far as is reasonably practicable. Risks should be assessed and controlled on a site specific basis and there is no provision for blanket adoption of measures based on a national average risk assessment.

14. The key to satisfactory risk control is the provision of adequate warning of train approach to crossing users at all crossings. The

minimum warning time needed at each crossing is calculated from the crossing width and a traverse speed appropriate to the type of user.

15. Where this warning time is not available by sighting alone additional measures are required. Paragraph 149 of RSPG 2E 'Level Crossings' states:

“Where warning time is insufficient, additional protective equipment may be provided as follows:

- a) audible warnings from trains – whistle boards positioned at not more than 400 metres from the crossing
- b) telephones (only applicable at bridleway crossings); or
- c) miniature stop lights.

16. Subsequent paragraphs give further guidance on the use of these alternatives, including the need to take into account objections to train horn noise.

17. RSPG 2E provides guidance for level crossing operators and is not intended to limit the choice of solutions available to them. RPSG 2E does not mandate the use of whistle boards. Alternative methods to those listed should also be considered in achieving adequate warning time, where possible by improving sighting distances.

18. Further information and reports from the THSG research can be found via the community relations section of the RSSB website at http://www.rssb.co.uk/community_relations/index.asp

Guidance

19. Inspectors are most likely to come across this issue when dealing with complaints from people who use crossings late at night or early in the morning. For example HMRI has already been contacted by early morning dog walkers who use foot crossings.

20. Inspectors should ensure that Network Rail has carried out the risk review referred to at paragraph 12. The risk and protective arrangements at level crossings should be assessed on the basis of the local situation, including issues relating to railway operation, crossing use, and the built and natural environment.

21. Where there is minimal foreseeable use of a crossing between 23:00 and 07:00 simple adherence to the quiet hours rule without additional measures is likely to be acceptable.

22. Where there is greater foreseeable crossing use between 23:00 and 07:00 the protective arrangements should include measures to provide adequate warning to users of train approach.

23. The measures adopted should take into account the general principles risk prevention in Schedule 1 of the Management of Health and Safety at Work Regulations 1999, where avoidance of risks is given precedence over procedural controls such as requiring drivers to use the train horn.

24. Legal closure or replacement with a grade separated alternative should be the first consideration, although such are unlikely to be reasonably practicable and be adopted only in exceptional cases.

25. Where reasonably practicable the crossing operator should provide adequate warning time through sighting. This may be achievable by clearance of lineside vegetation and other obstructions, or by reduction in line speed.

26. Where adequate warning through sighting cannot be achieved the crossing operator should consider implementing other measures to reduce risk so far as is reasonably practicable. Priority should be given to measures which will not cause disturbance to local residents, such as installing miniature warning lights.

27. Selective reintroduction of night-time use of train horns remains an option for those crossings where risk is significant and the safety benefit will not be outweighed by the ill-health effects. However Inspectors should note that there is currently no agreed format for a night-time or 24-hour whistle board or a rule to manage adherence to such an instruction. HMRI would therefore require such action only where all other avenues for controlling risk have been exhausted and agreement has been reached between all the railway undertakings involved.

28. The selection of appropriate controls is a matter initially for the crossing operator. Because of the difficulties in managing two types of whistle board instructions, Network Rail are opposed to the selective reintroduction of routine night time use of the train horn. Inspectors can advise, but should avoid specifying particular solutions and not advocate the general adoption of practices that do not conform with Railway Group Standards such as the Rule Book.

29. Inspectors should consider formal enforcement where there is a reluctance to secure proper risk control.