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**Network Rail – Transport & Works Order Application “Cambridge Resignalling” (C3R) – Support / Objection**

Dear sir or madam

I refer to the application detailed on the Network Rail website as “Cambridge Resignalling” – described on the page <https://www.networkrail.co.uk/running-the-railway/our-routes/anglia/improving-the-railway-in-anglia/cambridge-resignalling/>

For the avoidance of doubt, I am responding in an entirely personal capacity.

I wish to record a mixture of both strong support and serious misgivings (objection) to this application. Network Rail is 'killing two birds with one stone', and not just birds!

I am extremely supportive of improving the railway for passengers and freight using modern technology. However, I am against making road users (and the environment) suffer because of long barrier downtimes at level crossings. I disagree with the use of the grossly dishonest word “upgrading” in relation to the conversion (a much fairer term) of level crossing barriers from the highly efficient (and generally very safe) automatic half barriers (AHB) to full barriers (generally known as manually controlled barriers, MCB), which tend to be highly disruptive to road users.

I understand that the proposal by Network Rail (NR) is to use obstacle detection equipment (MCB-OD), which was first used on the Ely to Norwich line in 2012. My observations, from standing on platforms at some of these stations, suggest that barrier downtime is somewhat shorter than the worst of the full barrier (MCB) crossings that I regularly experience (such as Foxton), and is obviously shorter than when it was a gate manually opened and closed by the signaller. However, except for Dullingham, which currently has such a gate and there will clearly be an improvement for road users, I understand that the six other conversions will all be from an AHB, so there will be more disruption.

I would be willing to withdraw the objection element of this response if NR can provide evidence that the new full barrier level crossings will use highly-sophisticated technology to predict the train’s precise arrival time at the level crossing, providing that the solution reduced the downtime to an absolute minimum, and if NR supplies figures for the future downtime that are, on average, not significantly higher than the average for an AHB (which is not particularly sophisticated and does not take account of train speeds or stopping intention) with modelling (in the case of Waterbeach) showing that the backlog of traffic will not generate problems. Obviously, I would wish my highly supportive element of this response to stand regardless.

For the level crossing conversions, I object both *in principle* and through *direct personal impact*. Two of the level crossings are very relevant to me, based on where I live and where I travel. I live in Milton and regularly walk over Milton Fen level crossing to the river Cam. I will not be concerned if I must wait an extra two minutes on my leisure walk. However, I often pass through Waterbeach (e.g., when using Waterbeach station if travelling to King's Lynn and when having a meal at a pub in Horningsea), and I particularly fear that a longer barrier downtime that led to unexpected queuing could mean that I miss my train.

Between 2008 and 2011 I was a daily commuter from Waterbeach station to King's Cross and I occasionally missed my train because a queue had built up at the level crossing. These queues were (and still are) quite short because the AHB downtime is rarely more than 80 seconds (unless trains are crossing from both directions). If downtime were to become four minutes (higher still if trains are crossing from both directions) then the queue of cars will extend all the way down Station Road (where cars parked outside houses already block much of one side of the road), back to the village green, and potentially along Car Dyke Road all the way back to the 'Slap Up' junction on the A10.

### **Detailed response part 1 – Strong support for resignalling**

I am a regular train user, having made significantly more than two thousand train journeys in the last 20 years, in Great Britain, Ireland, through the Channel Tunnel and on the European Mainland. I support and promote train travel. I think the train can be a far more pleasurable journey experience than driving and I use the train wherever it makes sense to do so (convenience, comfort, quality, productivity, and value-for-money).

I want the railway to be as good as it can possibly be for passengers and for freight users. It must offer a modern service, using – and exploiting to the full – the technology available, including communications to passengers, and the industry must plan for future technology. Reliability must be increased. It must also become a true 24/7 system. The railway desperately needs to become more cost effective, which must result in having fewer employees.

I note that the rail infrastructure around Dullingham is quite notorious for failures (Network Rail reported to the MARPA rail user group some 29 incidents between Cambridge and Newmarket in the last year). Re-signalling will address this, and passengers will be very grateful. As the new system will be able to detect more precisely the train's location then real-time passenger information (at stations and online systems) should be improved as well.

The industrial action by NR signallers, so far, in 2022 has shown the railway routes operated from a Rail Operating Centre (ROC) can remain open (at least one daytime shift) with just management and non-union employees, whilst those relying upon rural signal boxes are closed – if just one essential box is unstaffed then the line must be closed. I welcome the closure of the signal boxes affected, although loss of staffing at Dullingham will be regretted by passengers.

I am disappointed that NR has chosen simply to re-signal to meet current service levels and has decided not to overcome some of the bottlenecks that either prevent new services or delay passengers. In its Ely Area Capacity Scheme (EACE) NR has stated that its published plans to increase from 6.5 to 10 paths per hour would not be limited to 10 by the design of the EACE scheme, but by the bottlenecks elsewhere on the Ipswich-Ely route, including the route covered by the Cambridgeshire resignalling scheme.

Soham-Ely needs to be doubled and was to have partially been. Less widely known is that reinstatement of the two centre roads at Bury St Edmunds would enable freight trains to either be held or to overtake a passenger service, depending on stopping pattern, but it will be expensive (and probably not viable) to do as a standalone scheme. However, if done at the same time as the re-signalling it is much more likely to be affordable.

From personal experience on numerous occasions, passenger trains heading to Newmarket must often wait before Chippenham junction for a train from Cambridge to pass. The stationary trains would be blocking the route to Ely, so a freight train behind might be held up. If a section of double track was reinstated between Chippenham junction towards Warren Hill tunnel (Newmarket), to allow the train to wait there instead, then the passenger train would no longer block the line to Ely, and passengers would arrive at Newmarket station sooner as the train would be stopped closer to it. Again, making this enhancement at the same time as re-signalling would be a highly cost-effective.

NR seems to be suffering from a silo mentality, where modest enhancements are not considered when life-expired assets are being renewed.

Barring its failure to reduce delays and/or provide capacity for more services, as stated above, I believe that Network Rail's re-signalling proposals (the subject of this TWA Order Application) achieve all the objectives that I have outlined above, and I fully support the re-signalling. However, conversion of an AHB to MBC-OD does not achieve any of these objectives at all and offers no benefits to passengers and freight users other than an extremely small (once in the blue moon) reduction in incidents at level crossings, and instead bring passenger disbenefits (as described below).

*In short, the entire re-signalling scheme could – and should – be delivered with the AHBs left as they are (albeit replacing any life-expired components).*

## **Detailed response Part 2 – Strong objection to increase I level crossing barrier downtime**

In my support for the proposals, I said that Network Rail should combine enhancements at the same time as other works to be cost-effective. It will probably say that by converting (sic) an AHB to MCB-OD it is doing exactly what I am encouraging it to do, but it is not.

My encouragement of NR to expand the work being done is to increase capacity and reduce delays, for everyone's benefit, and these would not come with any downsides (other than perhaps minimal extra maintenance e.g., inspecting switches and crossings). Full barriers can disrupt passengers (who are often road users) if they need to pass the level crossing to board a train: they could miss the train or would probably have to leave home earlier to catch the train. Full barriers could negatively affect patronage, encouraging people to make their entire journey by road, which is much more dangerous than by train.

Replacing AHBs may reduce the number and severity of incidents, but to what extent? Is it measurable? I suggest that it is only measurable when aggregating across a large number of crossings.

In the last 55 years there have been three train crashes that led to deaths of passengers.

- The Hixon accident in 1968 was an AHB, but the system was in its infancy and the accident caused because the barriers came down so early that car drivers did not believe a train was imminent and swerved around the barriers. BR reduced the downtime and there has been no fatal reoccurrence, suggesting that AHBs do not present a significant danger
- The Lockington accident in 1986 was an open crossing (i.e. no barriers) so that is not a valid justification
- The Ufton Nervett crash in 2004 was caused by a suicidal chef who chose to park on the crossing. The train derailed but carried on and, arguably, there would have been no fatalities if there had not been a set of points after the level crossing, which caused the train to leave the tracks. However, with in-cab signalling to inform the train driver immediately of a stationary vehicle via an AHB-OD such an accident could be avoided completely. NR has since replaced the crossing with a bridge, which is the best way of both reducing risk and avoiding delays to road users, although that is not practicable nor affordable everywhere.

Over the years, there have been deaths to occupants of cars and vans on crossings. However, thousands of people are killed on the roads each year, so to what extent are level crossing fatalities statistically significant?

There are numerous reasons for these fatalities and accidents. In some cases, vegetation has been allowed to obscure signage and lights; sometimes better signage or straightened roads would have been adequate. The fatality at Waterbeach level crossing occurred because the driver foolishly occupied the level crossing when there was a queue and he was unable to exit; NR then marked the level crossing with a yellow hatched box, which has avoided a repetition. There are multiple possible solutions, none of which need cause significant disruption to road users or harmful impacts on the environment. One excuse that drivers give when involved in an accident is that the lights were not working. It is almost always a downright lie – perhaps NR should change the lights so that there is always a light displayed (in Sweden there is a flashing white light when the crossing is open to traffic).

Let's be clear, a full barrier does not stop accidents. Frustrated pedestrians (and even cyclists) can climb over them, as NR's CCTV recordings from such incidents can show. Downham Market (which has a staffed signal box right next to the crossing) does not deter some people from doing so.

Many incidents have been on user-worked crossings (occupational crossings). They are not relevant to this TWA Order, and I am not objecting to how NR manages them. However, they inflate NR's statistics and lead to its claimed 'justification' that it needs to act on all crossings.

Network Rail is rightly worried about safety but its statement that level crossings 'pose the greatest risk' on the railway is a flawed argument. There will always be something that poses the 'greatest' risk. This mentality simply supports a never-ending task to keep someone in a job. There must come a point when the risk is too low to deal with, particularly when the cure is worse than the illness. The problem is that Network Rail does not seem to realise (or wilfully refuses to realise) that the cure has harmful effects and may indeed be worse.

Network Rail appears to be worried only about its own interest and has not considered — and I argue, does not care at all about — the consequences to society. It is ironic that justification for rail enhancements achieve the desired benefit:cost ratio (BCR) only by including 'wider benefits' including health and the environment, but when NR considers level crossings it ignores them (since they would probably be disbenefits) and focuses solely on accident statistics.

Naturally NR wants to avoid dealing with incidents at level crossings (service disruption, bad publicity etc.) but its solution may be creating much wider problems (potentially worse) outside of the actual level crossing area.

The road is closed for a minimum of 35 seconds for an AHB (this is the 27-second advance signal to the train reaching the crossing if travelling at line speed plus the time it takes for the train to cross and the barriers to raise). However, a full-barrier crossing is interlocked with the signalling, meaning that barriers can be down for four minutes (I have waited at Foxton on hundreds of occasions).

As well as the loss of time for people waiting to cross (hardship and an economic loss to the country) there are serious environmental consequences.

A vehicle waiting at a barrier for four minutes with its engine running is bad for the environment as is turning the engine off and on again, and any people waiting next to a car (as I often do at the crossing on Fen Road just south of Cambridge North station) breathe in deadly exhaust fumes. Admittedly the harm to the environment and health will be less bad once electric cars become more common, but that will not be until the 2030s.

I feel strongly that Network Rail has taken a high-handed "I don't care about you" attitude to the pedestrians, cyclists and other road users who will suffer because it puts itself first.

As far as I know, Network Rail has not conducted any research to show that the 'total costs' of full barriers (time, economic, environmental and health costs) are less than the benefits they bring (fewer level crossing accidents). NR can easily count the number of people who die or are injured on a level crossing, but it is much harder to calculate the number of shortened lives, for example, by the environmental damage of stationary cars at level crossings.

NR is not alone in ignoring 'invisible costs' - councils do it when installing 'sleeping policemen' on roads.

I look forward to hearing NR's evidence at the public inquiry, where I hope that it will a) give a commitment to keeping barrier downtime to an absolute minimum and b) provide statistical evidence to show the level of harm caused by installing them. It will then be possible to assess whether the cure is better than the illness, or not.

Yours faithfully

Jerry Alderson