TRANSPORT AND WORKS ACT 1992

TRANSPORT AND WORKS (INQUIRIES PROCEDURE) RULES 2004

SUMMARY OF PROOF OF EVIDENCE OF NICOLAS CONTENTIN

TRAFFIC MODELLING

15 March 2023

1 INTRODUCTION

1.1 My name is Nicolas Contentin. I am a Director of Modelling Group, appointed on behalf of Network Rail in partnership with Tracsis Traffic Data Ltd, to analyse traffic and congestion implications of upgrading 7 level crossings, as part of the Cambridge Re-Signalling Project.

1.2 I have got over 20 years' experience working on a wide range of projects in the public and private sectors. These projects include modelling schemes for town centre regeneration, public transport improvement, providing modelling support for residential and commercial scheme, as well as for the energy sector.

1.3 My involvement with the Project consists of assessing the traffic impacts of the proposed level crossings upgrades on the local communities and the wider transport.

1.4 My Proof of Evidence provides detail of the traffic modelling undertaken in relation to the Project and responds to a number of comments raised on the traffic modelling conclusions via third parties' objections and statements of case.

2 TRAFFIC MODELLING UNDERTAKEN FOR THE PROJECT

2.1 Traffic Modelling was appointed by Network Rail, in partnership with Tracsis Traffic Data Ltd, to undertake traffic modelling in relation to the proposed seven level crossings upgrade to MCB-OD or MCB-CCTV.

2.2 In this scenario, traffic modelling constituted an assessment of the vehicular capacity and traffic flow of the existing level crossings to determine the impacts of the proposed upgrades on traffic movements and, generally, on the local communities.

2.3 The traffic modelling was undertaken using PTV VISSIM 2021, a world leading multimodal traffic simulation software, to assess the impacts of the proposals on queue lengths, delays and journey times.

2.4 The traffic modelling has been developed to meet the DfT's and TfL's guidelines, as further described in my Proof of Evidence.

2.5 For the purposes of the Traffic Modelling, two scenarios were developed to test the impact of the Project:

a. the 'Do Nothing' Scenario, which includes a traffic growth factor and assesses impacts on the basis of the level crossings remaining, as they are (i.e., without the proposed upgrades being undertaken); and

b. the 'Do Something' Scenario, which models the impact of the proposed upgrades of the level crossings and the associated extended barrier downtime.

3 TRAFFIC MODELLING UNDERTAKEN AT EACH LEVEL CROSSING

3.1 In my Proof of Evidence, I provide detailed information on the models for each of the seven level crossings, which are proposed to be upgraded as part of the Project. My comments in relation to each level crossing are summarised below. For each of the level crossings traffic data was collected to observe the barrier down times in the AM and the PM peaks:

Milton Fen

3.2 The current average barrier downtime is 40 seconds in the AM peak and 38 seconds in the PM peak, which will increase by an average of 165 seconds in the AM peak and 167 seconds in the PM peak, as a result of the proposed upgrade. The maximum increase will be by 282 seconds in the AM peak and 276 seconds in the PM peak.

3.3 The impact of the proposed upgrade on the performance of the local network is considered to be minimal and will not cause any significant issues for road users.

Waterbeach

3.4 The current average barrier downtime is 56 seconds in the AM peak and 52 seconds in the PM peak, which will increase by an average of 124 seconds in the AM peak and 128 seconds in the PM peak. Maximum increase will be by 231 seconds in the AM Peak and 113 seconds in the PM peak.

3.5 If 2018 data is utilised, the impact of the proposed upgrade on the performance of the local network, as well as pedestrians who cross the level crossing, will be significant. However, the best-case situation shows an acceptable level of queuing when the more recent (2022) data is used, with a maximum increase of 172m.

3.6 Furthermore, any impact on the pedestrians is considered to be temporary only and will be mitigated once new Waterbeach station is complete and in use.

Dimmock's Cote

3.7 The current average barrier downtime is 38 seconds in the AM peak and 43 seconds in the PM peak, which will increase by an average of 166 seconds in the AM peak and 161 seconds in the PM peak. The maximum increase will be by 522 seconds and 274 seconds in the AM and the PM peaks respectively.

3.8 The impact of the proposed upgrade on the performance of the local network is considered to be significant. However, any such impact will be limited to this location, as there are no other feasible alternative routes for drivers to take.

Croxton

3.9 The current average barrier downtime is 75 seconds in the AM peak and 53 seconds in the PM peak, which will increase by an average of 99 seconds and 121 seconds in the AM and the PM peaks respectively. Maximum increase will be by 65 seconds and 116 seconds.

3.10 The impact of the proposed upgrade on the performance of the local network is considered not to be significant. Given the lack of any alternative routes, drivers are likely to wait in any additional queues before progressing with their journey.

Six Mile Bottom

3.11 The current average barrier downtime is 53 seconds in the AM peak and 51 seconds in the PM peak, which will increase by an average of 87 seconds and 89 seconds in the AM and PM peaks respectively. Maximum increase will be by 87 and 89 seconds.

3.12 The proposed upgrade will have a considerable impact on the performance of the local network. However, large increases in queuing are only anticipated 3 times in the AM peak and twice in the PM peak, with queuing subsequently dropping to a minimal level.

Dullingham

3.13 The current average barrier downtime is 249 seconds in the AM peak and 281 seconds in the PM peak, which will be reduced to 81 seconds in the AM peak and 113 seconds in the PM peak as a result of the proposed upgrade.

3.14 The proposed upgrade will, therefore, have a modest improvement to the network in this location.

Meldreth

3.15 The current average barrier downtime is 62 seconds in both the AM peak and the PM peak, which will increase by an average of 107 seconds. Maximum increase will be of 428 seconds in the AM peak and 302 seconds in the PM peak.

3.16 The proposed upgrade is considered to not have a significant impact on the road network. There will be modest increases in the journey times for vehicles traveling westbound and there will be some minor increase in queues in both directions.

4 OUTSTANDING OBJECTIONS

4.1 In my Proof of Evidence, I deal with the technical points raised in the objections and the Statements of Case submitted in relation to the Order. However, given the number of objections raised in relation to the proposed level crossings upgrade (and in particular Meldreth and Waterbeach upgrades), I do not consider each and every objection and, instead, concentrate on the technical points raised in the individual objections and reiterated in the Statements of Case.

4.2 I comment on the points raised in Mr Roger James' Statement of Case, as well as the Statements of Case submitted on behalf of Shepreth Parish Council and Fen Line Users Association. I also respond to the point raised in Mr Wood's email sent in response to Network Rail's Statement of Case.

4.3 Overall, the objections and third parties Statements of Case raise a number of technical comments on the modelling undertaken by the Modelling Group and data used for the same. In response to these, I note that the Modelling Group has got extensive experience of undertaking traffic modelling and interpreting its results. The results presented in the Modelling documentation referred to, have been generated by the industry standard software, which ensures that any stochastic processes are accounted for. I, therefore, do not agree that the modelling undertaken in relation to the Project is in any way flawed or inaccurate.

5 CONCLUSION

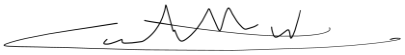
5.1 A model of each level crossing has been developed to the highest level using industry standing modelling guidelines.

5.2 The modelling results show that the impacts of the upgrades of Milton Fen, Croxton, Dullingham and Meldreth level crossings are minimal. Whereast the impact of the upgrades of Waterbeach, Dimmocks Cote and Six Mile Bottom is likely to be more significant and result in an increase in queue length ranging from 244m (Dimmocks Cote) to 525 (worst case at Waterbeach).

5.3 We anticipate longer barrier downtimes at all level crossings, which may generate longer waiting times and will affect the level of delay potentially experienced by both traffic and pedestrian users of these sites.

Dated 15 March 2023

I believe that the facts stated in this Summary are true.



Nicolas Contentin

Dated: 15 March 2023