

Network Rail responses to Plumpton Parish Council questions are as follows: -

Q. How far from crossing will be protecting signals be?

A. On the Up line (towards Haywards Heath) the protecting signal is 1,118 yards (1,022 metres) from the crossing; this distance will be assessed. The protecting signal on the Down line (towards Lewes) is 39 yards (36 metres) from the crossing; there is no requirement to assess this distance.

Q. What happens if an incident occurs on the crossing after the barriers are lowered and the train has passed the protecting signal?

A. The normal practice of lowering the barriers and releasing the protecting signals will apply, i.e. the signaller at Three Bridges Signal Box will lower the barriers, check that the crossing is clear, pressing the crossing clear button, before the signals can be cleared. During this time he will have a clear view of the crossing on the CCTV monitor, which can be set to remain on until the train has passed through the crossing and the barriers have been raised. The area is covered by the cab secure radio (CSR) system; the signaller will be able to alert the train driver.

Consideration will also be given to providing signs showing the telephone number to contact the signaller or providing telephones with a direct line to the signaller, though this is not normal practice for MCB(CCTV) crossing.

If a road vehicle hits the barriers, the barriers are designed to shear, which breaks a circuit causing an alarm to be raised in the signal box. However, it should be noted that once the train has passed the protecting signal, the time taken to arrive at the crossing is short, and in this respect the barrier crossing is no different than the current gated crossing.

Q. What measures will be in place to mitigate the risk of a train failing to stop at the protecting signal?

A. The normal practice is to have the barriers lowered, the level crossing proved clear of road users (and obstacles) and the railway protecting signals cleared before a train arrives at them, thus avoiding the need for a train to stop at a signal.

However, if they are not, the signals are fitted with AWS magnets as part of the automatic warning system (AWS). The system alerts the train driver that he is approaching a signal, and should reduce the likelihood of a train passing a signal at danger (SPAD).

Railway Safety Principles and Guidance states that if a train passes a protecting signal displaying a stop (red) aspect, the road traffic light signals should immediately show an intermittent red light, omitting the steady amber phase, and the audible warning should start. This is incorporated into all our circuit design for controlled crossings protected by railway signals.

In addition, during our design process the signals will be assessed for the risk of being passed at danger, and if necessary SPAD mitigation measures will be considered.

Q. In an Up Direction, many trains come to a stand across the level crossing. Is this permissible with the type of crossing proposed?

A. Yes, it is permissible and it does happen at other barrier crossings too, and is no different than the current gated crossing.

Q. What are the comparative whole life costs of retaining the existing crossing compared with installation of new barriers and associated infrastructure?

A. The capital expenditure for converting the crossing to barriers and controlling it from Three Bridges Signal Box using CCTV to view it, is likely more expensive than renewing the crossing as a gated crossing, even with needing to make bespoke parts for the latter.

At this stage we do not have an estimate for renewing the crossing as a gated crossing because we would not normally consider this option, rather we would seek to modernise the railway when renewal of equipment provides an opportunity. However, given the unique circumstances that the listed status of the signal box (and associated gates) gives us, we are going to make a more detailed study, which will include cost estimates for all options.

Converting the crossing to barriers does yield operational cost savings by not manning Plumpton Gate [signal] Box. This conforms to a strategy agreed with the ORR to reduce costs of running the railway that will ultimately benefit passengers and tax payers.

Q. When comparing the safety risk, what are the respective calculated risk values of each scheme? (proposed versus existing).

A. The current risk assessments show that the collective risk for the gated crossing is $9.21E-05$ FWI per year, and for the MCB-CCTV it is $5.25E-05$ FWI/ year – see below for a graphical comparison of various types of level crossing. These assessments are in the process of being updated with information from the census that was undertaken in September 2009: the results will be included in the study mentioned about.

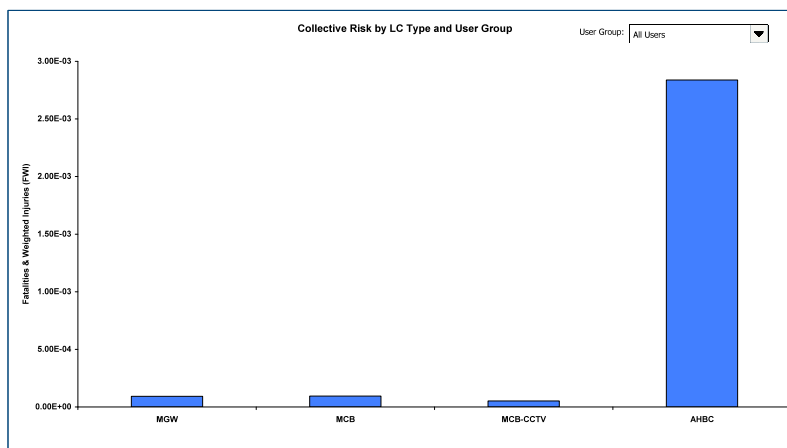


Figure 1: Estimated Collective risk by Crossing Type

Q. At present, the highway over the crossing is in the form of a dogleg. Will this be straightened as part of the proposed scheme?

A. It is proposed to straighten the “dogleg” in the road over the crossing as much as practicable [see the indicative sketch in the presentation].

Q. If it is not straightened, how will you mitigate against road users who fail to negotiate the dogleg and end up on the anti-trespass guards. (Currently road users are guided through the crossing by the open gates).

A. Very much the same way that drivers are guided on other parts of the road by using road markings. The advance warning signs shall also warn drivers of the level crossing and they should alter their speed accordingly.

- Q. How will traffic be managed on race days? At present, the signaller can open his window and speak to the attendant's managing access/egress to and from the Race Course. He can also communicate verbally with car drivers etc.
- A. The signaller's role does not include traffic management; however on race days we will consider manning Plumpton Gate Box, which we intend to keep operational as an emergency box for times of rail disruption. This will be considered in detail in the study that we are doing. A panel with controls for the crossing will also be installed in the gate box – a local control panel is standard practice for all remotely controlled level crossings, though this is normally located in a small lockable box adjacent to the crossing.
- Q. On race days, there is a high number of pedestrian users. What arrangements are proposed to ensure their safety? (RSP section 12 refers).
- A. Whilst the pedestrian use on race days is higher than other days, it is still low compared to other level crossings – see below. When designing a new layout for the crossing the pedestrian numbers and frequency of trains shall be considered, this will determine the footway widths and whether or not other measures to prevent pedestrians walking on to the road way are necessary, though the latter is probably not. Nonetheless, as stated above, consideration to manning the gate box on race days will be made.

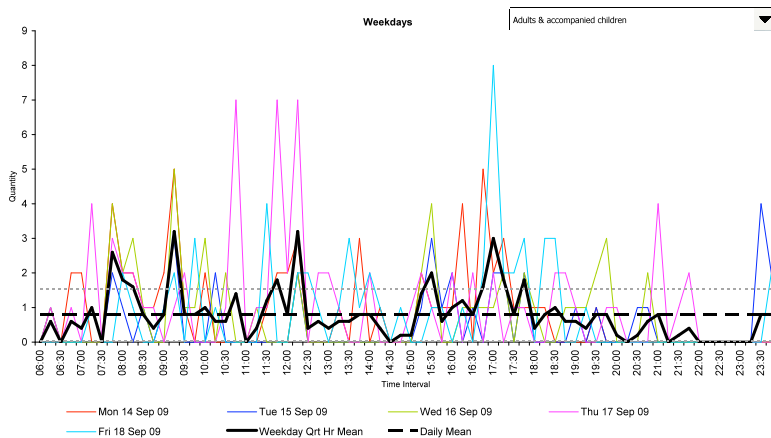


Figure 2: Plumpton LC Census (14 to 20 Sept-09) Weekday Pedestrian Use

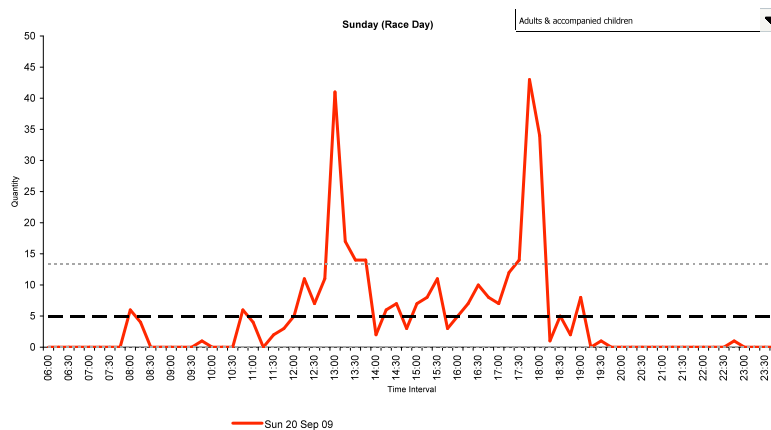
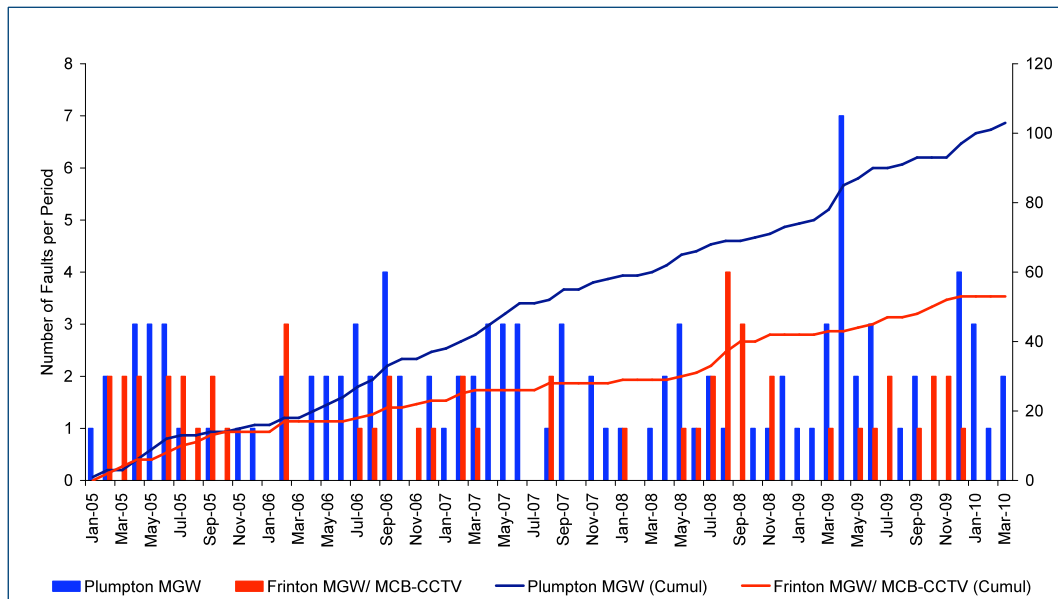


Figure 3 Plumpton LC Census (14 to 20 Sept-09) Race Day

- Q. What is the comparative failure rate of barrier crossings on the type proposed compared with gated as existing?
- A. See the comparison with Frinton Level Crossing, which was converted from a gated crossing in April 2009: -



- Q. Will the power supply for the crossing lighting be protected against failure? Recent power cuts have left the station and signal box in darkness?
- A. The electrical supply for the floodlights will be from the distribution network operator (DNO) supply. Whilst we are aware that there have been problems we are confident that EDF Energy can provide a satisfactory level of supply. However, if the supply does fail and the signaller cannot see the crossing, the level crossing will be operated under local control by a Mobile Operations Manager (MOM). Until MOM arrives this would cause a disruption to train service, not road traffic, and at no time shall the safety of the crossing be compromised.
- Q. Presumably monitoring of the crossing will be an additional workload for an existing employee at Three Bridges. How do you ensure that he/she can provide the necessary focus on Plumpton?
- A. Any change to a signaller's duties or workstation must be assessed. An ergonomics assessment concludes that the signaller working panel 5 at Three Bridges Signal Box will be able to manage the additional workload.
- Q. How does User Misuse (road vehicle and pedestrian) compare between a barrier type crossing as proposed and the existing gated type? What lessons have Network Rail learned from Horsham Road and Crawley High Street?

See comments below from Network Rail (25 November 2009) in respect of barrier type crossings in Sussex.

'Ellie Reilly, community safety manager Network Rail said "Jumping the gates, swerving around barriers and ignoring warning signs is sadly a sight we see all too often, and in many cases with tragic outcomes. Level crossings are safe, but if misused, they are pose very real risks. Over the last two years we have seen significant misuse at these level crossings but we believe the 15 reported incidents is just the tip of the iceberg. This is why we are here today to drive home the message that running the risk at a level crossing is just not worth it.'

- A. The quotation by Ellie was made at a level crossing awareness event held at Horsham Road and Crawley High Street level crossings on 25 November 2009. Whilst these comments are relevant to these crossings they are the same message that Network Rail, British Transport Police and the relevant local authorities are trying to get across in the latest initiative in the "Don't Run the Risk" campaign.

For full details about the day and what was discovered see: -

<http://www.networkrailmediacentre.co.uk/Press-Releases/NETWORK-RAIL-ASKS-CRAWLEY-WOULD-IT-KILL-YOU-TO-WAIT-12e1/SearchCategoryID-8.aspx>

For further information on the Don't Run the Risk campaign and what we are doing see: -

<http://www.networkrail.co.uk/asp/2292.aspx>

- Q. Have Network Rail considered the higher likelihood of pedestrian user misuse on race days (alcohol related and crowding)?
- A. Yes, will consider manning the gate box on race days for ensuring that safety of the railway and crossing users is protected – see responses to the other questions about race days.

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