

**TRANSPORT AND WORKS ACT 1992**

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

**THE NETWORK RAIL  
(CAMBRIDGESHIRE LEVEL CROSSING  
REDUCTION)  
ORDER**

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**MARK BRUNNEN**

**REBUTTAL OF PROOF(S) OF EVIDENCE**

**-OF-**

**MR D. DE MOOR (RAMBLERS)**  
**MR I. GREEN & MR C. POULTNEY (CCC)**  
**DR R. JAMES (MALDRETH PARISH COUNCIL)**

Document Reference	NR27/4
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I have reviewed the Proofs of Evidence and have comments on the following, as below:

- Mr Derek de Moor (Ramblers, OBJ/026-W1-1)
- Mr Iain Green (Cambridgeshire County Council, OBJ/12-7)
- Mr Chris Poultney (Cambridgeshire County Council, OBJ/12-13)
- Dr Roger James (Meldreth Parish Council, OBJ-45)

The fact that I have not commented on other Proofs of Evidence from objectors does not mean I agree with them.

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**1. Mr Derek de Moor (Ramblers, OBJ/026-W1-1)**

- 1.1. On Page 2 and 3 of his Proof of Evidence, Mr de Moor outlines the benefits of walking. Network Rail recognises and supports the importance of a healthy lifestyle. This extends to the provision of paths on which to enjoy outdoor pursuits. It is, however, important to note that these benefits are only realised if the participant completes their activity safely. Level crossings are a threat to this objective, not an enabler. The safety risk which Network Rail seeks to reduce through this Order is a risk to users of the public right of way network – including the Ramblers that Mr de Moor represents.
- 1.2. In Paragraph 11, Mr de Moor acknowledges that one of the common barriers to walking is a fear for personal safety and security. In Paragraph 13, he notes that “people seek green and quiet environments to feel calm/relaxed”.
- 1.3. As outlined in Section 9 of my Proof of Evidence (PoE), it is common for members of the public, and particularly regular users who are familiar with an area, to underestimate the risks to safety at level crossings. This is underlined by RSSB’s T984 research programme (Paragraph 9.15 – 9.20 of my PoE) which found that over 20% of pedestrians crossing an operational railway line inadvertently place themselves in potential harm’s way by failing to stop and look for trains in both directions before crossing; this despite signs instructing them to do so.
- 1.4. It is important that crossing users are alert to the dangers posed by the railway. Level crossings in pleasant countryside surroundings often appear quiet and gentle in nature. However, even on branch lines, trains typically travel in excess of 50mph. The risk to crossing users is real.
- 1.5. Network Rail has invested in national and local educational campaigns to highlight level crossing risks, and to impress upon members of the public the need to remain vigilant when crossing the railway.<sup>1</sup> Even with this sustained educational drive, there have been many accidental fatalities to pedestrians at level crossings in Britain, (see Appendices NR27/2, Tab 2).

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<sup>1</sup> Recent campaigns can be viewed at: <https://www.networkrail.co.uk/communities/safety-in-the-community/safety-campaigns/level-crossing-safety/>

- 1.6. In Paragraph 12, Mr de Moor observes that “Trips for utility purposes are particularly time-sensitive”. Time pressures are known to negatively influence people’s willingness to wait for trains or to adhere to instruction, alarms and/or crossing equipment. Therefore, these utility journeys are particularly susceptible to poor decision making and deliberate misuse of level crossings.
- 1.7. Where Mr de Moor references “the need to increase walking significantly above its current levels” (Paragraph 17) he is serving to highlight that level crossing risk is likely to increase if crossings remain as they are – a point that Network Rail is acutely aware of. The busier the paths and the more users there are traversing the railway, the greater the risk of near misses and/or accidents occurring.

**2. Mr Iain Green (Cambridgeshire County Council , OBJ/12-13)**

- 2.1. In Paragraph 12 of his Proof of evidence, Mr Green suggests that “The proposed diversion(s) might not be suitable for particular users and may affect walkers’ continued use of that path/route”. He goes on to highlight that levels of disability and general ill-health are particularly high in Fenland. In reference to Diversity Impact Assessments, Mr Green notes that some social groups are more vulnerable to the effects of community severance than others; including people with restricted mobility; older people and disabled people, and school children (younger people).
- 2.2. All of these groups of people are considered “vulnerable” when assessing level crossing risk. In Paragraphs 9.6 – 9.14 of my PoE, I clarify that “Vulnerable Users” are characterised as those who are unable to use the level crossing quickly and effectively, and are not fully aware of the dangers at a level crossing. The term does not relate exclusively to disabled or elderly people with impaired mobility.
- 2.3. In Paragraph 9.7 I explain that level crossings can cause difficulties for people who move slowly, and are not suitable for users who are unable to see or hear approaching trains or warning devices, as necessary at each crossing. This may mean that some users avoid routes with level crossings, or use them at increased risk compared to those without out such vulnerabilities. In other words, the existence of at grade crossings creates severance issues for some groups, and hence can cause social exclusion.
- 2.4. All of the diversionary routes proposed by the Cambridgeshire Transport and Works Act Order take cognisance of the diverse groups of people who use the crossings.

**3. Mr Chris Poultney (Cambridgeshire County Council , OBJ/12-7)**

- 3.1. In his summary (Paragraph 11), Mr Poultney explains that, in some locations, the proposed closures pass risk and cost from Network Rail to Cambridgeshire County Council.

- 3.2. It is certainly true that the closure of a level crossing and elimination of risk from the railway can change the risk profile risk of the surrounding transport infrastructure.
- 3.3. Network Rail is responsible for the safe operation of the rail infrastructure of Great Britain. As such, it is our duty to minimise the risk of accident and incident on our infrastructure. However, we are careful to minimise this transfer of risk from our infrastructure onto other areas of society.
- 3.4. Each of the diversions proposed by this Order, that divert pedestrians onto routes adjacent to the road network, has been subject to a Road Safety Audit (RSA) (see Sue Tilbrook's evidence). The purpose of an RSA is to identify any areas presenting significant risk or concern so that adjustments can be made where possible. In some instances, where risks have been identified, we have chosen not to progress with the diversionary route, instead seeking an alternative solution; in others, we have removed the level crossing from the Order entirely.

4. **Dr Roger James (Meldreth Parish Council, OBJ-45)**

**Strategic case**

- 4.1. In his PoE, Dr James refers to Network Rail's strategic case for the Cambridgeshire Transport and Works Act Order. He states that "Of greatest concern is that a myopic analysis has been made which considers only safety at the level rail crossing". He also contests that the case to close C04: "No Name No. 20" is based simply upon an internal risk assessment process, (Page 2).
- 4.2. Dr James is mistaken in his understanding of Network Rail's case for the Order. As should be clear from the contents of Andrew Kenning's Proof of Evidence, at no point has Network Rail adopted a 'myopic' approach to the proposed closures contained within the draft Order, nor limited its consideration simply to removing risk from Network Rail infrastructure.
- 4.3. Network Rail's case for closure of these crossings is strategic. For this reason Network Rail has sought an Order under the Transport and Works Act 1992 allowing the crossings to be considered holistically, rather than individually and in isolation. The purpose of the Order is threefold:
  - a) Improved operational efficiency of the Network.
  - b) Enhanced safety of both rail users and those interacting with railway by reason of Public and Private rights across the operational railway.
  - c) Efficient use of public funds in accordance with "Managing Public Money".
- 4.4. The case is not formed of any one of these elements alone but, rather, the cumulative effect of all three elements acting together. As set out in Sections 4 and 5 of my Proof of Evidence, this approach is consistent with Government, ORR and Network Rail policy.

**ALCRM and the House of Commons Transport Committee**

- 4.5. The All Level Crossing Risk Model (ALCRM) was developed by the Rail Safety & Standards Board (RSSB) in collaboration with Network Rail and Arthur D Little. It draws upon extensive research and expertise, established over many years, to model level crossing risk.
- 4.6. ALCRM is recognised by the ORR as *the* level crossing risk ranking tool for all level crossings under Network Rail’s management. Its purpose is not to prove that any one crossing is so dangerous that it must close. Rather, it is to assist Network Rail in understanding (and prioritising) risk.
- 4.7. Dr James refers to “recent legal criticism of the quality of [ALCRM] data” citing the House of Commons Transport Committee, Safety at level crossings, Eleventh Report of Session 2013–14 (HC680, published: 07/03/2014). This particular criticism related to risk assessments undertaken in 2007 and 2009. The same report goes on to acknowledge that:

*“22. ... Relative to 2009 risk levels, a 26% reduction was achieved by the end of 2013. This claim is supported by the fall in fatal accidents and fatalities over that period. This significant improvement in safety has been achieved by a £130 million programme of over 750 level crossing closures and more effective management of level crossings, particularly with the appointment of 100 specialist level crossing managers. Tina Hughes, whose daughter Olivia was killed in an accident at Elsenham, and who is now Network Rail’s Level Crossing User Champion, praised the work of level crossing managers:*

*They have always been very good at reacting when there is a catastrophic failure, but I now see that they are beginning to be proactive and look at where the next accident might happen and start to make some changes to that.*

*The appointment of level crossing managers has made a significant contribution to the recent improvement in safety at level crossings: we recommend that Network Rail continue to use these posts to drive continuing improvements in safety.”*

The report also adds:

*“19. ... Network Rail and ORR are working on a project to incorporate “narrative assessments” into risk assessments. The more recent introduction of level crossing managers is designed to improve application of local knowledge to risk assessments. ...”*

- 4.8. Dr James is correct in his observation that ALCRM does not incorporate all of the local factors acting on a crossing when calculating risk. He is also correct that RAIB have previously identified this as a weakness in the risk assessment process – a finding that was endorsed by Network Rail. Accordingly, in August 2014, Network Rail introduced the Narrative Risk Assessment (NRA) to compliment the ALCRM assessment.
- 4.9. As set out in my Proof of Evidence (8.18 – 8.23), ALCRM and the NRA combine to deliver a rounded and balanced analysis of level crossing risk. Structured, expert judgement is used to compliment quantitative assessment. Such an approach is encouraged by the ORR.

- 4.10. There is perhaps some confusion in Dr James's Proof of Evidence when, on Page 3, he refers to crossing C19. There is no such crossing covered by this Order. There is a crossing known by Network Rail as "No Name No. 19" which is not affected by the Order, but which is located a short distance away from C04: "No Name No. 20". This private footpath crossing is overgrown, fenced off and padlocked, and has no known use. Accordingly, it has been allocated the lowest possible ALCRM risk categorisation (M13).
- 4.11. I explain in my Proof of Evidence that, whilst Network Rail uses ALCRM to model level crossing risk as part of our Health and Safety, and Asset Management duties, and it is a useful indicator of crossing risk, it is not the only basis for assessing risk and it has not been used to select or prioritise crossings for inclusion in this Order. The inclusion of a crossing is not determined by its ALCRM score in isolation or relative to other crossings in the vicinity.

#### **Further findings of the House of Commons Transport Committee**

- 4.12. The House of Commons Transport Committee, Safety at level crossings, Eleventh Report of Session 2013–14 included a number of additional findings that are relevant to this rebuttal:

*"15. Unlike crossing a road, where motorists can swerve and brake and vehicles are lighter than trains, the consequences of being struck by a train are almost always very serious, if not fatal. Analysis of Network Rail and Department for Transport data (see Annex) shows that if an average walking trip includes a level crossing, the fatality risk to a pedestrian is about double the risk of an average walking trip without a level crossing. Overall, there is an increase of around 8% in the risk of a fatality during an average car journey that includes a level crossing, compared with one that does not. We recommend that the Office of Rail Regulation adopt an explicit target of zero fatalities at level crossings from 2020."*

*"16. ... The only way to eliminate risk at a level crossing is to close it. ...."*

...

*"24. In relation to how level crossings can be improved, the ORR provides the following guidance:*

*The primary objective should be to close level crossings permanently, following the closure or diversion of a highway, road or by the provision of a bridge or under-pass. As a secondary objective, it may be practicable to reduce the status of the crossing, for example from vehicular to footpath or bridleway only. Simple renewal and retention of existing crossings should be seen as a last resort."*

- 4.13. The full report is offered as an appendix to Eliane Algaard's Proof of Evidence.

#### **CP5 Level Crossing Risk Reduction Programme**

- 4.14. On Page 3 of his PoE, Dr James presents that Network Rail's risk reduction programme is directed to reduce risk by 25% during Control Period 5. The requirement, as set out in the Office of Road and Rail's "Periodic Review 2013: final determination of Network Rail's outputs

and funding for 2014-19”<sup>2</sup>, is for Network Rail to “deliver a plan to maximise the reduction in risks of accidents at level crossings, using a £99m ring-fenced fund”. It is to be achieved “for example, by enabling the closure of more crossings”. I have explained this more completely in Paragraphs 5.8 and 5.9 of my PoE. The Scottish Parliament has awarded a further £10m for additional crossing closures exclusively in Scotland, over and above the national programme.

- 4.15. Of the £99m Level Crossing Risk Reduction Fund (LCRRF), the Anglia Route has received £19.9m – a figure greater than that received by any other Route. The Anglia Route’s LCRRF investment has been focused principally on those crossings that offer the greatest opportunity to maximise risk reduction, in line with the regulated requirements of the fund. This work continues alongside, and in addition to, the Anglia Transport and Works Act Order work streams.

## DECLARATIONS

I hereby declare as follows:

This proof of evidence includes all facts which I regard as being relevant to the professional opinion which I have expressed and I have drawn the inquiry’s attention to any matter which would affect the validity of that opinion.

I believe the facts which I have stated in this proof of evidence are true and that the opinions are correct.



Mark Brunnen  
Head of Level Crossings  
15 November 2017

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<sup>2</sup> Periodic Review 2013: Final determination of Network Rail’s outputs and funding for 2014-19, (PR13), (October 2013): [http://orr.gov.uk/\\_data/assets/pdf\\_file/0011/452/pr13-final-determination.pdf](http://orr.gov.uk/_data/assets/pdf_file/0011/452/pr13-final-determination.pdf)