TRANSPORT AND WORKS ACT

TRANSPORT AND WORKS (INQUIRIES PROCEDURE) RULES 2004

THE NETWORK RAIL (CAMBRIDGE RE-SIGNALLING) ORDER

NOTE ADDRESSING POINTS RAISED BY THE OBJECTORS IN RELATION TO THE SUMMARY OF BAR CHARTS FOR MELDRETH AND WATERBEACH LEVEL CROSSINGS

1 INTRODUCTION

1.1 On 5 August 2022 Network Rail Infrastructure Limited (**NR**) submitted an application (**Application**) to the Secretary of State for Transport to make the Network Rail (Cambridge Re-Signalling) Order (**Order**). The Application was made under sections 1 and 5 of the Transport and Works Act 1992 (**1992 Act**).

1.2 On 1 December 2022 the Secretary of State made a decision to hold an inquiry into the Application. The inquiry was subsequently opened on 12 April 2023 and continued on the 13th, 14th and 18th April 2023.

1.3 During the Inquiry, a number of comments were raised by the objectors to the Order (**Objectors**) in relation to the impact on highway users, as discussed in the Proof of Evidence of Nicolas Contentin and in the following documents produced by the Modelling Group (referred to together as the **Modelling Group Documents**):

a. Modelling Methodology Report, dated 3 June 2021;

b. Local Model Validation Report, dated 11 August 2022; and

c. Performance Report, dated 24 November 2022.

1.4 These comments have been discussed in detail and answered during the Inquiry by Nicolas Contenin.

2 PERFORMANCE REPORT – BAR CHARTS

2.1 One of the criticisms raised by the Objectors, was the use of the median figure of barrier downtimes in the Performance Report, instead of the mean. In response to this, in his oral evidence Mr Contentin explained that, initially, the mean figure had been tested but that the outputs were not considered to be realistic. As such, the median figure has been utilised instead.

2.2 The Inspector appointed by the Secretary of State asked that the mean figures be shared with him and the Objectors and these were sent by NR on 20 April 2023. The Inspector stated that he was willing to accept "*brief comments"* from the Objectors. A number of additional comments were subsequently raised by the Objectors, as follows:

a. INQ-20 – FLUA response to Bar Charts;

b. INQ-21 – Roger Faires response to Bar Charts;

c. INQ-22 – Meldreth Parish Council response to Bar Charts;

d. INQ-23 Hugh Wood – Shepreth Parish Council response to Bar Charts

2.3 This note provides an overall response to these comments, as far as NR is able to at this stage of the Inquiry process.

3 FLUA REQUEST FOR ADDITIONAL INFORMATION

3.1 It is noted that additional information has been requested by Fen Line Users Association in their comments on the Bar Charts, which provide that:

"[…] it would be more helpful to have timings based on the actual position of the strike-in point in each direction (see definition in APP-W2-2 [Appendices to Proof of Evidence of John Prest] page 75; or the likely position(s) if it has not been decided yet) and the May 2023 timetable(including freight paths). This can make the same assumptions about train speeds etc that were used in constructing the timetable".

3.2 This is not a "*brief comment"*, as permitted by the Inspector but, rather a request for further information. It is not considered appropriate given the current stage of the Inquiry process. The objector has had sufficient time to raise these comments prior to or during the Inquiry and NR is not in a position to provide this additional information at this stage.

4 RESPONSE TO COMMENTS RAISED BY THE OBJECTORS

4.1 As explained in oral evidence of Mr Contentin, the model developed by the Modelling Group, is a simplified representation of the real world, which makes use of user-defined inputs and assumptions to allow proposals and schemes to be tested in a simulated environment.

4.2 VISSIM software used by the Modelling Group is commonly used in transport planning projects and the choice and methodology proposed for assessing the level crossing impacts was agreed with NR, as detailed in the Performance Report. This methodology was also discussed with Cambridgeshire County Council and subsequently agreed with their officers after minor amendments.

4.3 The Officer Report supporting the decision to grant planning permission at Meldreth Level crossing carefully considered the concerns about traffic modelling and provides as follows:

"9.22 The local parish councils and third-party representations have raised concerns about apparent inaccuracies and inconsistencies with the modelling work undertaken by the applicant, and therefore the reliability of the information within the applicant's Transport Assessment. These concerns have also been raised through representations submitted to Network Rail's application for a Transport and Works Act Order. This has been examined as a matter for the public inquiry however no decision has been made on that public inquiry. The applicants have also provided a response addressing concerns regarding the transport modelling.

9.23 The local highway authority is a statutory consultee on this planning application and Network Rail's application for the Transport and Works Act Order. The County Council transport assessment team has reviewed the applicant's Transport Assessment in relation to both applications. The local highway authority has not objected to either application on the grounds that the transport modelling is inadequate, flawed or unreliable, and nor on the grounds that the finding of the report is unacceptable. The advise of the local highway authority is accepted.

9.24 Moreover, the local highway authority has specifically reviewed the comments from Shepreth Parish Council and has explicitly advised the local planning authority that the concerns raised do not alter their advice.

9.25 Notwithstanding the local knowledge of the Parish Council and Third Parties, officers do not consider there is any evidence to suggest that the findings of the submitted Transport Assessment are substantially inaccurate. Therefore, while acknowledging the strong objections that have been made, officers for the local planning authority are satisfied that the concerns raised by the parish councils and third party have been fully assessed by the relevant statutory consultees and that there would be no reasonable transport grounds on which to refuse the planning application." (emphasis added).

4.4 When developing traffic models, the aim is to replicate 'typical' and 'neutral' conditions for assessing proposals. In this instance, the testing of a 'reasonable worst-case situation' through the use of the 'median' barrier time, compared to the 'mean' barrier time suited this methodology. Whilst it is acknowledged that this approach removes some of the high barrier down times, these are considered outliers and are not 'typical' for this exercise, which has focused on more 'neutral' conditions.

4.5 As an example, the bar chart analysis for Meldreth level crossing, illustrates that the use of the mean, instead of the median, would increase the maximum barrier downtime from 7 mins 8 seconds to 12 minutes 20 seconds during the AM peak. This is not considered realistic, given the actual data recorded at Shepreth Level Crossing (which is located in the close proximity of the Meldreth crossing). As illustrated in paragraph 5.13 of Mr Contentin's Proof of Evidence, delays beyond 7 minutes rarely occurred at Shepreth Level Crossing (more precisely only on 5 occurrences out of 1128 in the AM peak. Given the close proximity of the Meldreth crossing to Shepreth, similar performance (i.e. a delay of not more than 7 minutes) is expected with the same controller operation.

4.6 It is acknowledged that the barrier downtime at Meldreth level crossing will increase to a maximum of 7 mins 8 seconds during the AM peak and 5 minutes 28 seconds during the PM peak. This results in average/maximum queues of 70m (eastbound), 40m (westbound) in the AM peak and 15m (eastbound), 50m (westbound) in the PM peak. Using the passenger car unit length of 5.75, this equates to the queues of approximately 12 vehicles (eastbound), 7 vehicles (westbound) in the AM and 3 vehicles (eastbound) and 9 vehicles (westbound).

4.7 During the Inquiry Mr James suggested that figures stated above underestimate the actual number of vehicles and referred to a Speed Survey, which was carried out in Meldreth in 2016. This survey collected data on North End, which is connected to Stone Lane, Malton Road (Malton Golf Club) Cam Farm, Brewere Lane, as well as a number of smaller residential roads. The exact location of this traffic survey is unknown, meaning that it is not possible to ascertain if all of the traffic flows on this link have originated and/or are travelling to the Shepreth level crossing, or if they were travelling from/to one of the other feeder roads. Furthermore, the survey dates back to 2016, which makes any data unsuitable for use as data older than 5 years are not considered to be recent in the industry. Any data collected should be at most 3 years old to be considered representative of current conditions. As such, Mr James' concerns are considered to be unfounded.

4.8 The Objectors have raised a number of comments around the impacts to other road users at the crossings. In relation to this it should be noted that, whilst the modelling undertaken by the Modelling Group, was purely focused on the traffic impacts, the surveys undertaken in 2021 highlighted very low levels of active travel mode demand in the AM and PM peaks. There were only 4 pedestrians observed using Meldreth level crossing in the AM peak and none in the PM peak. In terms of cyclists, there were 3 and 6 cyclists observed in the AM and PM peaks respectively. Whilst the change in barrier operation will lead to increased waiting times, if the pedestrians and cyclist demands remain at the level recorded in 2021, then the numbers actually affected will be very small.

4.9 Mr James makes the following specific comment:

"The new modelling data 'suggests' an hourly 7m 2s barrier down time from Shepreth LX – Observe Data which is 1/8th (12.5%) of the barrier closing yet data in 5.13 of the proof of evidence records only 0.5% of closing exceed 7 minutes. Similarly the data for downtime in excess of 5 minutes predicts 2/8th (25%) of closings in excess of 5 minutes and the data in 5.13 only records 10.9%"

4.10 The disparity between the data in the bar charts and Mr Contentin's proof of evidence is due to the usage of the two different datasets. The data presented in the bar chart is a 'snapshot' of the peak hour of one day rather than a sample over a 6 months' period. This is due to the fact that no data was available at the time the initial modelling has been undertaken. On the other hand, data presented in the Modelling Group Documents is based on the 6 months' dataset obtained at a later stage, which shows that the 7min 2s barrier downtime is an unusually high value. The bar charts have not been revisited to take into account the new data and as such is considered conservative.

4.11 Mr Faires makes the following comment:

> *"From that data it seems that a typical train would create a 169 second block, with the slow trains creating a longer 261s block of down time, 4minutes 21.*
> *...*
> *So I can't see how you can then use the 169 second median which is derived from another station when it looks like the standard minimum at shepreth is 169 seconds."*

4.12 As explained in paragraph 4.10 above, the data extracted on the day of the survey is a snapshot of one day rather than a sample over a 6 months' period. The 261s value falls into the 4-5 minutes bracket (for the AM peak) in table 9 of Mr Contentin's proof of evidence which represents 10.9% of the case. It would not be realistic to assume that it is a typical barrier downtime for a slow train.

4.13 To summarise, the modelling exercise sets out to create a reasoned, typical worst-case scenario to be representative of the expected normal operation at each site. All methodologies used, in reference to data analysis and modelling approach, are carried out in line with National Guidance and in full agreed with NR and the affected local highway authorities. Whilst the concerns presented at the Inquiry and any follow-up comments are understood and appreciated, issues raised with outlying, unusual and non-typical data and event occurrences are simply not what this modelling exercise was commissioned to understand.

Addleshaw Goddard LLP

15 June 2023