

# ON THE LEVEL

**There has been much discussion about the safety of miniature stop light level crossings in *Rail Professional*, following the death of two teenage girls at a crossing last year in Elsenham, Essex. Veteran railwayman Stanley Hall looks at whether different wording on warning signs or a change in protocol could cut down on accidents**

Up and down the country, railways crisscross over roads and footpaths. Millions of pedestrians and car drivers obey the warnings and get themselves safely across the tracks without incident each day. But every so often there is a tragic accident; perhaps because the pedestrian or driver has disregarded the warnings, or perhaps because of mechanical failure on the part of the road vehicle. However, occasionally people lose life or limb because they have misunderstood the written instructions, warning lights, sirens or all three.

A common problem is that when two trains pass in quick succession, crossing users may wrongly believe it safe to cross after the first train has gone. Is there more that could be done to make level crossings less ambiguous?

Miniature stop light equipment (MSL) consists of small red and green lights mounted on a white backboard at each side of the crossing, normally on the far side of the crossing facing towards the tracks so that the crossing user can see them. At Elsenham the MSL are at the side of the entrance gate. When no train is approaching, the green light is illuminated, and when an approaching train 'strikes-in' at a pre-determined point, the red light is illuminated and the green light is switched off.

At some MSL crossings, such as Elsenham, an audible alarm sounds as long as the red light is lit, but most do not have one. Users are instructed to cross only when the green light shows. Until recently, these crossings were referred to as miniature warning light (MWL) crossings.

This type of equipment was introduced in the late 1960s and was originally intended for

use on lightly-used public road crossings as a cheaper alternative to automatic half barrier crossings. Gates were provided which were intended to be opened and closed by the crossing user, and at a few locations lifting barriers were provided which were pumped up by hand by the crossing user.

The latter variety was discontinued at public road level crossings, however, because members of the public sometimes left the gates open or the barriers raised, but began to be installed at public footpath crossings, especially on high-speed lines. In 2005 there were 129 user-worked crossings with MSL.

In 2005, nine pedestrians were killed when crossing the line, as follows:

- One person on manually controlled barriers with CCTV
- Two people at automatic half barriers
- Three people at user-worked crossings with MWL (including two at Elsenham)
- One person at a user-worked crossing
- One person at a user-worked crossing with telephone

**'It is ironic that by providing miniature stop light equipment, most of the need for crossing users to look out for themselves has been removed, thus reducing the need for vigilance. Safety now depends upon the users' unquestioning obedience to the lights'**



Miniature stop lights at the Elsenham crossing.

- One at a footpath crossing.

From April 2003 to March 2004 the number of pedestrians killed was also nine.

The footpath crossing at Elsenham station was equipped with MSL in 1989-90 following two fatalities at crossings in the area. The minimum warning time should be at least five seconds longer than the time required to traverse the crossing. There should be self-closing wicket gates, opening away from the railway.

There are several other factors which could be taken into account, if we are to consider how crossings may be made safer.

Firstly, should train drivers sound the horn when approaching a foot crossing at a station? This might not be considered necessary when MSL are provided, because the lights themselves provide warning of an approaching train. However, there was a separate rule requiring drivers to sound the horn when passing a train standing at the opposite platform.

The rule (6.2.1) required the driver 'to sound the horn as a warning when approaching... a station where there is another train standing on a line which is immediately adjacent'. It was a rule of very ancient lineage designed to warn people who may be crossing the line behind a train oblivious of one coming the other way. The rule was abolished a couple of years ago in order to placate residents complaining about the noise.

But consideration could be given to reinstating the requirement where there is a footpath crossing at a station, denoted by the erection of a special whistle board. And to avoid confusion perhaps every train should whistle whether or not there is another train there.



The pedestrian crossing at Elsenham, next to the road crossing, keeps pedestrians away from traffic and allows them to cross for a few seconds after the road crossing has closed.

The actual wording on the notice at a crossing could also be reviewed to see if the warning can be made any clearer. The notices currently read 'Cross only when the green light shows'. Ought it not to read 'Do NOT cross when the red light shows'? That would be more positive. There should also be some reference to the 'second train coming' situation, something like: 'If it remains lit, another train may be coming.'

Another possible problem is the amount of warning given to crossing users. The red light shows when a non-stopping train is only 20 seconds away. That provides remarkably little margin of error. Plus, locking the wicket gates when a train is approaching is a solution that some critics have proposed – Chris Bazlinton, the father of one of the girls killed at Elsenham, has been campaigning for the gates to be locked at Elsenham. In fact, MSLs are an alternative and avoid the need to lock the gates. The problems that would be created by locking the

gates have been aired already on these pages – namely the risk of pedestrians getting stuck if the gates lock when they are on the crossing.

At Elsenham the red light ceases to show as soon as the rear wheels of a train have passed a few yards beyond the crossing, therefore a train standing in the down platform would not cause the MSLs to remain at red. But this may not be common knowledge.

At Elsenham an audible warning sounds whilst the red light is lit. It could be an advantage, as has been suggested elsewhere, if the approach of a second train were to be announced by a change in the character of the audible warning as soon as the first train arrives at the crossing.

The attention of crossing users will need to be drawn to this arrangement by, say, adding the words 'and the audible warning will change' to the suggested wording above, plus something like: 'If it remains lit, another train may be coming and the audible warning will change.'

The red and green lights and all the wording should be contained on one board.

At most footpath level crossings, users have to look out for their own safety, and self-preservation is a powerful human instinct. It is ironic that by providing MSLs, most of the need for crossing users to look out for themselves has been removed, thus reducing the need for vigilance. Safety now depends upon the users' unquestioning obedience to the lights. In other words, it is essential not to speculate why the lights are doing this or that, but to obey them without question.

The alternative is to close the foot crossing entirely and require passengers, and other pedestrians, to use the road crossing, which would be very unpopular.

How does one get that message across?

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*Stanley Hall is a former signalling and safety officer for the British Railways Board and a fellow of the Institution of Railway Operators.*