

## Proposed closure of Giles public footpath level crossing, Great Clacton

Giles level crossing is the point where public footpath No. 25 Great Clacton crosses the Colchester to Clacton-on-Sea railway line. Network Rail has applied to Essex County Council to close the public footpath element of the level crossing and extinguish the full length of the public footpath between Telford Road and Sladbury's Lane.

All level crossings present a risk to those using them. Network Rail therefore has a continuing programme of level crossing closures. Level crossing closures may be by way of extinguishment of the rights crossing the railway, diversion of the rights to another crossing point of the railway, or in some cases by providing a bridge or tunnel at or near the level crossing in question. Each site is considered on its own merits.

Below is Network Rail's explanation of the problems that exist at the level crossing and why we are proposing to extinguish it permanently.

### The Level Crossing

Giles level crossing is a passive level crossing. Its safe usage depends on users understanding and following the instructions displayed at the crossing. Users are instructed to Stop Look Listen: Beware of Trains. There are no lights provided. Stiles are provided in the railway boundary fence for public footpath users. The last ALCRM<sup>1</sup> assessment assigned the level crossing a risk of C7, with a FWI<sup>2</sup> of 0.00008.

Adjacent vehicular gates are provided to accommodate private rights of way for landowners, their tenants, and invitees. These private rights of way will be unaffected by the proposed public footpath extinguishment.

### Crossing time

Before crossing the rails, users are required to stop in a position of safety to check for approaching trains. The Stop Look Listen sign is located 2m from the nearest running rail and it is at this point, a position of safety, that users must stop, look, listen, and decide whether to cross. The crossing distance from this point to reach a point 2m clear of the farthest running rail is 9.1m. Allowing a walking speed of 1.2m/s, the time taken to cross the railway is 7.65s.

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<sup>1</sup> All Level Crossing Risk Model, being the approved quantitative level crossing risk assessment model for level crossings.

<sup>2</sup> Fatalities and Weighted Injuries: a measure of risk. A value of 1.0 is equivalent to 1 fatality per year, 8 Workforce Specified Injuries (RIDDOR 2013) per year, 40 severe injuries requiring hospital attendance per year, and so forth.

## **Speed and number of trains**

The passenger service on this line is two to four trains per hour in each direction in peak hours and two per hour off-peak. The line is also used for empty stock moves to and from Clacton-on-Sea.

The railway at this location comprises two lines of rails. Trains travel at up to 50mph (22.4m/s) on both lines. Trains run on the left-hand side. Trains towards Colchester/London are up trains, and trains towards Clacton-on-Sea are down trains.

## **Sighting of approaching trains**

To have sufficient time to cross the railway (7.65s) it is necessary to be able to see a train (from the decision point) travelling at 22.4m/s when it is 172m away. The available sighting from the up (west) side towards up direction trains is only 125m and from the down (east) side towards up direction trains is only 185m. This is due to track curvature and vegetation outside of Network Rail's control. Sighting is therefore insufficient.

Vulnerable users have not been identified at this level crossing, but if they were, Network Rail standards require addition of 50 % to the crossing time allowed, meaning users must be able to see an approaching train when it is 258m away from the decision point. This would make the sighting insufficient from three of four aspects.

## **Whistle boards**

To mitigate the insufficient sighting, whistle boards are provided on both lines. Trains sound their horns on approach to the level crossing.

Whistle boards are only ever a partial mitigation against insufficient sighting. Firstly, they are only effective between 06:00 and 23:59 each day; train horns are not sounded at night because of the local disturbance this can cause. This leaves a level crossing without any mitigation during the Night Time Quiet Period. Secondly, whistle boards require the train driver to obey the whistle boards, which introduces the risk of human error in providing the warning. Thirdly, whistle boards are not effective at warning people with hearing loss. Fourthly, the sound of a passing train may mask the sound of the horn of an approaching train on the other line.

## **Supplementary Audible Warning Device**

A Supplementary Audible Warning Device (SAWD) is provided which replicates the sound of the train horn at the crossing 24 hours a day. SAWD has a Safety Integrity Level rating of zero. This means it is not sufficiently reliable to be deployed as a primary mitigation. Therefore its sole function is to supplement the warning provided by the train horn. SAWD is now considered obsolete and will in due course be withdrawn.

## **Telephones**

Telephones are provided at the level crossing which connect to Colchester signal box. These enable users of the adjacent private vehicular level crossing to telephone the signaller to obtain permission to cross the line. Telephones are not provided for public footpath users.

## **Overhead electrification**

The railway is overhead electrified at 25kV. The latest railway standards require contact wire clearance of at least 4.04m above the rails at a level crossing. The clearance of the wires above the level crossing is 4.4m.

25kV electrification is capable of delivering a lethal electric shock if people make contact or get sufficiently close to it for current to arc.

## **Recorded usage of the Level Crossing**

A 41-day camera census was undertaken at the crossing from 15 September to 25 October 2022. 38 pedestrian traverses were recorded, giving average usage of less than one person per day.

## **Alternative Routes**

The existing onward highway connectivity on the east side of the railway from Giles level crossing requires use of national speed limit single carriageway roads without footways or verges. This may account for the very low recorded usage of the level crossing. The alternative routes for any pedestrians who did wish to travel between the west side of the railway and Sladbury's Lane and Holland Road on the east side of the railway following extinguishment of the public footpath are described below. These routes are of comparable standard to the existing onward connecting routes on the east side of the railway.

The nearest alternative crossing point of the railway to the north is the road over-rail bridge at Holland Road, which is reached via Telford Road, Stephenson Road, BR24 Great Clacton, and Holland Road. The total length of this route between the terminal points of the proposed extinguishment is approximately 2,800m. Holland Road is a national speed limit single carriageway road with various sections without footways or verges.

The nearest alternative crossing point of the railway to the south is Burrs Road level crossing, which is reached via Telford Road, Burrs Road, and Sladbury's Lane. Burrs Road is a manually-controlled barrier – closed circuit television (CCTV) level crossing. Road traffic lights are provided, along with barriers across the full width of the roadway. Trains cannot be signalled over the crossing until the signaller has confirmed via CCTV that the crossing is clear of obstructions following the lowering of the barriers. The total length of this route between the terminal points of the proposed extinguishment is approximately 2,200m. Burrs Road and Sladbury's Lane are national speed limit single carriageway roads with various sections without footways or roadside verges.

## **Diversion**

The proposed diversionary routes are already public highways of public footpath status or higher. There are no other suitable structures over or under the railway line that could be used as part of a diversionary route.

## **Installation of Technology**

Network Rail is seeking to phase out the use of whistle boards owing to the shortcomings detailed above. If the level crossing were to remain open a Miniature Stop Light system would be required. Miniature Stop Lights are activated by a train 'striking in' before the crossing, and then 'striking out' once they have passed the crossing. Any failure in the system, or a longer than anticipated dwell between the two points, whereby a train does not strike out with the time allowed, will lead to the Miniature Stop Lights going into 'dark mode', where no warning is shown to crossing users until another train can pass through to reset the system.

Miniature Stop Lights can also cause confusion when a second train is approaching. Users may wait at the red light to allow one train to pass, but fail to consider that there may be a train coming in the other direction even though the red light continues to show. This can be mitigated by a 'second train coming' announcement.

A Miniature Stop Light system would be expected to cost in excess of £250,000 to install, plus ongoing inspection, maintenance and renewal costs. Network Rail does not consider the installation of a Miniature Stop Light system to represent value for public money having regard to the very low recorded public usage of the level crossing.

## **Provision of a Bridge or Tunnel**

Whilst Network Rail considers that the route should be extinguished without provision of an alternative, the practicalities and cost of providing a grade-separated crossing of the railway are considered below.

The land in railway ownership close to the level crossing is very limited, which would make provision of a bridge or tunnel impossible without land acquisition from third parties.

A stepped footbridge would be the cheapest way to reprovide access across the railway.

Any footbridge maintaining a gradient of 1:20 would have to have long ramps to reach the required height to cross the railway.

A subway could be prone to flooding and could attract antisocial behaviour on such a lightly-used route close to a built-up area. It would involve much disruption in construction. Failure of drainage pumps could lead to the subway flooding.

A stepped footbridge would typically cost around £2m and a ramped footbridge around £4m.

A subway will typically cost more than a ramped bridge on account of the excavation and necessity of providing a structure to support the railway. It would still require some land to be purchased for the approaches to be formed. A budget of £5m would be conservative. The ongoing cost of drainage should also be considered.

## **Conclusion**

The level crossing has insufficient sighting for users. This is mitigated by whistle boards, supplemented by a Supplementary Audible Warning Device. These are only partial mitigations. Network Rail policy is to phase out the use of whistle boards owing to the shortcomings detailed above.

The installation of Miniature Stop Lights or a bridge or tunnel at this level crossing would deliver limited value for money when compared with similar interventions at other public level crossings with far higher levels of recorded usage.

Network Rail  
16 May 2023

OFFICIAL

Good afternoon Sarah

Further to the below, I have now heard back from the Level Crossing Manager. Network Rail's observations in respect of the objector's new comments are set out below. I will leave you to decide whether it would be helpful to pass these to the objector for further consideration. If you do not think that would be helpful Network Rail is happy for the case now to be referred to PINS.

Level crossing sighting

The following information will assist the objector in understanding the basis for the level crossing sighting calculations recorded in the application form and justification document.

- Network Rail standard NR/L2/XNG/001 (Issue 3) 'Provision and risk management of level crossings' and Network Rail Level Crossing Guidance Document LCG 01 (Issue 2) 'Completion of site visit and user census forms' set out requirements for risk management of level crossings, including level crossing sighting calculations. Network Rail standard NR/L2/XNG/30020/R03 (Issue 1) 'Requirements for station, footpath, bridleway and user-worked level crossings' sets out requirements for the design of footpath level crossings.
- The maximum permissible speed ('line speed') over and on approaches to this level crossing is 50 mph for passenger, parcels and postal trains and light locomotives and 35 mph for all other trains. Trains are permitted to travel at line speed, including through curves. Most train movements over the level crossing are of passenger trains.
- Sighting calculations must be based on highest line speeds (NR/L2/XNG/001 Appendix B para 7) rather than observed approach speeds. The latter can vary according to numerous operational factors. In any event, I have reviewed speed-stamped video footage from forward and rear facing on-train cameras to confirm actual train speeds over and on the approach to the level crossing. This confirms that trains can, and ordinarily would, attain 50 mph in both directions.
- Sighting measurements must be taken from the decision point (LCG 01 para 6.3.1). Where line speeds are  $\leq 100$  mph the danger area at a footpath level crossing extends to a point 2 metres from the nearest running rail. The marked decision point should be as close as practicable to the danger area (NR/L2/XNG/30020/R03 paras 3.6.2 and 3.6.3). At this level crossing the decision point has been positioned at 2 metres, which is as close as possible to the danger area, and is marked with Stop, Look, Listen signs, wing fencing and tactile paving.
- Sighting measurements must be taken at the distance at which the majority of the front of the train comes into sight. A visual estimate is not acceptable. The risk assessor must use a rangefinder and record where they measured the distance to. (LCG 01 para 6.3.2.) Some users may be able to recognise an approaching train before a majority of the front is visible, depending on various contingent factors such as site topography and layout, seasonal and meteorological variation, train type and the user's personal characteristics (e.g. height) and familiarity with the site. For example, a user may be able to discern the roof or pantograph of a train above

vegetation. Network Rail's methodology must account for the full range of users and sighting measurements based on such contingent factors would not be robust.

- Traverse times are based on a standard assumed pedestrian crossing time of 1.189 metres per second for a typical able bodied user at a level crossing with a deck (LCG 01 para 8.3.1 and Appendix A). Some users would, of course, be able to cross more quickly.
- As set out in the application form and justification document, which reflect the above methodology, sighting is insufficient from the up (west) side of the railway line looking to up (Colchester-bound) train approach. The limitations of whistle boards and the Supplementary Audible Warning Device as mitigations for this insufficiency are set out in the application form and justification document.

#### Suggested diversionary route from Burrs Road to east side of level crossing

The compensation payable to landowners for creation of a 2 metre wide field-edge path would be based on the loss of land value and the land taken out of production rather than the likely number of users. Landowners on the suggested route would require to be compensated for the creation of approximately half a mile of public footpath. There would also be costs for maintaining the new right of way, particularly vegetation cutting. Network Rail considers that this expenditure, whether funded by Network Rail through a commuted sum payment or shared with Essex County Council, is not justified having regard to the extremely low recorded usage of FP25.

Consideration would need to be given to whether the suggested footpath could be created via a public path creation order. Whether such an order would be expedient according to the statutory criteria would be a matter for Essex County Council. However, the lack of evidence of use of the existing footpath may militate against expediency. If the footpath could not be created by public path creation order Network Rail would be required to negotiate creation of the new footpath with the affected landowners on commercial terms.

The other level closures in Tendring to which the objector alludes relate to a different statutory regime, namely an order made under the Transport and Works Act 1992. This order can and does confer compulsory powers on Network Rail for the creation of new highways. In addition, the relevant level crossings had higher levels of usage than FP25 at Giles level crossing.

Kind regards

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