

David Milburn
Network Rail
Enterprise House
167-169 Westbourne Terrace
London
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16 December 2014

Dear David,

Thank you for the opportunity on 20 November for myself to meet with RfL and Network Rail to consider contingencies should ETCS not be fully fitted to the Great Western route between Stockley Bridge Junction and Paddington for 20 May 2018. On this date, MTR Crossrail commences services to Heathrow Airport with new class 345 rolling stock that will not be equipped with ATP. Although MTR is not currently an affected party as it does not hold Track Access rights to the line section, we welcome your approach to us to keep us updated on the possible mitigation measures.

You explained to MTR Crossrail that you remain committed to ETCS and that you were seeking intermediary solutions until ETCS was fully operational should the programme be delayed. As it would not appear reasonable or justified to retrofit ATP to the class 345s, you presented an option described as TPWS+ as being a means of providing enhanced protection to trains at signals not currently covered by the existing TPWS programme.

We have considered the various options and, as a Train Operator, we can only offer limited technical support as to the true risk benefits of each signalling solution. That said, we believe the TPWS+ solution to offer the following benefits to us and the industry:

- TPWS as a technology is well proven and has an excellent record of reducing the incidence of SPADs and collisions where fitted; we can therefore see the benefits of it being fitted at signals other than those at junctions;
- the majority of other trains operating over the GW Relief lines are not fitted with ATP and therefore a TPWS+ approach delivers greater actual safety on these lines than operating just two trains per hour equipped with ATP;
- a TPWS fitment programme is relatively simple in terms of engineering design and installation. This means that resources do not need to be diverted from the ETCS programme for it to be delivered;
- we strongly support a scheme that limits the number of in-cab signalling systems we are expecting drivers to use. While we understand the benefits of the ATP, we are concerned by the concept of having four signalling systems installed in the cab for the driver to use and be kept competent in their use;
- we believe that ATP will create risks with system reliability when interfacing with ETCS at Heathrow Airport and with the CBTC system on the Crossrail Central Operating Section. TPWS+ will avoid this additional interface.



We appreciate that this does not constitute a full risk assessment of the differing signalling systems but we believe that it is important that we support Network Rail in the approach it is taking recognising that the TPWS+ proposition will provide an improvement in safety of operation over a 'do nothing' approach, but is also a practical solution when compared to the other options such as fitting ATP to the class 345 rolling stock.

We would welcome the opportunity to become involved with industry discussions in this area as the debate moves forward.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Steve Murphy', written over a large, loopy blue circular scribble.

Steve Murphy
Managing Director – MTR Crossrail