



TRANSPORT AND WORKS ACT 1992

**TRANSPORT AND WORKS (INQUIRIES
PROCEDURE) RULES 2004**

**THE NETWORK RAIL
(ESSEX AND OTHERS LEVEL CROSSING
REDUCTION)
ORDER**

SUMMARY

PROOF OF EVIDENCE

-OF-

ELIANE ALGAARD

Document Reference	NR28/3
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1. INTRODUCTION

1.1 My name is Eliane Algaard. I am employed by Network Rail as the Director Route Safety and Asset Management (DRSAM) on the Anglia Route ¹, responsible for overseeing all safety and asset management activities throughout the region. I am a Chartered Civil Engineer with over 20 years' experience in strategic planning and infrastructure asset management in the Water and the Rail sectors.

1.2 It is my role to actively drive the project to deliver the safety, maintenance and efficiency savings that the project set out to deliver.

1.3 The Network Rail national strategy for risk reduction is set out in the evidence of national strategic evidence of Mark Brunnen.

1.4 I will focus on the Anglia region and provide evidence on the following topics:

- Level crossings in Anglia
- Management of level crossings in Anglia
- Safety impacts
- Operational impacts
- Capacity and network development
- Anglia level crossing strategy
- Approach to selection of level crossings for closure
- GRIP process and consultation
- Address "in principle" objections
- Statement of Truth

1.5 Separate witnesses will provide more detail behind the site specific considerations for each level crossing and the diversion routes proposed.

2. EVIDENCE

2.1 Level crossings in Anglia

2.1.1 Anglia Route currently has 771 level crossings,² where the public, landowners, contractors, passengers and/or statutory undertakers cross, or could cross, the railway on the level. There are 203 level

¹ Network Rail has devolved day-to-day responsibility for railway businesses to eight strategic geographical routes. Anglia Route covers five main corridors through Greater London, Cambridgeshire, Essex, Norfolk and Suffolk

² As at 02/08/2017. This includes the following recent amendments: reclassification of Tip Sidings (MAH) as Internal Railway, recognition of Haltermann Carless as a level crossing, and closure of Northumberland Park.

crossings in the highway authority areas covered by this Order, being Essex, Havering, Thurrock, Hertfordshire, and Southend.³

- 2.1.2 This Order includes 6 User Worked Crossings, 54 public footpath or bridleway crossings, 1 public road crossing. Of the 54 public footpath or bridleway crossings, 51 are passive crossings requiring the user to decide for themselves if it is safe to cross.

2.2 Management of Level Crossings

- 2.2.1 The management of level crossings represents a significant staffing cost. Anglia route is divided into 14 Level Crossing Manager (LCM) zones. Each zone has between 50 and 76 level crossings with about 61 on average.⁴
- 2.2.2 The frequency of inspection varies by the type of level crossing, from a maximum inspection interval of 7 weeks for controlled crossings, to 6 months for footpath and bridleway crossings.
- 2.2.3 The reduction in the number of level crossings that needs to be managed will result in a reduction in headcount from 14 to 13 Level Crossing Managers. This would represent a saving of approx. £40,000 per annum for the removal of one Band 4 role.⁵
- 2.2.4 In addition to the LCM staffing costs, the assets themselves represent a significant ongoing cost to maintain the status quo.
- 2.2.5 If a complete renewal of the assets were required, this would represent £89,000 for a passive public footpath level crossing and £370,000 for the renewal of a user worked crossing with telephones (UWCT). These renewal costs have been taken from the national CP6 cost model (NR26).

2.3 Safety impacts

- 2.3.1 Risks are not equally distributed amongst level crossings. The risk at each crossing is quantified using the All Level Crossing Risk Model (ALCRM), explained in more detail in Mark Brunnen's evidence.
- 2.3.2 The total FWI attributable to the level crossings on Anglia route is 2.95, which is 25% of the overall national level crossing risk.
- 2.3.3 Across Anglia route in the financial year of 2016/2017, there were 567 recorded incidents of deliberate misuse/user human error, 79 near misses and 29 incidents of users not calling the signaller back when requested.

2.4 Operational impacts

- 2.4.1 In the event that a level crossing inspection identifies a defect or a non-compliance Network Rail staff will work together to complete

³ The figure for Hertfordshire includes level crossings on Anglia route only.

⁴ Note that this figure counts hybrid crossings, such as a UWC with a footpath through separate wicket gates, as 2 crossings.

⁵ Level Crossing Manager minimum salary: £32,256 (transparent pay grade 4B) + employer's pension contributions, NI, expenses etc.

any repair works required to bring the level crossing back up to a safe standard.

- 2.4.2 In the event of reported incidents it may be necessary to caution or stop trains, which has an impact on performance and reliability.
- 2.4.3 When certain track maintenance operations are performed, it is necessary to arrange a temporary closure of the level crossing. Diversion to grade-separated routes eliminates many of the occasions when temporary closure is required.
- 2.4.4 In addition to the asset inspections, the Level Crossings Managers have to carry out risk assessments.
- 2.4.5 There are a number of level crossings where Network Rail has eliminated the risk by closing them temporarily due to the crossing having non-compliant sighting, or because the furniture at the level crossing does not allow safe ascent and descent of the embankment or cutting necessary to reach the crossing.
- 2.4.6 Within the Essex Order there are 4 level crossings that are temporarily closed. In all cases Network Rail is seeking to extend the closures until such time that the level crossings can be closed through powers granted as part of the Order. In the case of E09 Elephant, E56 Abbots and E30 Ferry level crossings an integrated MSL would be required to provide suitable warning to users at a cost of £452,000 per crossing, based on the CP6 cost model (NR26).
- 2.4.7 If a level crossing has insufficient sighting, Network Rail may consider implementation of a temporary speed restriction (TSR). Within the Essex Order there is a TSR in place at Pagets level crossing on the Down line, which has added an additional 40 seconds in journey times for passengers travelling in that direction.
- 2.4.8 Network Rail has a statutory duty, as outlined in the proof of Mark Brunnen, to run an efficient railway. Level crossings are a significant risk to timetable resilience, where any asset failures or incidents can lead to train delays. Only by removing these interface points through the rationalisation of the level crossing network can we entirely remove this risk to the efficient and effective timetabled service.

2.5 Capacity and Network Development

- 2.5.1 Outside London, Anglia has the fastest growing employment in England, and in effect our services connect millions of people to city, town and country in a fast-growing region, vital to the City of London, and a gateway to three major UK ports and airports in London and the South East. The investment we are making as part of our current Railway Upgrade Plan seeks to improve passenger services and help deliver economic growth, reduce environmental impact and regeneration of communities.

- 2.5.2 Level crossings act as a constraint to any future enhancement scheme.
- 2.5.3 Fewer level crossings on a stretch of line means fewer sites requiring risk assessments, and fewer crossings requiring potential upgrades or closures to accommodate enhancements to the railway service.

2.6 Approach to the selection of level crossings for closure

- 2.6.1 On the commencement of Control Period 5 (CP5), in addition to the focus on the highest risk level crossings, Anglia Route also sought to obtain powers to rationalise the number of level crossings across the region through the closure / downgrade of multiple crossings, which is documented in the Anglia Crossing Reduction CRD (NR18).
- 2.6.2 This Order progresses level crossings that fall within phases 1, 2 and 4 of that CRD. These phases are being progressed first due to the minimal infrastructure investment required.
- 2.6.3 Network Rail identified this opportunity to rationalise level crossings, improving the resilience of the network, improving user safety and delivering better value for money through identifying where existing infrastructure could be utilised in the first instance for alternative diversionary routes.
- 2.6.4 In these cases the installation of costly new infrastructure, including bridges and underpasses, cannot be justified, when existing infrastructure can be utilised to deliver the same benefits at a fraction of the construction cost.
- 2.6.5 Network Rail will continue to progress schemes that utilise new technology to improve safety at level crossings, but this approach does not remove the safety risk or constraint on future growth on the network. It also requires a cost outlay for installation and an ongoing maintenance burden.
- 2.6.6 I consider that Network Rail's approach is consistent with the National Planning Policy Framework and with Essex County Council's relevant plans, strategies and policies.

2.7 GRIP process and consultation

- 2.7.1 Governance for Railway Investment Projects (GRIP) is Network Rail's project management and control process for delivering projects on the operational railway. It is mandatory for all projects. The approach is based on industry-wide best practice.
- 2.7.2 At GRIP stage 1 in 2015, Network Rail, with the support of design consultants Mott MacDonald, assessed the suitability of each of the level crossings that were initially placed in phases 1, 2 and 4.
- 2.7.3 In April 2016 Network Rail and our selected design consultants continued the development of the level crossing proposals.

- 2.7.4 The proof of evidence of Andy Kenning will go into more detail on the development works.
- 2.7.5 Network Rail recognises the importance of engagement and carried out 3 rounds of public consultation.
- 2.7.6 Consultation with private landowners affected directly or indirectly by the plans continued through to deposition.
- 2.7.7 The Statement of Consultation (NR05) contains further details on the consultation undertaken.

2.8 Address “in principle” objections

- 2.8.1 The Ramblers (OBJ/148), the Essex Local Access Forum, ELAF (OBJ/142) and David Atkins (OBJ/176) make a number of general objections to the Order. Network Rail’s case for closure of the crossings is set out in the Statement of Case (NR26). Furthermore, the need for closure is not just centred on safety.
- 2.8.2 Network Rail fully appreciates the benefits of Public Rights of Way (PRoW) for health and wellbeing. Network Rail has sought to maintain the local network, which is demonstrated by the volume of new paths and ways being proposed for creation in the Order.
- 2.8.3 Under the Order, Network Rail will not be closing any level crossings until the alternative routes are open and available for use.
- 2.8.4 Essex County Council (OBJ/195) makes a general objection to all proposals included in the Order until detailed designs and commuted sums are agreed with them. Network Rail will continue to work with the Council to agree commuted sums and will be engaging with them on the schedule of works for each level crossing diversion. The Council is further protected by the provision in the Order that no new PRoW can come into effect until it has been completed to the reasonable satisfaction of the highway authority.
- 2.8.5 The National Farmers’ Union (OBJ/34 and OBJ/84) make a general objection in terms of potential impacts on access to land, implications for farming businesses and adequacy of consultation. Network Rail’s consultation complied with the legislative requirements of the 2006 Rules. Where Network Rail is proposing an alternative route on farmland, it is considered that the route is required, suitable and convenient.
- 2.8.6 The Environment Agency (OBJ/172) was concerned about the content and scope of the protective provisions in the draft Order for the protection of the Environment Agency. Network Rail is in discussions with the Environment Agency regarding the form of the proposed protective provisions.
- 2.8.7 The Royal Mail Group (OBJ/156) make a general objection on the grounds that their operational and statutory duties to collect and

deliver mail may be adversely affected. The street works in the Order are very limited in extent and expected to be of short duration, which will only have a limited impact on Royal Mail.